An examination of the career aspirations of Irish children within the framework of goal contents theory

Author: Aoife Olsthoorn

Doctorate in Educational and Child Psychology

Mary Immaculate College

Supervisor: Dr. Patricia Daly

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Abstract

Aoife Olsthoorn

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Aims: This study explored the following questions: (a) what are students' career aspirations and goal contents? (b) are there predictive factors of students' career aspirations and goal contents? (c) how do students' career aspirations compare with those found in older studies, within the framework of Goal Contents Theory (GCT)? (d) what are the implications of students' goal contents?

Method: A qualitative survey which included two-questions and a drawing activity was conducted by the researcher, with the assistance of the class teacher. Across nine primary schools, 209 fifth class students, aged between 10 and 11, were included in the current study. Students' goal contents were coded thematically, using the framework of GCT. Quantitative analyses were conducted to explore possible correlations between students' career aspirations and gender, SES (Delivering Equality of Opportunity in Schools (DEIS) or non-DEIS school), gender make-up of the school (male, female or co-educational) and location (urban or rural). Gender and SES were also examined as predictors of students' goal contents.

Results: Students reported 92 different career aspirations. The majority of students expressed intrinsic goal contents while a minority expressed extrinsic goal contents. Gender significantly predicted students' career aspirations with males being more likely to pick a career in sports over other careers. Females were as likely as males to aspire to a non-professional career as a professional career. Females reported more careers than males. Students attending a DEIS school were more likely to aspire to a non-professional career than a professional career. Gender significantly predicted students' goal contents while SES did not. Location and the gender make-up of the school did not correlate with students' career aspirations.

Conclusions: GCT is a useful framework for exploring students' career aspirations. GCT possesses implications for well-being depending upon the type of goal contents. Although careers that would generally be associated with extrinsic

aspirations, such as youtuber have grown in popularity, the majority of students expressed intrinsic goal contents.

Declaration

I hereby declare that I am the sole author of this thesis. Where the use has been made of the work of other people, it has been fully acknowledged and referenced.

Signed: _____   Date: _____

Acknowledgements

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Glossary of Terms

BJEP: British Journal of Educational Psychology

CYP: Child or Young Person

EP: Educational Psychologist

GCT: Goal Contents Theory

MIREC: Mary Immaculate College Research Ethics Committee

SDT: Self-Determination Theory

SES: Socio-Economic Status

Chapter 1: Introduction

This chapter will include a brief introduction to the area of study. The focus and purpose of the systematic reviews will be outlined in the context of educational psychology. Finally, an overview of how the thesis is structured will be provided.

1.1 Introduction to the Area of Study

This study explored fifth class students' (age 10 or 11) career aspirations and goal contents. Their goal contents were analysed within the framework of Goal Contents Theory (GCT). At the time of publication, no studies had been conducted that explored Irish primary-aged students' career aspirations and goal contents.

1.1.1 Children's career development theory.

Within the literature on career aspirations, there has been relatively little research conducted with children and young adolescents, in contrast to older adolescents and adults (Hartung, Porfeli & Vondracek, 2005). This differs to research on human development theory which emphasises childhood and adolescence as formative periods (Erikson, 1980). Research that has been conducted in relation to career development theory, has focused beyond the 'what' of children's career aspirations to the 'how'. How are children's career aspirations formed? What are the influential factors? Hartung et al. (2005) found that childhood experiences, beliefs, values and motivation, combine to create a foundation for career development. These aforementioned factors interact with contextual factors to alert children to the world of work and the options available to them (Hartung et al. 2005).

Goldstein and Oldham (1979) demonstrated that children in first class (age 6 or 7) and third class (age 8 or 9) were concerned about how to find a job, for example, using help wanted signs or asking family members about jobs. Fifth class (age 10 or 11) and first year students (age 12 or 13) were able to engage in a more dynamic exploration of career aspirations, using their interests and abilities to guide their exploration (Goldstein & Oldham, 1979). Across empirical studies, first year (age 12 or 13) appears to mark a threshold for when young adolescents shift from a theoretical exploration of the world of work to engaging in familial related work (Csikszentmihalyi & Schneider, 2000; Entwisle, Alexander, Olson & Ross, 1999; Goldstein & Oldham, 1979). As young adolescents progress through secondary

school, they consistently increase their knowledge of their career aspiration and gain more experience doing related activities (Csikszentmihalyi & Schneider, 2000). This increase is most noticeable in second year (age 13 or 14) and fourth year (age 15 or 16) (Csikszentmihalyi & Schneider, 2000). This coincides with a student's transition from middle school to high school, with the latter marking the senior end of their schooling. As such, there may be pressure to begin narrowing their career aspirations.

Regarding career awareness, children in fifth class (age 10 or 11) have been found to have a developed knowledge about different types of careers and are able to envision themselves in different careers (McGee & Stockard, 1991). In early childhood (approximately age 8), children base their perceptions of careers upon that which is modelled for them and upon their own speculations and assumptions (Ferrari et al. 2015; Hill, 1969). By age 11, this perception has developed into a more realistic understanding of careers. By age 14, this perception is further developed by an awareness of possible negative features, such as job demands and whether their own abilities match those required of the job (Nelson, 1963). Their options begin to narrow at this age with the choices they make, such as subject choices and Central Applications Office (CAO) options. As children and adolescents progress, their career aspirations continuously become more aligned with their interests, aptitudes and values while they also become aware of opportunities and obstacles, adjusting their aspirations accordingly (Hartung et al. 2005).

This developmental trajectory begins with a burgeoning awareness of the practicalities of how to find a job in early childhood, to using their interests and aptitudes to guide their exploration in late childhood, to gaining further knowledge and experience of careers throughout adolescence (Csikszentmihalyi & Schneider, 2000; Entwisle et al. 1999; Goldstein & Oldham, 1979; Hartung et al. 2005). Contextually, the shift from childhood to adolescence is characterised by a narrowing of career options. This entails selecting a secondary school to attend (age 11 or 12), to selecting subjects in the junior cycle, to further refining subject choices in the senior cycle, to compiling CAO choices and finally transitioning from secondary school to further education, an apprenticeship or a career. There is a major limitation within the research on career development as cross-sectional designs are

employed with very few longitudinal studies conducted. Thus, age and cohort are confounded.

Contextual factors influence this developmental career progression. These factors interact with children and adolescents' interests, beliefs and motivation to form their careers aspirations (Hartung et al. 2005). Influential factors have been found to operate across systems, ranging from the individual to the macrosystem (Bronfenbrenner, 1992). These factors include: parents' careers, family experiences, characteristics of the home environment, parents' levels of education and their attitude to education, attachment relationships, ethnicity, Socioeconomic Status (SES), role models in the media, gender-role stereotypes, socio-cultural and national differences, and urban and rural differences (Franken, 1983; Hammond & Dingley, 1989; Henderson, Hesketh & Tuffin, 1988; King & Multon, 1996; Liu, McMahon & Watson, 2015; MacKay & Miller, 1982; Rainey & Borders, 1997; Trice, 1991; Trice, Hughes, Odom, Woods, & McClellan, 1995; Trice & Knapp, 1992; Vondracek & Kirchener, 1974; Weinger, 2000).

Howard, Flanagan, Castine and Walsh (2015) explored fourth class (age 9 or 10) and second year students' (age 13 or 14) perceptions of influential factors on their career choices. Second year students perceived an interaction of variables as influencing their career aspirations while fourth class students perceived career aspirations as an additive process (Howard et al. 2015). Types of factors that students perceived as influential can include: interests, abilities, family, school, employment market and lifestyle (Bardick & Bernes, 2005; Kentli, 2014; Lee 2012; McMahon, Carroll & Gillies, 2001; McMahon and Patton, 1997; Phipps, 1995; Schuette, Ponton & Charlton, 2012; Trice et al. 1995). The rationale for why fifth class children (age 10 or 11) were selected as participants for inclusion in the current study will be outlined next.

1.1.2 Rationale for researching the career aspirations of children.

There is a significant dearth in the literature on children's career development that attempts to contextualise it within the broader sphere of career development across the lifespan and which focuses on the 'how' of career aspirations, as well as the 'what' (Hartung et al. 2005; Watson & McMahon, 2005). There is a need for a more holistic understanding of children's career aspirations which the current study

attempts to address. From a career development perspective, fifth class students (age 10 to 11) were selected because they have progressed from a practical knowledge about how to search for jobs to being able to match their interests and abilities to their career aspiration (Hartung et al. 2005). When they enter sixth class their options become funnelled by their choice of secondary school and later their subject choices and CAO options. In fifth class, students demonstrate a greater knowledge of careers and can envision themselves in different careers (Härtung et al. 2005; McGee & Stockard, 1991). Before fifth class, students understanding is based upon what is modelled for them, combined with their assumptions and fantasies (Ferrari et al. 2015; Hill, 1969). By fifth class, this has developed into a more realistic understanding of careers (Nelson, 1963). Although the current study has been conducted in schools, schools are not the focus of this research, rather it is the child's stage of career development that is important.

Much of the international research has focused on predictors of students' career aspirations, which the current study hopes to add to. Understanding the influence that factors, such as gender and SES play on students' aspirations allows for insight on the part of the Educational Psychologist (EP) into how they may best support students, parents and other professionals (Brich, Frederickson, & Miller, 2015; Hagstrom, Fry, Cramblet & Tanner, 2007; Holliman, 2013). It has been anecdotally noted in the practice of EPs that the aspirations of Children and Young People (CYP) are changing with the influx of new communication methods and technology. This change has also been observed in a recent large-scale survey (Chambers, Kashefpakdel, Rehill & Percy, 2018). The current study attempted to ascertain whether children's career aspirations were indeed changing in response to various cultural changes.

Career aspirations or life goals, each have a goal content/s. The goal content refers to what type of goals students pursue, whether they be extrinsic or intrinsic (Kasser & Ryan, 1993, 1996; Sheldon, Ryan, Deci & Kasser, 2004). Extrinsic goals might include fame, wealth and personal appearance (Grouzet et al. 2005; Kasser & Ryan, 1996). Intrinsic goals might include contributing to the community, personal growth and building close relationships (Grouzet et al. 2005; Kasser & Ryan, 1996). The type of goal content is differentially associated with well-being, depending upon whether it satisfies or thwarts the basic needs for autonomy, competence and

relatedness (Deci & Vansteenkiste, 2004; Hope, Holding, Verner-Filion, Sheldon & Koestner, 2018; Kasser & Ryan, 1996; Ryan & Deci, 2000). As an EP supports the well-being of the CYP, such outcomes and theoretical understandings are of particular relevance (Brich et al. 2015; DES, 2018c; Hagstrom et al. 2007; Holliman, 2013; Roffey, 2015). Understanding students' goal contents can be achieved by using the framework of GCT, a mini-theory of Self-Determination Theory (SDT) (Härtung et al. 2005). No previous studies, to the researcher's knowledge, has combined students' career aspirations with their goal contents, using the framework of GCT. They appear to complement each other as GCT can provide a deeper understanding of aspirations.

1.2 Focus and purpose of the reviews

Due to the lack of empirical research that combines these two strands (children's career aspirations and goal contents), two systematic literature reviews have been conducted. The first is a review of children's career aspirations. The purpose of this review is to examine studies that assessed what type of careers children aspired to and associated predictor variables, such as gender and SES. The second review is of peoples' goal contents and differentially associated factors. An attempt was made to include studies that framed findings using GCT.

1.3 Overview of the thesis structure

The thesis is structured in the following manner. Firstly, two systematic literature reviews on children's career aspirations and goal contents are outlined. Secondly, the methodology according to paradigm, participants, procedure, design, measures and ethics is detailed. Thirdly, the results are structured according to descriptive statistics, chi-square, multinomial logistic regression and thematic analysis. Fourthly, students' career aspirations and its' predictive factors, goal contents and its predictive factors, changing patterns in career aspirations and implications of goal contents, according to GCT are discussed. Fifthly, the conclusion is outlined according to the contribution of the study to the field of educational psychology, limitations of the study, areas for future study, dissemination of findings and conclusions. Sixthly, and finally, the references and appendices (including an empirical article) are presented.

Chapter 2: Literature Review

Two systematic literature reviews were undertaken, consisting of two strands. The first strand is dedicated to exploring studies around career aspirations, while the second strand explores participants' goal contents.

2.1 Systematic Review of Career Aspirations

The first part of this literature review will focus on children's career aspirations. The review will include an introduction, context, rationale, definition of key concepts, review questions, literature search, mapping of the field, weight of evidence, synthesis of findings according to the different weights of evidence, primary outcomes and findings and implications and recommendations for practice and research.

2.2 Introduction

This systematic review relates to career aspirations. To the author's knowledge, no studies have been conducted, at the time of this review, which combine these two strands: children's career aspirations and goal contents. Gough's Weight of Evidence (WoE) framework (2007) will be applied to the reviewed studies. The findings from each strand are synthesised and gaps identified, leading to the research questions of this thesis.

2.3 Context.

Historically, much of the research around career aspirations has been conducted with adolescents and adults, largely neglecting the period of childhood (Vondracek, 2001). It is only since the mid-twentieth century that researchers have begun to explore the career aspirations of children (Härtung et al, 2005; Watson & McMahon, 2005). The catalyst for this was perhaps the acknowledgment that childhood constitutes a stage along the lifespan of career aspiration development (Vondracek, 2001). This gap in the research may have been due to a desire to not burden children with thoughts and responsibilities relating to future employment (Zinnecker, 1995). This impetus resulted in the emergence of new strands of research over recent years. These will be briefly mentioned, allowing for contextualisation.

One strand of research is around the developmental trajectory of children's career aspirations. However, a major limitation has been the use of cross-sectional designs with a minority of studies using longitudinal designs (Härtung et al. 2005). Another research strand is around the exploration of differences between participants expected and aspirational careers (Arbona & Novy, 1991; Auger, Blackhurst & Wahl, 2005; McNulty & Borgen, 1988). One of the other main areas that research has explored is the factors that influence career aspirations, such as gender, SES and parents' occupations (Härtung et al. 2005; Lee, 2012). Recently attention has been drawn towards changes in the career aspirations of children with the advancement of new communication methods, the large gaming market and new media occupations, such as coders and youtubers (Bobo, Hildreth & Durodye, 1998; Chambers, Kashefpakdel, Rehill & Percy, 2018; McDevitt, Hess, Leesatayakun, Sheehan & Kaufeld, 2013). One of the most recent and largest surveys of its kind has demonstrated a shift in the career aspirations of children, aged 7 to 11, to reflect these changes in the career options available (Chambers et al. 2018). These issues denote the continued importance of exploring children's career aspirations and influential factors.

2.4 Rationale

The purpose of this review is to systematically evaluate studies that explore such issues (Gough, 2007). This will allow for the identification of gaps in the research, which this thesis attempts to fill. Children's career aspirations have been targeted as "many children in the range of 10-12 years of age do engage in dynamic career exploration, using their interests and aptitude to guide how and what they learn and the goals they formulate in relation to the world of work" (Härtung et al. 2005, p.388). Career knowledge and the ability to envision oneself in a career are usually developed by the age of 10 or 11, alongside a realistic understanding of careers (McGee & Stockard, 1991). This indicates the importance of conducting this review and thesis as well as the reasoning behind selecting fifth class students.

2.5 Definition of Key Concepts

A career aspiration refers to the career that an individual hopes to achieve.

2.6 Review Questions

The purpose of this review is to answer the following questions: What are fifth class students' career aspirations? What are possible influential factors?

2.7 Literature Search

On the 8th of August 2019, a systematic literature search was performed using EBSCOhost. The following terms were searched across Psychinfo and Eric: ("career aspiration" OR "job aspiration" OR "occupational aspiration" OR "career expectation" OR "job expectation" OR "occupational expectation") AND (child OR adolescent OR youth OR "primary school" OR "middle school" OR "elementary school") (see figure 1). Career aspiration was included in the search string, alongside synonyms, to find all relevant studies. These synonyms were used in conjunction with an age range, to refine results. This search string included the terms "child" or "adolescent" or "youth", alongside the search terms for schools that children of this age would attend. Terms, such as "child" were included as the systematic review was not confined to studies conducted through schools.

This search string returned 1,585 studies. Keeping only peer-reviewed studies reduced this to 771. Limiting the pool to English only reduced this further to 697. These 697 studies were reduced to 690 studies when limited to studies published in journals. Duplicates were removed, resulting in 675 studies. These 675 studies were filtered according to whether a full-text version was available, resulting in 270 studies. The titles and abstracts of these 270 studies were screened according to exclusionary and inclusionary criteria (see table 1). These criteria related to participants, intervention, outcome and design.

Studies must have included participants that were in fifth class (fifth grade) but could include other participants additional to this. Participants were required to be from a general sample and/or numerous groups rather than specific subgroups, such as children with a specific disability. Studies which employed an intervention were not included in this systematic review. The primary outcome of studies must have been to examine children's career aspirations, using an open format rather than offering closed options. The study design must have used primary data. The rationale behind these criteria are provided in table 1. Once these inclusionary and exclusionary criteria were applied, 27 studies remained. A full-text screening was conducted of these 27 studies, as not enough information was provided in the title

and abstract to ascertain whether the inclusionary and exclusionary criteria applied. Following this, five studies remained, which were reviewed using Gough's WoE framework (2007).

Identification

| Records identified through database searching (n = 1,585) | Additional records identified through other sources (n = 0) |

Screening

Records screened (n = 1,585)

Records excluded: those not peer reviewed, in English, published in journals, duplicates or where a full-text version was not available (n = 1,315)

Full-text articles assessed for eligibility (n = 270)

Full-text articles excluded: title and abstract screened according to inclusionary exclusionary criteria (n = 243)

Eligibility

Full-text articles assessed for eligibility (n = 27)

Full-text articles excluded: full-text screened according to inclusionary exclusionary criteria (n = 22)

Included

Studies included in qualitative synthesis (n = 5)

Studies included in quantitative synthesis (meta-analysis) (n = 5)

Figure 1. *Flowchart outlining the search and screening process for studies about students' career aspirations.*

Table 1

Inclusionary and exclusionary criteria are outlined for studies about students' career aspirations.

Study feature	Inclusion criteria	Exclusion criteria	Rationale
Type of publication	Study published in a peer-reviewed journal.	The study has not gone through the peer-review process.	Peer-reviewed articles undergo a rigorous quality review by independent experts and therefore represent a higher methodological standard.
Language of study	The study must be published in English.	Studies that are not published in English.	The information can be read and understood.
Participants	Participants must include fifth class students attending primary school.	Studies which do not include fifth class students as any of the participants.	Some or all of the participants must be in fifth class as children of this age have been found to engage in dynamic career exploration (Härtung et al. 2005; McGee & Stockard, 1991). This type of cohort will be the sample of the current study, making this a particularly relevant criterion.
	The sample represents either a general sample and/or numerous subgroups.	Studies which select a specific sample, such as children who have a specific disability.	This systematic review aims to explore career aspirations and associated factors, such as gender and SES. To do this, a sample from the general populace and/or a sample from more than one

			subgroup is required.
Intervention	Studies which do not employ an intervention.	Studies which do employ an intervention.	This study does not examine the effects of an intervention as this does not align with the review questions. As such, any studies examining interventions have been excluded.
Outcomes	The primary outcome must pertain to children's selected career aspiration.	Studies where the primary outcome is not related to children's career aspirations.	This systematic review aims to explore children's career aspirations.
	. This outcome must be open to all possible career aspirations.	Studies which provide closed options for selecting career aspirations.	Open-ended questions pertaining to children's career aspirations should be incorporated to allow for a true exploration of this area.
Study setting	National and international studies are included.	No exclusionary criteria apply for the study setting.	This has been left open so as not to limit the exploration of children's career aspirations. Open-ended questions have been found to result in a wider variety of responses (Braun & Clarke, 2013).

Type of design	Only primary data can be included.	No secondary data, such as meta analyses, can be included.	The aim of this review is to add new information to the field and to adhere to systematic review guidelines.

Table 2

This table includes references for the four studies that met the criteria for inclusion in this systematic review of students' career aspirations.

Full References

Auger, R. W., Blackhurst, A. E., & Wahl, K. H. (2005). The development of elementary-aged children's career aspirations and expectations. *Professional School Counselling*, 322-329.

Blackhurst, A. E., & Auger, R. W. (2008). Precursors to the gender gap in college enrollment: Children's aspirations and expectations for their futures. *Professional School Counseling*, *11*(3), 2156759X0801100301.

Donelly, E. (2006). Saint Lucian Youth in Focus: Aspirations of Saint Lucian Rural Primary School Students. *International Education*, *35*(2), 82-104.

Phipps, B. J. (1995). Career dreams of preadolescent students. *Journal of Career Development*, *22*(1), 19-32. doi:10.1007/BF02247893.

Schmitt-Wilson, S., & Welsh, M. C. (2012). Vocational knowledge in rural children: A study of individual differences and predictors of occupational aspirations and expectations. *Learning and Individual Differences*, *22*(6), 862-867.

2.8 Mapping the field

Each study explores children's career aspiration. Some of these studies include fifth class students and students from other classes. Each of the reviewed studies implemented a survey design with Donelly (2006) and Schmitt-Wilson and Welsh (2012) using a questionnaire and Auger et al. (2005), Blackhurst and Auger (2008) and Phipps (1995) using structured interviews. Currently there are no

recognised quality criteria for evaluating survey research (Strech, Persad, Marckmann, & Danis, 2009). However, for the purpose of this review, an adapted version of the 'critical appraisal checklist for a questionnaire study' is utilised (National Institute for Health and Clinical Excellence (NICE), 2012).

2.9 Weight of Evidence

Studies are weighted according to Gough's framework (2007) and a checklist applied quality criteria (NICE, 2012) (see appendix A). WoE A rates the methodological quality, WoE B rates the relevance of the research design to the review questions and WoE C rates how well the evidence of the study answers the review question. WoE D indicates the study's overall utility in answering the review question. Each WoE is assigned a rating from 1 to 3, with 1 indicating a low WoE, 2 indicating a medium WoE and 3 indicating a high WoE (table 3).

Table 3

Gough's weight of evidence framework for each reviewed study about students' career aspirations.

Study	Methodological quality (Weight of evidence A)	Methodological relevance (Weight of evidence B)	Relevance to review question (Weight of evidence C)	Overall weighting (Weight of evidence D)
Auger, Blackhurst & Wahl (2005)	Medium (2.0)	High (3.0)	Medium (2.3)	High (2.4)
Blackhurst & Auger (2008)	High (3.0)	High (3.0)	High (2.7)	High (2.9)
Donelly (2006)	High (3.0)	High (3.0)	Medium (2.0)	High (2.7)
Phipps (1995)	High (3.0)	High (3.0)	High (2.7)	High (2.9)
Schmitt-Wilson &	High (3.0)	High (3.0)	High (2.7)	High (2.9)

Welsh (2012)

2.10 Synthesis of Findings

The findings of the five studies are synthesised according to their methodological quality (WoE A), methodological relevance (WoE B), relevance to the review question (WoE C) and overall weighting (WoE D).

2.10.1 Weight of evidence A.

Each study is scored according to criteria relating to methodological quality (NICE, 2012). These criteria are summarised in relation to each of the studies. A questionnaire was determined as the most suitable approach for two of the studies as it allowed the researchers to attempt to answer their research questions (Donelly, 2006; Mertens, 2010; Schmitt-Wilson & Welsh, 2012). For the same reason, a structured interview was the most appropriate method for the remaining three studies (Auger et al. 2005; Blackhurst & Auger, 2008, Phipps, 1995). Donelly (2006) states that the questionnaire proved valid and reliable when piloted with a small sample of students that shared similar characteristics to the primary study population. Auger et al. (2005) piloted the structured interview with eight students across three classes and subsequently made minor changes. The three remaining studies did not provide any information about validity and reliability checks (Blackhurst & Auger, 2008, Phipps, 1995; Schmitt-Wilson & Welsh, 2012).

Four of the five studies provided examples of questions asked (Auger et al. 2005; Blackhurst & Auger, 2008, Phipps, 1995; Schmitt-Wilson & Welsh, 2012). These questions were phrased clearly and simply for the intended audience. Donelly (2006) did not include examples of questions and can therefore not be rated on whether they were appropriately worded for the intended audience. Only 8 of the 30 participants recorded an answer to both the educational and occupational aspiration questions (Donnely, 2006). The wording of the questionnaire may therefore need to be considered as a possible reason for this response variability. However, not enough information is given to independently explore this. Donelly (2006, p.101) does note that the "structure of some questionnaire items" presented a limitation.

Each study included a sufficiently large and representative sample for survey research (Mertens, 2010). Please see appendix B for details about sample sizes. Sufficient methodological details are provided, allowing for future replication of

each of the reviewed studies (Maxwell, Lau & Howard, 2015). Donelly (2006) obtained a full response rate, but as stated above, there was variability in the number of questions participants answered. No participants refused to take part in two of the other studies (Auger et al. 2005; Phipps, 1995). Schmitt-Wilson and Welsh (2012) sent parental consent forms to 240 potential participants, of which 132 were returned and included in the study. Approximately 30% of participants' parents returned consent forms in Blackhurst and Auger's (2008) study. One student withdrew between wave one and two and seven students moved district and subsequently were not interviewed during wave two (Blackhurst & Auger, 2008).

Response biases are not explicitly explored in three of the studies (Auger et al. 2005; Blackhurst & Auger, 2008, Donelly, 2006). Phipps (1995) employed two people who were not within the school district to conduct the interviews with the aim of limiting response bias. The study was introduced by the class teacher as a 'new project'. Schmitt-Wilson and Welsh (2012) acknowledged the inherent response bias of asking potential participants to return consent forms.

The appropriate statistical tests were conducted, considering the type of data (quantitative) and the research questions. Each study coded participants' answers, with Schmitt-Wilson and Welsh (2012) also calculating inter-rater reliability coefficients. All relevant data were reported, including demographics and significant and non-significant findings. The link drawn between the data and the conclusions is clear and the findings are placed within the wider body of knowledge.

Four of the studies received a high WoE A rating which was determined as obtaining 12 or more of the 17 quality criteria (NICE, 2012). Donelly (2006) met 13 of these 17 quality criteria and Blackhurst and Auger (2008), Phipps (1995) and Schmitt-Wilson and Welsh (2012) met 12 of the criteria. Auger et al. (2005) received a medium WoE A, meeting 11 of the 17 criteria. Please see appendix A for further details about these quality criteria and weighting of evidence.

2.10.2 Weight of evidence B.

WoE B scores studies according to their methodological relevance. Each of the studies received a high WoE B rating (Auger et al. 2005; Blackhurst & Auger, 2008, Donelly, 2006; Phipps, 1995; Schmitt-Wilson & Welsh, 2012). WoE B rates how appropriate the research design is for answering the review question (what are

children's career aspirations and what are the influencing factors?). No manipulation of variables is required to answer these questions. Therefore, an appropriate design would be a non-experimental design, such as qualitative research and/or a survey approach (Mertens, 2010). This type of design matches the review questions and has been judged as the most appropriate.

Auger et al. (2005), Blackhurst and Auger (2008) and Phipps (1995) utilised structured interviews. Auger et al. (2005) and Blackhurst and Auger (2008) also asked the children's caregivers to complete a demographic form. Phipps (1995) asked teachers to complete a data sheet on the demographic characteristics of each student as well as any other information that the teacher felt might be pertinent to the study's aims. Schmitt-Wilson and Welsh (2012) used a demographic information sheet, an in-class group administered survey and a vocational knowledge questionnaire. Donelly (2006) used a questionnaire that also garnered demographic information. Each of these designs was non-experimental, matching the review question and therefore received a high WoE B.

2.10.3 Weight of evidence C.

WoE C rates how relevant the focus of the evidence is to the review question (Gough, 2007). The five studies were rated according to the sample, measures and setting with an average calculated across these three criteria to calculate the overall WoE C.

2.10.3.1 Sample.

Three studies received a high weighting of evidence for the sample criterion. Studies received a high rating if all the participants were in fifth class, a medium rating if participants were from fifth and other classes and a low rating if no participants were in fifth class. Donnelly (2006), Phipps (1995) and Schmitt-Wilson and Welsh (2012) received a high rating. Auger et al. (2005) and Blackhurst and Auger (2008) included participants from first, third and fifth class and as such received a medium rating. The review question asks what fifth class children's career aspirations are, hence, the importance placed upon the selected sample.

2.10.3.2 Measures.

The next criterion was how participants' career aspirations were measured. Each of the studies asked the participants for their career aspiration. This systematic review aims to explore children's views of their career aspirations, not the perceptions of others, such as teachers or caregivers. Considering the type of information sought, it appears that the most appropriate way to explore this is by inviting the views of the participants themselves (Mertens, 2010). It acknowledges the importance of the voice of the child and it can be a more reliable measure than relying on the perceptions of others (Grover, 2004; Mertens, 2010). All of the reviewed studies included this type of measure, receiving high ratings (Auger et al. 2005; Blackhurst & Auger, 2008, Donelly, 2006; Phipps, 1995; Schmitt-Wilson & Welsh, 2012).

2.10.3.3 Setting.

The setting of each study was next considered as a criterion. A high rating was awarded when a study administered the survey or interview in the school. As the participants are all in fifth class this would appear to be a practical choice. Doing it this way has a multitude of benefits, such as a higher response rate compared to electronic surveys. The participants may feel more comfortable in their usual setting, with familiar staff around. These ethical and methodological strengths are the rationale behind selecting this is a criterion for a high rating. Blackhurst and Auger (2008), Phipps (1995) and Schmitt-Wilson & Welsh (2012) implemented their study within the participant's school. Donelly (2006) and Auger et al. (2005) did not describe whether the interviews were held in the school or elsewhere, therefore receiving a low rating.

2.10.3.4 Overall weight of evidence C.

When the sample, measure and setting criteria were averaged for each study, an overall WoE C was calculated to determine the relevance of each study to the review question. Blackhurst and Auger (2008), Phipps (1995) and Schmitt-Wilson & Welsh (2012) received a high WoE C. Auger et al. (2005) and Donelly (2006) received a medium WoE C.

2.10.4 Weight of evidence D.

Weight of evidence A, B and C are each scored from one to three and averaged to calculate the WoE D. Each of the studies received a high weighting of evidence D (Auger et al. 2005; Blackhurst & Auger, 2008, Donelly, 2006; Phipps, 1995; Schmitt-Wilson & Welsh, 2012).

2.11 Primary Outcomes and Findings

The findings of the studies will be synthesised with particular emphasis placed upon findings that are relevant to the review questions: What are children's career aspirations. What are influential factors? Each study received a high overall WoE D, indicating that these studies are of a high quality. However, each contains certain limitations according to different weighting of evidences resulting in less emphasis placed upon certain findings.

Blackhurst and Auger (2008) and Schmitt-Wilson and Welsh (2012) did not include information about the types of careers children aspired towards. Donelly (2006) reported that 36.7% did not specify a career aspiration; 13.7% aspired towards medical careers, including doctors and nurses; 13.3% aspired to become a garda (police officer); and 10% aspired to become teachers and entertainers. The latter includes singers, dancers and musicians. The findings of the study conducted by Auger et al. (2005) can be viewed in table 4. Fifth grade or fifth class consisted of 44 students and can be seen on the right-hand side of the table. Sixty one percent of these students aspired towards realistic careers while 36% aspired towards fantasy careers. No further information is given that specifies the types of careers selected.

Table 4

Copied from Auger et al. (2005, p.325), detailing the characteristics of children's career aspirations.

Table 1. Characteristics of Children's Desired and Expected Careers

Nature of Career	First Grade (*n* = 41)		Third Grade (*n* = 38)		Fifth Grade (*n* = 44)	
	Desired	Expected	Desired	Expected	Desired	Expected
Specific	36 (88%)	30 (73%)	28 (74%)	22 (58%)	38 (86%)	26 (59%)
Nonspecific	3 (7%)	3 (7%)	7 (18%)	6 (16%)	5 (11%)	8 (18%)
No career given	2 (5%)	8 (20%)	3 (8%)	10 (26%)	1 (2%)	10 (23%)
Realistic	33 (80%)	29 (71%)	22 (58%)	19 (50%)	27 (61%)	24 (55%)
Fantasy	6 (15%)	4 (10%)	13 (34%)	7 (18%)	16 (36%)	6 (14%)
No career or nonspecific career	2 (5%)	8 (20%)	3 (8%)	12 (32%)	1 (2%)	14 (32%)
Sex-typed	27 (66%)	19 (46%)	20 (53%)	12 (32%)	18 (41%)	8 (18%)
Non-sex-typed	12 (29%)	14 (34%)	15 (39%)	16 (42%)	25 (57%)	26 (59%)
No career given	2 (5%)	8 (20%)	3 (8%)	10 (26%)	1 (2%)	10 (23%)

Phipps (1995) does not specify the types of careers selected by children but does provide a table that categorises them according to 'realistic', 'investigative', 'artistic', 'social', 'enterprising' and 'conventional' (see table 5).

Table 5

Copied from Phipps (1995, p.24) which categorises the different types of career
aspirations reported by children.

	Ethnic Group			Gender		
	African-American (n=37)	White (n=27)	Hispanic (n=8)	Male (n=34)	Female (n=38)	Total (n=72)
JOB CLASSIFICATION						
Realistic	12.1	12.0	25.0	26.5	2.6	13.9
Investigative	24.2	24.0	12.5	17.6	28.9	23.6
Artistic	9.1	20.0	0.0	5.9	18.4	12.5
Social	39.4	44.0	50.0	41.2	39.5	40.3
Enterprising	20.0	4.0	0.0	8.8	7.9	8.3
Conventional	0.0	0.0	12.5	0.0	2.6	1.4
TOTALS	100.0	100.0	100.0	100.0	100.0	100.0
EDUCATIONAL LEVEL						
Less than High School	0.0	8.0	0.0	5.9	0.0	2.8
High School	30.3	28.0	50.0	50.0	13.2	30.6
Post-Secondary Vocational	3.0	12.0	37.5	8.8	13.2	11.1
College—Baccalaureate	27.3	38.0	0.0	8.8	36.8	23.6
College—Post-Baccalaureate	39.4	24.0	12.5	26.5	36.8	31.9
TOTALS	100.0	100.0	100.0	100.0	100.0	100.0

Two studies found that the majority of participants were able to name their career aspiration (Auger et al. 2005; Phipps, 1995). Phipps (1995) additionally found that participants were also able to answer why they wanted to have that career (Auger et al. 2005). Influencing factors were explored by each study. Auger et al. (2005) discovered that gender influenced career aspirations, but the effect of this influence decreased amongst females as they progressed through their schooling. Gender was found to be a more influential factor on career aspirations in contrast to career expectation. Less than half of participants listed their aspiration to be the same as their expectation. Phipps (1995) found that more females than males aspired to investigative and artistic careers while males tended to aspire towards more realistic careers. However, Auger et al. (2005) found that a large proportion of males aspired to become professional athletes.

Blackhurst and Auger (2008) found that children's educational aspirations and expectations were not linked to a gender gap in university enrolment. Gender differences in aspirations were tentatively linked to a gender gap in university enrolment. This gender difference was found to widen with age. Girls were more likely to aspire to careers that required higher level education. Girls were three times more likely than boys to aspire to careers that required a graduate degree. Girls aspired to less sex-typed careers than boys and these became less sex-typed with age.

Other influential factors included family, teachers, self-confidence and liking school (Donelly, 2006). Donelly (2006) measured family influence according to whether the child felt that their caregiver/s helped them with their schoolbooks and getting to school. In contrast, Auger et al. (2005) explored familial influence by cross referencing children's career aspirations with the careers of their caregivers. Findings showed that few participants cited their caregiver's career as their aspiration (Auger et al. 2005). Phipps (1995) detected two other factors related to occupational variables (career aspiration, required level of education and goal content) which were SES and ethnicity. The career aspirations of children with a higher SES, were more likely to be motivated by their interests or generativity goal contents. Children from a lower SES, were more likely to be motivated by role models or financial goal contents. Ethnicity related to the educational level required for career aspirations and the motivation behind such aspirations. African-American children aspired more towards careers that required a higher educational level, in contrast to White or Hispanic children. In relation to motivation, White children were more likely to be motivated by their interests and self-perceived aptitude, in contrast to African-American children who were more likely to be motivated by generativity or financial goal contents. Factors which did not relate to occupational variables included grade, ability and achievement levels (Phipps, 1995).

Aspiring towards prestigious careers was a recurrent finding in three of the four studies (Auger et al. 2005; Donelly, 2006; Phipps, 1995). Phipps (1995) found that the most popular careers were those which were prestigious, requiring post-graduate qualifications. Another study discovered that all of the participants aspired towards prestigious careers and that these careers were more prestigious than those of their caregivers (Donelly, 2006). Auger et al. (2005) found that older students aspired towards more prestigious careers in contrast to their younger counterparts

and that career aspirations and expectations did not differ according to social prestige.

Schmitt-Wilson and Welsh (2012) focused on career knowledge rather than career aspirations. They found that academic achievement significantly related to levels of career knowledge, aspirations and expectations (Schmitt-Wilson & Welsh, 2012). No significant positive relationships were found between career knowledge and gender and SES (Schmitt-Wilson & Welsh, 2012). These findings possess implications for the practice of EPs and future research.

2.12 Implications and Recommendations for Practice and Research

Career knowledge and aspirations develop during childhood and adolescence, continuing throughout the lifespan (Vondracek, 2001). As EPs work to support Children and Young People (CYP), it is important to be aware of influential factors, such as gender and SES, on the aspirations of CYP. It has been noted anecdotally in the author's own practice as a trainee and that of qualified EPs, that the aspirations of children are changing with the influx of new technology and communication methods. Investigating this allows for further insight and for EPs to be up to date on these changes when working with CYP. Implications for research in relation to the current study will be discussed following a systematic review of studies focusing on goal contents.

2.13 Systematic Review of Goal Contents

A systematic review of goal contents will be conducted next and the findings synthesised with those of career aspirations. This systematic literature review will include an introduction, context, rationale, definition of key concepts, review questions, literature search, mapping the field, weight of evidence, synthesis of findings according to the different weights of evidence, primary outcomes and findings and implications and recommendations for practice and research.

2.14 Introduction

The purpose of this systematic review is to explore associated factors with goal contents through the weighting of relevant empirical studies (Gough, 2007).

2.15 Context

This systematic literature review is contextualised within GCT, a mini-theory of SDT. SDT, its' underlying assumptions and GCT will be detailed in the following sections.

2.16 Self-Determination Theory

SDT is an "organismic theory of human behaviour and personality development" (Ryan & Deci, 2017). It is a macro-theory, comprising of six mini-theories (see figure 2). Each mini-theory addresses a certain facet of behaviour and/or personality functioning (Deci & Ryan, 2008a). Basic needs theory and organismic dialectic theory underlie SDT and all its' mini-theories (Ryan & Deci, 2017).

Organismic dialectic theory is based on the assumption that human beings have inherent tendencies towards proactively interacting with their environment, mastering challenges and integrating new experiences into a coherent sense of self (Deci & Ryan, 2000). These inherent tendencies do not necessarily operate automatically, rather they require support from the social context (Deci & Vansteenkiste, 2004). Equally, the social context can thwart these tendencies, inhibiting psychological development (Deci & Vansteenkiste, 2004).

The type of support that is required for healthy development and functioning is the fulfilment of all three of the basic psychological needs (Ryan & Deci, 2017). According to SDT, people share the basic needs for autonomy, competence and relatedness (Ryan & Deci, 2017) (see figure 2). If or when each of these needs are satisfied, outcomes, such as psychological well-being and optimal functioning are expected (Ryan & Deci, 2000). When one or more of these needs are thwarted, psychological ill-being and non-optimal functioning are to be expected (Deci & Vansteenkiste, 2004).

These theories and associated assumptions underlie SDT, thereby informing each of the mini-theories. These mini-theories include cognitive evaluation theory, organismic integration theory, causality orientations theory, basic psychological needs theory, goal contents theory and relationships motivation theory (Ryan & Deci, 2017) (see figure 2). The focus of the current study is GCT, and as such, the other mini-theories, under SDT, will not be explored in-depth.
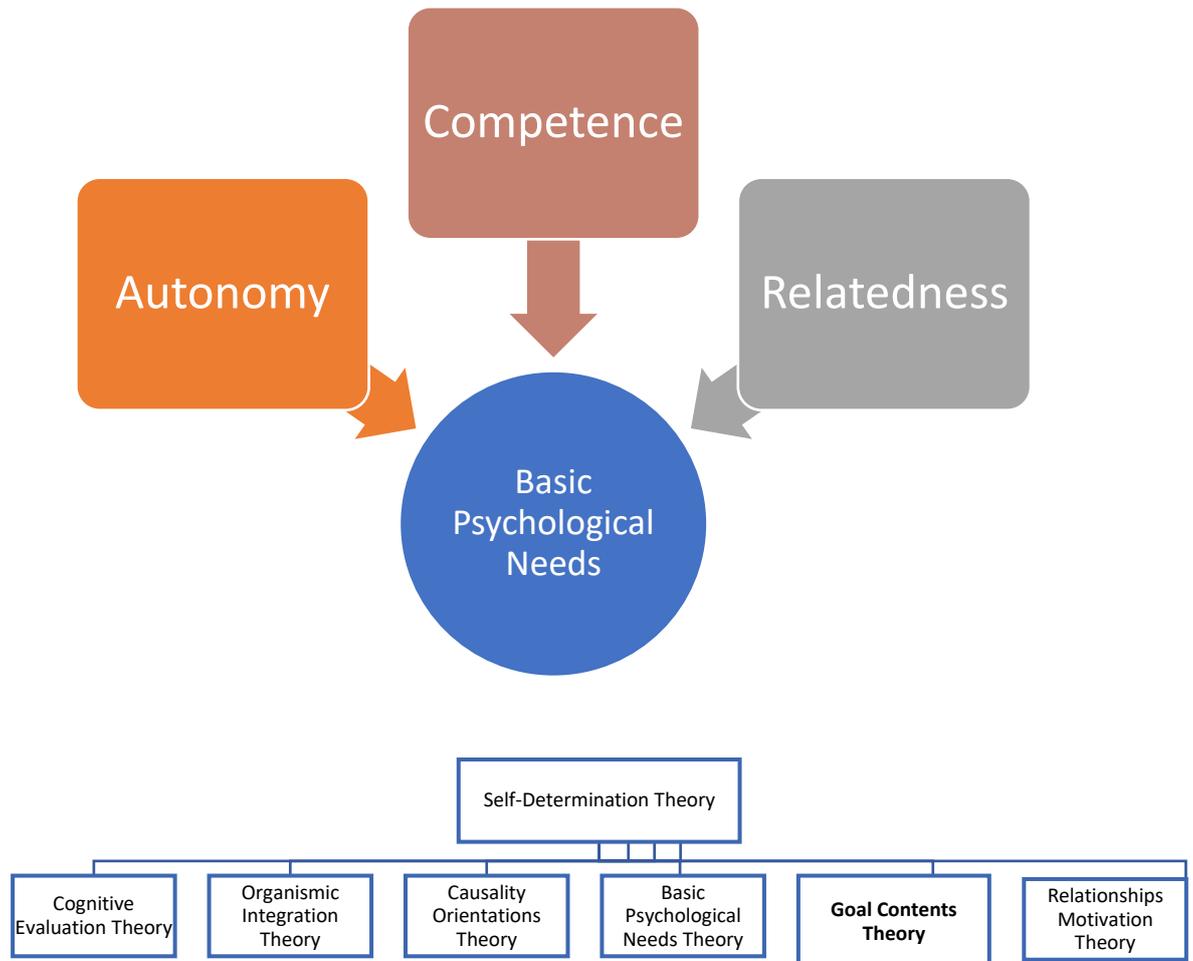
Figure 2. *SDT and its' mini-theories are founded upon the assumption of basic need fulfilment. GCT is one of these mini-theories.*

SDT originated from work completed by Ryan and Deci in the 1970's and 1980's (Deci & Ryan, 1985). Since this time, it has been further developed and applied to numerous fields, such as education, sports, organisational psychologies, psychotherapy and virtual worlds (Ryan & Deci, 2017). To the author's knowledge, at the time of publication of the current study, no study has been published that explores children's career aspirations from a self-determination theoretical perspective. Poulsen, Rodger and Ziviani (2006) conducted a review of the literature around children's willingness to engage in occupations and retroactively applied a self-determination theoretical perspective. However, no study was conducted that combined the two areas. The current study specifically seeks to use the mini-theory of SDT, GCT, to understand the goal contents of children's career aspirations.

2.17 Goal Contents Theory

While SDT is predominantly concerned with 'why' people engage in behaviours i.e. the motivation, GCT is concerned with the 'what'. What is the content of the aspiration that they are pursuing? Research has indicated that aspirations can generally be categorised as either intrinsic or extrinsic (Kasser & Ryan, 1993, 1996). According to organismic dialectical theory, humans possess an inherent tendency towards growth (Ryan & Deci, 2017). Following eudemonic principles, well-being is viewed as a process of "fulfilling one's virtuous potentials and living as one was inherently intended to live" (Deci & Ryan, 2008b, p.2).

In relation to goal contents, Ryan and Deci (Ryan & Deci, 2017) posit that intrinsic goal contents are driven by people's inherent desire to fulfil their own potential and lead meaningful lives. Examples of intrinsic aspirations include: contributing to the community, health, personal growth, generativity and relationships (Grouzet et al. 2005; Kasser & Ryan, 1996). Intrinsic aspirations are differentiated from extrinsic aspirations. Intrinsic aspirations arise from within the person while extrinsic aspirations arise from outside the person. Examples of extrinsic aspirations include: fame, wealth and physical appearance (Grouzet et al. 2005; Kasser & Ryan, 1996).

It is the goal content rather than the career that can be intrinsic or extrinsic. For example, a child who aspires to be a doctor so that they can give back to the community and engage in personal growth, would have an intrinsic aspiration. Another child who also aspires to become a doctor so that they can earn a large salary and become renowned in their field, would have an extrinsic aspiration. It is the goal content rather than the career that can be intrinsic or extrinsic.

Intrinsic and extrinsic aspirations are differentially associated with well-being (see figure 3) (Kasser & Ryan, 1996). Research has indicated that intrinsic aspirations fulfil the basic psychological needs for autonomy, competence and relatedness, which are associated with well-being and optimal functioning (Deci & Vansteenkiste, 2004; Hope et al. 2018; Ryan & Deci, 2000). Extrinsic aspirations thwart basic need satisfaction and are associated with ill-being and non-optimal functioning (Deci & Vansteenkiste, 2004; Ryan & Deci, 2000). Research has demonstrated that the need for autonomy plays a large role in these effects,

specifically autonomous and controlled behaviours (Bartholomew, Ntoumanis, Ryan, Bosch & Thøgersen-Ntoumani, 2011; Black & Deci, 2000; Gagné & Deci, 2005; Niemiec, & Ryan, 2009; Ryan & Deci, 2006; Vansteenkiste, Lens & Deci, 2006). Extrinsic aspirations are more likely to be controlled, resulting in the need for autonomy being thwarted (Ryan & Deci, 2017). Intrinsic aspirations have a greater tendency to be autonomous, thereby fulfilling this basic need, resulting in greater well-being (Ryan & Deci, 2000). These findings have been generalised across cultures, including both collectivist and individualist cultures (Romero, Gómez-Fraguela & Villar, 2012; Ryan, Chirkov, Little, Sheldon, Timoshina, & Deci, 1999).

Research has indicated that it is an overemphasis on extrinsic goal contents that can produce a negative impact upon well-being (Deci & Ryan, 2000; Deci & Vansteenkiste, 2004; Rijavec, Brdar & Miljkovic, 2011; Salmela-Aro & Nurmi, 1997). Rijavec et al. (2011) found that possessing high extrinsic and high intrinsic goal contents was the most linked with well-being. Ryan and Deci (2000, 2017) differentiate goal content from motivation. Although they are related, a person could be extrinsically motivated but have an intrinsic goal content (Sheldon et al. 2004). For example, someone may have a goal content of contributing to the community but they are extrinsically motivated by trying to impress someone (Ryan & Deci, 2017). However, after controlling for motivation, the goal content is still linked with well-being (Sheldon et al. 2004).
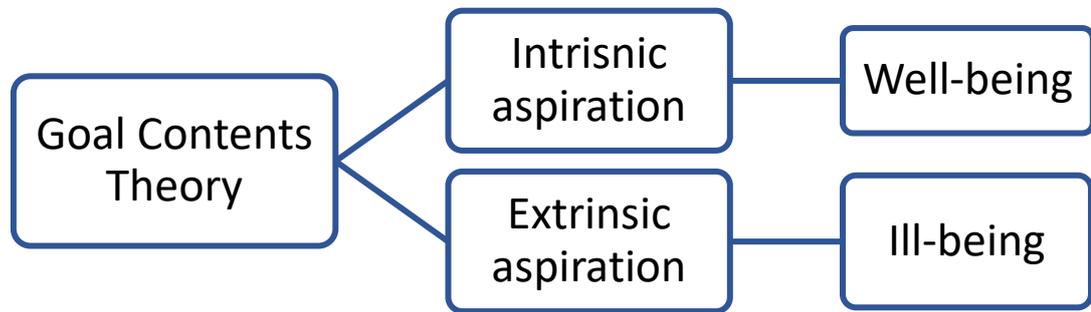
Figure 3. *Goals can be extrinsic or intrinsic, each differentially associated with well-being.*

Similar results have been replicated with children and adolescents, denoting the importance of studying the aspirations of children (Easterbrook, Wright, Dittmar & Banerjee, 2014; Ku, Dittmar & Banerjee, 2014; Schmuck, Kasser & Ryan, 2000; Martos & Kopp, 2014; Utvær, Hammervold, & Haugan, 2014). Research in the area of career aspirations also indicates the value of examining children's career aspirations, as children appear to be capable of formulating career aspirations with a growing knowledge of the world of work (Härtung et al. 2005; McGee & Stockard, 1991).

2.17.1 Outcomes associated with goal contents.

Studies have discovered numerous other outcomes associated with intrinsic and extrinsic goal contents. Several studies have found that having intrinsic aspirations is linked to well-being while having extrinsic aspirations is linked to ill-being, in line with basic needs satisfaction (Kasser & Ryan, 1996). Nishimura and Suzuki (2016) found that intrinsic goal contents are associated with increased life satisfaction and extrinsic goals are negatively associated with life satisfaction. Cozzolino, Staples, Meyers, and Samboceti (2004) discovered that intrinsic goals were linked to greater spirituality and lower levels of greed. Other positive outcomes associated with intrinsic aspirations include increased learning, performance, persistence and school success while extrinsic aspirations can produce negative

effects for each of these outcomes (Fryer, Ginns & Walker, 2014; Ku et al. 2014; Vanteenkiste, Simons, Lens, Sheldon & Deci, 2004; Vansteenkiste et al. 2006).

Possessing extrinsic goals has been shown to be associated with other negative outcomes, such as an increase in high risk behaviours, drug and television usage and job burnout (Schmuck, Kasser & Ryan, 2000; Roche & Haar, 2013; Williams, Cox, Hedberg & Deci, 2000). Extrinsic goal contents have also been found to produce a negative impact on relationship variables. People with a high proportion of extrinsic goal contents may have more conflictual relationships that are less satisfying and trustful, in contrast to those who have intrinsic goals (Kasser & Ryan, 2001). People with intrinsic goals have comparatively higher quality relationships and engage in more give and take, possibly fuelled by generativity goals (Kasser & Ryan, 2001; Sheldon & Kasser, 1995). Those with extrinsic goals can be less empathic, with subsequent effects on their relationships (Dittmar, Bond, Hurst & Kasser, 2014). Some people may use their relationships to progress the achievement of their own aspirations (Sheldon & Kasser, 1995).

Using the framework of GCT will allow for insight into the goal contents of children's career aspirations. The link between intrinsic and extrinsic aspirations and well-being is well documented and may pose implications for the findings of the current study (Deci & Vansteenkiste, 2004; Kasser & Ryan, 1996; Ryan & Deci, 2000). Although no research has applied GCT to career aspirations, studies which apply GCT to other types of aspirations will be systematically reviewed.

2.18 Rationale

The current mental health crisis in Ireland and the well-being outcomes associated with intrinsic and extrinsic goal contents, flags this as an important area to examine (Healthy Ireland, 2016; Rochford, Morgan, Quinn & Farren, 2018). The findings of this systematic review will be combined with that of the review of children's career aspirations. The lack of empirical research conducted that combines these two strands, indicates a gap in the literature, which this systematic review seeks to further examine by first looking at the factors associated with goal contents.

2.19 Definition of Key Concepts

SDT is a macro-theory that is concerned with motivation, behaviour and personality (Ryan & Deci, 2017). SDT is founded on the premise that all humans have **basic psychological needs** which include: autonomy, competency and relatedness (Ryan & Deci, 2017). Basic need fulfilment occurs when each of these needs is achieved (Deci & Vansteenkiste, 2004; Ryan & Deci, 2000). **GCT** is a mini-theory of SDT and is concerned with a persons' goal contents. According to this theory, aspirations can be either intrinsic or extrinsic with differentially associated outcomes (Kasser & Ryan, 1993, 1996). **Intrinsic aspirations or goals** are those that revolve around such things as contributing to the community, health, personal growth, generativity and relationships (Grouzet et al. 2005; Kasser & Ryan, 1996). **Extrinsic aspirations or goals** revolve around such things as fame, wealth and physical appearance (Grouzet et al. 2005; Kasser & Ryan, 1996). Extrinsic aspirations are dependent upon factors outside the person while intrinsic aspirations are dependent upon factors within the person.

2.20 Review Question

The purpose of this review is to answer the following question. What factors are differentially associated with peoples' goal contents?

2.21 Literature Search

On the 5th of July 2018, a systematic literature search was performed using EBSCOhost. "Goal contents" was searched across Psychinfo, Academic Search Complete and Education Source (see figure 4). Of the 80 studies identified, those which were not peer-reviewed, and which were exact duplicates, were excluded. This left 41 studies, whose title, abstract and procedure were screened. It was necessary to screen the procedure of each study to discern whether they allowed for self-generated goals and whether they assessed participants' goal contents (see table 6). Following screening, using these exclusionary and inclusionary criteria, six studies remained. Please note that two of these studies used the same data set but applied different analyses to answer different research questions (Hyvönen, Feldt, Salmela-Aro, Kinnunen & Mäkikangas, 2009; Hyvönen, Feldt, Tolvanen & Kinnunen, 2010). Another of the selected articles contained three studies, two of which met the inclusionary and exclusionary criteria (Sheldon et al. 2004). Although

the previous systematic review focused on studies which included fifth class participants, this was not possible for this review as none of the screened studies included primary-aged children. This gap was considered and weighted using Gough's WoE C (2007). Gough's framework is applied to each of the screened studies. Figure 4 details the search strategy and screening process that was employed.
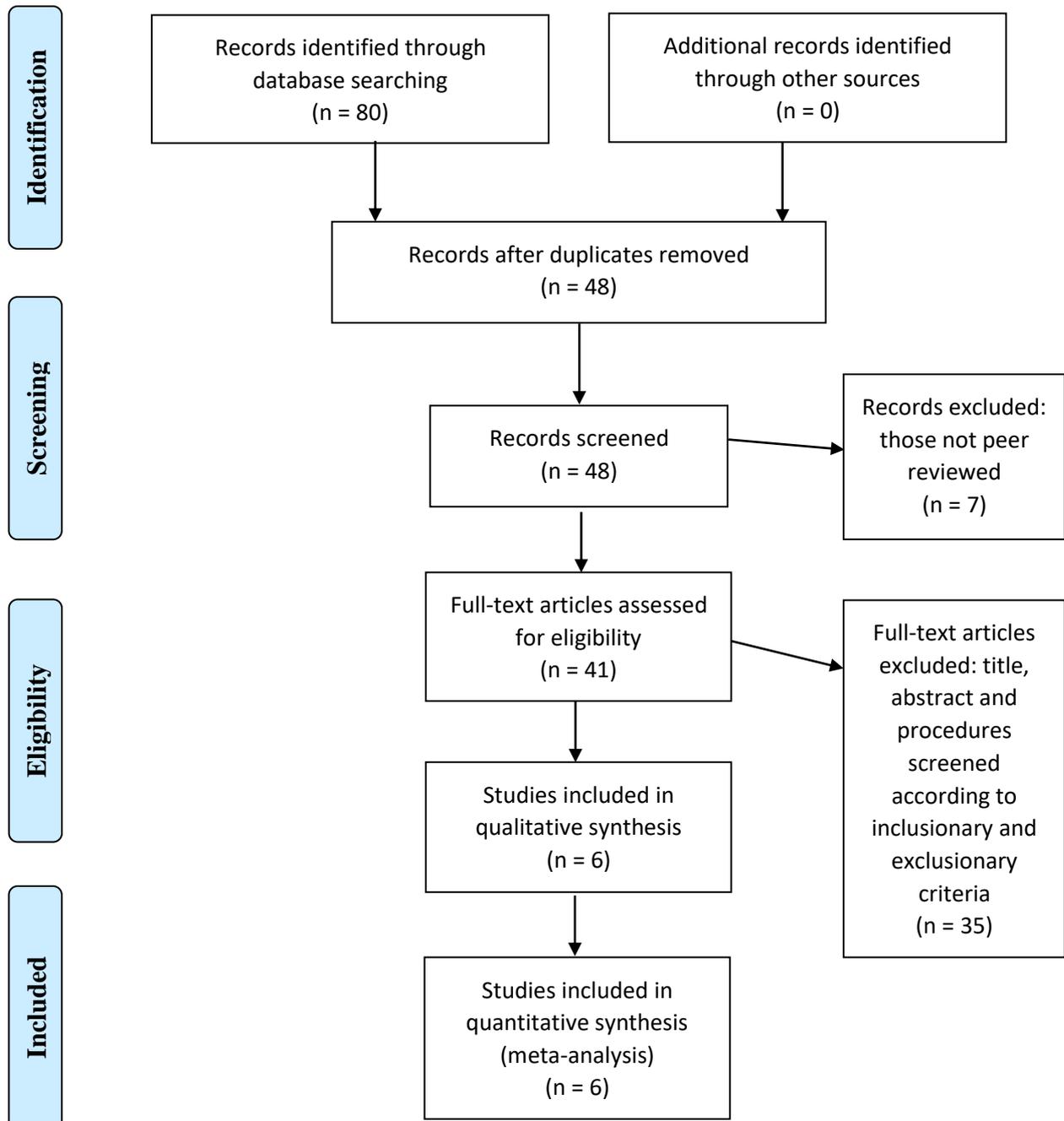
Figure 4. *Flowchart outlining the search and screening process for studies about goal contents.*

Table 6

Inclusionary and exclusionary criteria are outlined for studies about goal contents.

Study feature	Inclusion criteria	Exclusion criteria	Rationale
Type of publication	Study published in a peer-reviewed journal.	The study has not gone through the peer-review process.	Peer-reviewed articles undergo a rigorous quality review by independent experts and therefore represent a higher methodological standard.
Language of the study	The study must be published in English.	Studies that are not published in English.	The information can be read and understood by the reviewer.
Participants	Those whose goals are assessed must be the participants.	Studies which includes participants whose goals are not subject to assessment. For example, a study that explores parental aspirations for their children.	This thesis aims to assess the goal contents of participants, rather than assess goal contents according to the perception of others.
Measures	The study must garner self-generated goals from participants. Participants can be prompted to provide goals that	Studies which provide pre-set goals to participants.	Self-generated goals allow for a more genuine assessment of goals and goal contents that is not dictated by an external person (Mertens, 2010; Ryan

	fit broad categories, such as work and study.		& Deci, 2017).
	One measure must be of goal contents.	No measure of goal contents is included in the study.	Goal contents must be a measure in order to answer the review question: What factors are differentially associated with goal contents?
	Studies which do not manipulate participants' goals.	Studies which manipulate goals will not be included.	Studies that manipulate goals to observe subsequent effects constitute another strand of research. This review seeks to examine factors that are differentially associated with goal contents and will focus on this specifically.
Study setting	National and international studies are included.	No exclusionary criteria apply for the study setting.	All settings have been included to expand the search for this systematic review.
Type of design	Only primary data can be included.	No secondary data, such as meta analyses can be included.	The aim is to add new information to the field and adhere to systematic review

guidelines.

Table 7

This table provides references for the six studies included in this systematic literature review of goal contents.

Full References

Hyvönen, K. k., Feldt, T., Salmela-Aro, K., Kinnunen, U., & Mäkikangas, A. (2009). Young managers' drive to thrive: A personal work goal approach to burnout and work engagement. *Journal of Vocational Behavior*, *75*(2), 183-196. doi:10.1016/j.jvb.2009.04.002

Hyvönen, K. k., Feldt, T., Tolvanen, A., & Kinnunen, U. (2010). The role of goal pursuit in the interaction between psychosocial work environment and occupational well-being. *Journal Of Vocational Behavior*, *76*(3), 406-418. doi:10.1016/j.jvb.2009.10.002

Jongho, S., Soowon, P., Jun-Young, L., & Ji Eun, K. (2016). Comparative study of goal contents and goal characteristics between medical and business students. *Korean Journal of Medical Education*, *28*(1), 17-24. doi:10.3946/kjme.2016.5

Kökönyei, G., Reinhardt, M., Pajkossy, P., Kiss, B., & Demetrovics, Z. (2008). Characteristics of personal strivings and their relationship with life satisfaction. *Cognitie, Creier, Comportament/Cognition, Brain, Behavior*, *12*(4), 409-433.

Salmela-Aro, K., & Nurmi, J. (1997). Goal Contents, Well-being, and Life Context During Transition to University: A Longitudinal Study. *International Journal of Behavioral Development*, *20*(3), 471-491. doi:10.1080/016502597385234

Sheldon, K. M., Ryan, R. M., Deci, E. L., & Kasser, T. (2004). The independent effects of goal contents and motives on well-being: It's both what you pursue and why you pursue it. *Personality and Social Psychology Bulletin*, *30*(4), 475-486. doi:10.1177/0146167203261883

2.22 Mapping the field

Each study explored goal contents and differentially associated factors. All of the studies employed a survey design, using different types of questionnaires and additional measurements to gauge factors that were differentially associated with participants' goal contents. Currently there is no single recognised quality criteria for evaluating survey research (Strech et al. 2009). However, for the purpose of this review, an adapted version of the 'Critical Appraisal Checklist for a Questionnaire Study' was utilised (NICE, 2012).

2.23 Weight of Evidence

Studies are weighted according to Gough's Weight of Evidence framework (2007) and rated using specific quality criteria (NICE, 2012) (see appendix D). WoE A rates the methodological quality, WoE B rates the relevance of the research design to the review question and WoE C rates how well the evidence of the study answers the review question. WoE D indicates the study's overall utility in answering the review question. Each WoE will be assigned a rating from 1 to 3, with 1 indicating a low WoE, 2 indicating a medium WoE and 3 indicating a high WoE (see table 8).

Table 8

Gough's weight of evidence framework applied to the six reviewed goal contents studies.

Study	Methodological quality (Weight of evidence A)	Methodological relevance (Weight of evidence B)	Relevance to the review question (Weight of evidence C)	Overall weighting (Weight of evidence D)
Hyvönen et al. (2009)	High (3.0)	High (3.0)	Medium (2.0)	High (2.7)
Hyvönen et al. (2010)	High (3.0)	High (3.0)	Medium (2.0)	High (2.7)
Jongho et al. (2016)	Medium (2.0)	High (3.0)	High (2.7)	High (2.6)
Kökönyei et	Medium	High	Medium	Medium

al. (2008)	(2.0)	(3.0)	(2.0)	(2.3)
Salmela-Aro, & Nurmi (1997)	High (3.0)	High (3.0)	Medium (2.0)	High (2.7)
Sheldon et al. (2004)	High (3.0)	High (3.0)	High (2.7)	High (2.9)

2.24 Synthesis of Findings

The findings of the six studies will be synthesised according to their methodological quality (WoE A), methodological relevance (WoE B), relevance to the review question (WoE C) and overall weighting (WoE D).

2.24.1 Weight of evidence A.

Each of the six studies were coded according to their methodological quality (NICE, 2012) (see appendix D). Each study appropriately utilised a survey design, which may have included a questionnaire and/or other assessment tools, depending upon the specific aim/s of the study (Hyvönen et al., 2009, 2010; Jongho et al., 2016; Kökönyei et al., 2008; Salmela-Aro & Nurmi, 1997; Sheldon et al., 2004). Each study calculated and reported acceptable reliability figures for the measurement tools that were used. All of the studies provided examples of questions which were clearly stated and appropriately matched to the intended audience. None piloted their study and measurements beforehand, indicating a significant weakness across the studies included for review.

Hyvönen et al. (2009, 2010), Salmela-Aro and Nurmi (1997) and Sheldon et al. (2004) included details of their methodological procedure, to the degree that it would be replicable (Maxwell et al. 2015). Jongho et al. (2016) and Kökönyei et al. (2008) did not provide adequate details for replication. Hyvönen et al. (2009, 2010) and Salmela-Aro, & Nurmi (1997) included both response rates and details of those who refused to participate. The remaining studies included the former but not the latter (Jongho et al. 2016; Kökönyei et al. 2008; Sheldon et al. 2004). Hyvönen et al. (2009, 2010) explored possible response biases, such as unfilled questions that may have been because participants were unsure of their future goals or participants feeling "overloaded". The remaining studies did not appear to explore possible

response biases (Jongho et al. 2016; Kökönyei et al. 2008; Salmela-Aro & Nurmi. 1997; Sheldon et al. 2004).

The analyses used were judged to be appropriate considering the data gathered and the research questions. Each study contained both qualitative and quantitative elements, for which relevant significant and non-significant results were reported. In each case the data were clearly linked to conclusions drawn. Findings were contextualised, and recommendations were justified according to the findings. In relation to the aforementioned areas, Jongho et al. (2016) and Kökönyei et al. (2008) received a medium WoE A. Hyvönen et al. (2009, 2010), Salmela-Aro and Nurmi (1997) and Sheldon et al. (2004) received a high WoE A. WoE B will be discussed in the following section.

2.24.2 Weight of evidence B.

WoE B rates each study on how appropriate the selected research design is for answering the review question: What factors are differentially associated with peoples' goal contents? This question does not require an experimental design as there is no manipulation of variables (Mertens, 2010). Rather a non-experimental design would be the most appropriate. Each of the reviewed studies utilised a non-experimental survey design (Hyvönen et al., 2009, 2010; Jongho et al., 2016; Kökönyei et al., 2008; Salmela-Aro & Nurmi, 1997; Sheldon et al., 2004). Employing this type of design allowed for the exploration of participants' goal contents as well as an examination of associated factors, which were measured using an array of tools. For this reason, each of the reviewed studies received a high WoE B. WoE C will be discussed next.

2.24.3 Weight of evidence C.

The six studies are rated according to their relevance to the review question using the headings: sample, measures, data analysis and overall WoE C.

2.24.3.1 Sample.

The categories of sample, measurement and data analysis are used to rate the reviewed studies on the relevance of their evidence to the systematic review question. Sample has been selected as a category because the current study seeks to examine the career aspirations of children. Studies which included such a sample would therefore receive a high rating. However, none of the reviewed studies included primary-aged children. Three studies were awarded a medium rating as they included participants attending a third-level institution (Jongho et al., 2016; Salmela-Aro & Nurmi, 1997; Sheldon et al., 2004). The three remaining studies included participants who were either in employment or whom had completed education, thereby receiving a low rating (Hyvönen et al., 2009, 2010; Kökönyei et al., 2008).

2.24.3.2 Measures.

The second category the studies are rated on was the type of measurement they used to determine participants' goal contents. The review question asks what factors are associated with goal contents, indicating the need to assess this. Measurement tools have not been specified, to allow for the exploration of all possible factors. As this thesis uses GCT to understand goal contents, studies which followed this theoretical framework received a high rating. Salmela-Aro and Nurmi (1997) did not frame their study using GCT and were therefore awarded a medium rating. The remaining studies achieved high ratings as they either used GCT to explore goal contents or used open-ended question, the results of which were then later coded according to GCT (Hyvönen et al., 2009, 2010; Jongho et al., 2016; Kökönyei et al., 2008; Sheldon et al., 2004). All studies assessed goal contents, in some format.

2.24.3.3 Data analysis.

The way the studies coded goal contents affected the rating they received for the category of data analysis. According to GCT, goal contents can be categorised as either intrinsic or extrinsic (Kasser & Ryan, 1996). Differential outcomes are associated with each (Kasser & Ryan, 1993, 1996). If studies explicitly coded results in this way they achieved a high rating. Jongho et al. (2016) and Sheldon et al. (2004) did so, thereby achieving a high rating. The four remaining studies coded goal contents but did not explicitly code them as extrinsic or intrinsic, thereby receiving a medium rating (Hyvönen et al., 2009, 2010; Kökönyei et al. 2008;

Salmela-Aro & Nurmi, 1997). The overall WoE C will be summarised for the reviewed studies.

2.24.3.4 Overall weight of evidence C.

An average was calculated according to sample, measurement and data analysis. Jongho et al. (2016) and Sheldon et al. (2004) received a high overall WoE C. Hyvönen et al. (2009, 2010), Kökönyei et al. (2008) and Salmela-Aro and Nurmi (1997) received a medium overall WoE C. WoE C has been averaged with WoE A and B to calculate the overall WoE D, which will be discussed next.

2.24.4 Weight of evidence D.

Kökönyei et al. (2008) received a medium WoE D. Hyvönen et al. (2009, 2010), Jongho et al. (2016), Salmela-Aro and Nurmi (1997) and Sheldon et al. (2004) were awarded a high WoE D. Therefore, more weight should be given to the findings of these five studies, in contrast to Kökönyei et al. (2008).

2.25 Primary Outcomes and Findings

The findings of each of the studies will be reviewed and synthesised with more emphasis placed upon studies with higher ratings. Kökönyei et al. (2008), which received a medium WoE D, found that generativity goal contents were positively associated with life satisfaction. Uncoded goal contents which related to goals about participant's daily routine were found to be negatively associated with life satisfaction. As the remaining studies received a higher WoE D, their findings will be discussed more in depth.

Hyvönen et al. (2009, 2010) categorised goal contents into competence, career progression, well-being, stress management, job satisfaction, motivation, job change, job security, organisation and finance. Hyvönen et al. (2009, 2010) used the same data set to answer different research questions. Hyvönen et al. (2009) discovered that high levels of engagement with work and low burnout levels were related to having organisational goals. Conversely, high levels of burnout and low levels of work engagement were related to having job change and well-being goals (work satisfaction, work-life balance and health). Hyvönen et al. (2010) took a slightly different slant and looked at how Effort, Reward and Effort–Reward Imbalance (ERI) were factors in the categorisation of goals. The relationship

between ERI and well-being in participants' current career was mediated by goal categories. The psychosocial occupational environment was a factor in the goal contents of participants. These goal contents were found to operate as mediatory factors between the environment and well-being at work.

Salmela-Aro and Nurmi (1997), again, took a different perspective on goal contents by looking at the association between life situations and goal contents, as well as the association to well-being. Earlier familial life situations were found to be associated with interest in familial goals. Goals relating to future life choices, such as having children, predicted high levels of well-being. Possessing high levels of well-being, in turn, predicted interest in these goals. Low levels of self-esteem predicted interest in goals about the self which was associated with low levels of well-being.

Although these studies demonstrate a link between goal contents and well-being, they do not explicitly categorise goal contents as either intrinsic or extrinsic (Kasser & Ryan, 1993, 1996). This is a key tenet of GCT and represents a shared limitation in the relevance of the aforementioned studies to the review question (Kasser & Ryan, 1993, 1996). Previous studies have found that intrinsic aspirations are associated with better well-being while extrinsic aspirations are associated with ill-being (Kasser & Ryan, 1993, 1996; Ryan et al. 1999).

Jongho et al. (2016) and Sheldon et al. (2004) categorise their findings according to GCT. Jongho et al. (2016) found that the goal contents of participants differed according to their major. Medical students had higher social concerns within their goals i.e. intrinsic aspirations. Business students expressed higher goals pertaining to the pursuit of wealth i.e. extrinsic aspirations. Medical students showed higher levels of satisfaction with their major in contrast to business students. Results indicated that social values and goal attainability could be significant predictors of major satisfaction of medical students.

Sheldon et al. (2004) contained three different studies within the same publication. Two of these three studies met the inclusionary and exclusionary criteria. The first study employed a cross-sectional within-person survey design. Participants' goal contents and motivation were found to produce independent variance regarding subjective well-being. Those who possessed intrinsic goals had higher well-being in contrast to those who possessed extrinsic goals. The second

study employed a between-person two-wave longitudinal survey design. The findings from this study indicated that goal contents and motivation produced independent effects on well-being at a one-year follow-up. Although the reviewed studies differ in how and if they explicitly use GCT to frame their findings, a link has been drawn in each of the studies between goal contents and well-being and life and major satisfaction. The implications and recommendations for the practice of educational psychology as well as implications for research will be discussed next.

2.26 Implications and Recommendations for Practice

EPs may benefit from adding SDT, and more specifically GCT, to their knowledge base, considering the link to well-being. This is particularly important given the current mental health crisis in Ireland and the role that the EP plays in supporting CYP's well-being (Brich et al. 2015; DES, 2018c; Healthy Ireland, 2016; Rochford et al. 2018; Roffey, 2015). Each of the reviewed studies demonstrated a link between goal contents and well-being, life satisfaction and major satisfaction. Having an awareness of this link may then inform the practice of EPs. The implications for research will be explored by synthesising the findings from the systematic review of goal contents and career aspirations.

2.27 Implications for Research

The first strand of the systematic review focused on career aspirations while the second strand focused on goal contents. At the time of this publication, the author was unable to find studies that explored these two strands combined. In this section, the findings of two systematic reviews of these strands will be synthesised and gaps for future research identified, with reference to how the current study aims to fill some of these gaps.

The need to conduct two systematic reviews, in and of itself, signifies a gap in the research as no studies seem to have been conducted, to date, that explore children's career aspirations within the framework of GCT. The importance of exploring this gap in the research is underscored by the factors associated with different types of goal contents. Factors that were found to be differentially associated with goal contents in the reviewed studies included well-being, satisfaction with undergraduate courses and satisfaction with life. According to GCT, goal contents can generally be categorised as either intrinsic or extrinsic (Kasser &

Ryan, 1993, 1996). Jongho et al. (2016) and Sheldon et al. (2004), as well as previous research, found that intrinsic aspirations are linked to well-being while extrinsic aspirations are linked to ill-being (Kasser & Ryan, 1996). This link to well-being is of extreme importance when contextualised with the current mental health crisis in Ireland (Healthy Ireland, 2016; Rochford et al. 2018). The current study aims to offer insight into the career aspirations of children, using GCT, thereby allowing for the exploration of goal contents and possible implications for well-being.

This exploration can be conducted with children as Auger et al. (2005) and Phipps (1995) found that children were capable of answering questions about what they want to be and why they would like to be this. This has implications for the current study, as it indicates its viability and validity. It also possesses implications for the practice of EPs, as this is an area for discussion that children can actively engage in (Härtung et al. 2005; McGee & Stockard, 1991). In relation to research, an area that appears to require further exploration is the differences in the career aspirations of children according to factors, such as SES and gender. Within the systematic review of career aspirations, Auger et al. (2005) and Phipps (1995) found differences according to gender, with Phipps (1995) also discovering differences according to SES. However, Schmitt-Wilson and Welsh (2012) did not find differences for either SES or gender. All of these studies received high overall WoE D, indicating that this area appears to require further investigation.

The potential differential impact of attending either an urban or rural school, or a same-sex or co-educational school was not explored in the reviewed studies. Previous research has indicated that children attending rural schools aspire to their parents' occupations more than those attending urban schools (Härtung, Porfeli & Vondracek, 2005). This may be because children in rural areas have a finite number of occupations available to them (Härtung et al. 2005). The gender make-up of the school (co-educational or same-sex school) has been selected as another factor to explore in the current study, as Watson, Quatman and Edler (2002) demonstrated differences in the career aspirations of students depending upon the gender make-up of the school they attended.

Alongside the exploration of such factors is an examination of changes in children's career aspirations, in contrast to empirical findings from previous decades. Chambers et al. (2018) found a shift in the aspirations of children with the influx of new communication methods, gaming and careers in the media, such as youtubers. To keep up to date with these advancements, new research is continuously needed. Differences in career aspirations were evident in research across cultures (Lee, 2012). For example, developed countries showed a greater media influence on the career aspirations of children than less developed countries (Chambers et al. 2018). These differences combined with an apparent lack of research within an Irish context, provide a greater rationale for undertaking the current study.

The current study will explore children's career aspirations. GCT will be used to frame goal contents, with possible implications for well-being. Possible differences in career aspirations, according to gender, SES, school location and the gender make-up of the school, will be examined, as well as changes in aspirations compared to historical studies. The research questions asked using purposeful and convenient sampling include:

(a) What are student's career aspirations?

(b) What are the goal contents of student's career aspirations?

(c) In what way, if any, do student's career aspirations differ from those found in previous studies, within the framework of GCT?

(d) What factors, if any, predict student's career aspirations and goal contents?

Chapter 3: Methodology

The research questions will be answered using a specific methodology, which this chapter will outline. This chapter will also present the paradigm employed in the current study. The demographics of the participants and schools will be described and the procedure for the pilot and main study phase will be outlined. The design and measures will be discussed regarding quantitative and qualitative methods as well as data decisions. Finally, the ethics process will be detailed.

3.1 Paradigm and Assumptions

A pragmatic method was employed that used a survey approach. Pragmatism is a paradigm that focuses on 'what works' rather than attempting to ascertain one objective truth or reality (Mertens, 2010). This was selected as the most appropriate paradigm because it matches the research questions (Mertens, 2010). The assumptions of the paradigm will be considered in relation to the current study, according to axiology, ontology, epistemology and methodology.

3.1.1 Axiology.

The pragmatic approach takes careful account of possible ethical issues in research (Mertens, 2010). Relevant ethical guidelines were taken into consideration, with particular thought given to the inclusion of participants under 18 years of age, hence the adoption of the child-centred method of drawing (Department of Children and Youth Affairs (DCYA) (2011); Merriman, 2004; Merriman & Guerin, 2006; Psychological Society of Ireland (PSI), 2011). The aim of this thesis is to gain information ethically in an attempt to answer certain research questions, thereby contributing to future research, with possible implications for well-being (Kasser & Ryan, 1993, 1996).

3.1.2 Ontology.

An assumption of the pragmatic paradigm is that a single reality exists, which each person interprets differently (Mackenzie & Knipe, 2006). Through the inclusion of a somewhat large sample, numerous interpretations of reality can be garnered, with appreciation and recognition given to the uniqueness of each one. The current study does not attempt to approximate one objective reality, rather it is concerned with whether the desired purpose is achieved. The purpose of this thesis is to attempt

to answer the research questions identified through the systematic reviews conducted in the previous section.

3.1.3 Epistemology.

This paradigm allows the researcher to make assumptions about what is worthy of investigation and the most appropriate method/s for conducting this investigation. The aim is to produce positive consequences, in this case, shedding light on Irish students' career aspirations and their goal contents, leading to possible implications for well-being (Deci & Vansteenkiste, 2004; Mertens, 2010; Ryan & Deci, 2000).

3.2 Methodology

The methodology was determined by the purpose of the study which was to answer the research questions. A survey was selected as the most appropriate means to answer the research questions and is compatible with a pragmatic paradigm. The rationale for selecting this approach is detailed under the 'design and measures' section.

A mixed-methods approach was assumed for the current study and is a methodological implication of a pragmatic perspective. The research questions of the current study required the use of both quantitative and qualitative measures. A pragmatic approach allows the researcher to select the most appropriate means for their research, providing a philosophical framework for a mixed-methods approach (Braun & Clarke, 2006; Mertens, 2010).

The philosophical assumptions that were discussed under the headings of axiology, ontology, epistemology and methodology, demonstrate how the pragmatic paradigm is appropriate for the current study. Participants and procedure will be discussed next.

3.3 Participants

A total of 231 fifth class students (male = 102, female = 129), ranging in age from 10 to 12 years old (M = 10.43), from ten primary schools across Ireland participated in the current study, including those in the pilot phase. The main study sample, excluding those in the pilot school, amounted to 209 participants (male = 95,

female = 114), ranging in age from 10 to 12 years old (M = 10.45). Fifth class students were selected because they have a wide variety of career options open to them. Once students enter post-primary education, these options become more limited due to such things as streaming according to honours, pass or foundation level, which then limits options for third level education and subsequently, possible career options. Even in sixth class, students are already aspiring towards certain post-primary schools.

Regarding response rate, nine parents did not return consent forms and seven students did not give their assent to participate. The ten primary schools each fulfilled certain subgroup criteria, ranging from geographical location, the gender make-up of the school to DEIS status (see table 9). Purposeful convenience sampling was used to select schools that differentially fulfilled these three criteria. Schools' demographic data were collected instead of participants' demographic data, aside from gender. Individual participant data were not required to fulfil the aims of this research. The aim of the current study was to answer the research questions. School demographic data provided a feasible means to measure possible predictive factors, given the resources available as a large sample size was required. Assumptions were made from schools' data.

For the purpose of the current study, school SES was approximated according to whether the school was designated DEIS or non-DEIS under the Delivering Equality of Opportunity in Schools program (Department of Education and Skills (DES), 2018a). Urban and rural schools were identified according to the whether they were located in an urban or rural area. Urban areas are defined as towns or cities with a population of 10,000 or more (Department of Housing, Planning and Local Government, 2017). Rural areas are outside such populated areas. Please see table 9 for a breakdown of the criteria each school meets. School five, contained two fifth classes. The school wished for both classes to be involved in the study, which they were. The procedure will be clearly and systematically described in the next section.

Table 9

Each school is coded according to whether it has DEIS status, the gender make-up of the school and its geographical location.

School Number	DEIS Status*	Non-DEIS Status	Single-Sex School (male)	Single-Sex School (female)	Co-Educational School	Urban School	Rural School
Pilot (1) (n = 22)		✓			✓	✓	
2 (n = 16)	✓		✓			✓	
3 (n = 22)	✓			✓		✓	
4 (n = 34)		✓		✓		✓	
5 (n = 20)		✓			✓		✓
6 (n = 39)	✓				✓	✓	
7 (n = 18)		✓	✓				✓
8 (n = 16)		✓			✓	✓	
9 (n = 24)		✓	✓			✓	
10 (n = 20)		✓		✓			✓

Please note, all schools were DEIS band one. Band one signifies the highest level of need.

3.4 Procedure

The research procedures are presented below for the pilot project and the main study.

3.4.1 Pilot.

The survey was piloted with an 11-year-old student to approximate the time needed to conduct the survey. Next it was piloted with school zero. The researcher noted questions that were asked by students and the class teacher, as well as the researchers' own reflections. No changes were subsequently made to the survey as students relayed that the questions were clear and appropriate for the intended audience. However, an issue that arose which was not considered prior to conducting the survey was what procedure would be followed if students did not want their picture to be included in the data. Some students during the pilot phase marked 'no' on their assent form to allowing their picture to be used in the study. The procedure that was followed at the time of the pilot phase and for the subsequent main study phase was to note their dissent on their survey form. This then signified to the researcher that their picture was not to be included in the study. These pictures are later included as examples of students' career aspirations. While the pictures were not interpreted, they provided an opportunity for students to express themselves through an alternative medium to the written word. Although written answers were also sought, with the option of transcription, this provided an opportunity for students who may have literacy difficulties to, perhaps, more successfully express themselves.

It was also noted during the pilot phase, that some students found it difficult to pick only one career aspiration. The researcher encouraged students to pick one and they were able to do so once given time to think about it. Garnering assent and conducting the survey took 40 minutes to complete, as was expected, according to the first pilot with the single student. The procedure for the main study phase will be outlined in the following section.

3.4.2 Main study.

A double-list was compiled of schools which matched certain subgroup criteria (see table 9) and were within the Munster area (which was within reasonable driving distance for the researcher). Recruitment emails were sent first and then follow-up phone calls were made. If neither school on the double-list agreed to

partake in the study, another school was sought that matched the same criteria. As a consequence of refusal, one school was sought outside the Munster area, which was the closest school to the researcher that fulfilled the required subgroup criteria. The researcher visited the schools that agreed to participate prior to conducting the survey to provide information sheets and consent forms for the board of management, principal, fifth class teacher and the caregiver/s of the fifth class student (DCYA, 2011; PSI, 2011). If consent was received, a date was arranged, that was agreeable with the school, to conduct the survey. While garnering consent, there was an opportunity for the researcher to briefly meet with fifth class to introduce themselves and the thesis in five out of the ten schools. In the remaining five schools, the students were informed about the study by their teacher and met the researcher on the day the survey was administered.

In each school, the survey was administered by the researcher using the following procedure. The researcher informed the teacher about their role: to support and assist students. The researcher provided each student with an information sheet and an assent sheet. An information script was read aloud to the class which used clear and simple language (see appendix E). The assent sheet was also read aloud, and the students were asked to fill this in.

The survey was administered to students whose caregiver/s had provided consent and whom had given their assent. If caregiver consent was not provided or if it was provided but student assent was not given, the student was offered the choice of completing the survey without it being used in the study or to do a different activity arranged by the teacher. The front page of the survey was read aloud: 'I am ___ years old', please tick either 'I am a boy' or 'I am a girl' and 'draw a picture of what you would like to be'. Students were asked to raise their hands once they had completed this section and the researcher or teacher would approach them. The back of the page was not addressed at this point. Students were reminded to please pick one career, as this was noted as a difficulty for some students during the pilot phase.

The teacher and researcher approached each student, when they raised their hand, and individually asked the following questions: 'what would you like to be when you are older?' and 'why would you like to be this?' Students were asked whether they would like their answers transcribed or whether they would like to

write (see appendix E). Answers were scribed verbatim. This was offered in an attempt to provide the same support to all students, thereby not signalling out students with literacy difficulties. Each survey was checked to ensure that the writing was legible, limiting misinterpretation. When students were finished, they moved on to a quiet independent activity, organised by the teacher. Students were reminded five minutes and one minute before they would have to be finished, the time limit being 40 minutes.

Certain procedures were followed in specific circumstances. If a student changed his/her mind during the survey and asked for a new sheet, this was provided. It was this new sheet that was collected at the end for inclusion in the study, unless the student indicated otherwise. If a student wanted more time, this was given, within the allocated time asked of the school (up to 40 minutes). If a student crumpled their survey up, it was not considered for inclusion in the study. Once the survey was completed, the students and teacher were thanked for their time and informed that a copy of the research would be sent to the school at a later date.

3.5 Design and Measures

The current study employed a survey design. A survey was selected as the most appropriate methodology because no manipulation of variables was required to answer the research questions (Haslam & McGarty, 2014). This method allowed for the examination of relationships between variables which would otherwise be extremely difficulty to isolate experimentally (Haslam & McGarty, 2014). The survey questions have been detailed in the previous section. Data decisions made in relation to the quantitative and qualitative data will be outlined in the following section.

3.5.1 Quantitative data.

Data were analysed quantitatively to investigate possible relationships between gender, career aspirations, type of school (DEIS or non-DEIS status, location and gender make-up of the school) and goal contents. Before conducting quantitative analyses, the number of career aspirations needed to be reduced as 93 different careers were reported by participants (excluding data from the pilot phase). These were collapsed into professional, non-professional, creative and sports careers.

This was done so that the variable, career aspiration, could be analysed and interpreted.

According to Mertens (2010), at least 20 cases are required within each subgroup to reliably conduct statistical analyses. Therefore, within this data set, each career aspiration category required at least 20 different career aspirations. The researcher analysed the types of career aspirations that students expressed and found that they could be categorised into four main types, each of which included at least 20 careers. During this process, similar studies were reviewed to explore how they categorised careers. However, each study categorised their results differently, some using prestigious and non-prestigious careers, others using artistic careers (Auger et al. 2005; Donelly, 2006; Phipps, 1995; Schmitt-Wilson & Welsh, 2012). There was no single universal protocol.

The information garnered from previous studies about how they categorised careers, was used to inform the categorisation process of the current study. This process was also individualised according to the type of the careers found in the current studies data set. Consequently, professional and non-professional careers were likened to prestigious and non-prestigious careers. Creative careers had appeared in previous studies and this data set supplied enough career types to satisfy Merten's (2010) criterion of at least 20 cells per subgroup. Sports careers were commonly categorised in previous studies and was similarly done in the current study considering the high proportion of males who aspired to this career type. The four categories accommodated all of the selections made by the participants. Throughout this process, the researcher's supervisor was consulted and at the end of the process provided approval of this approach.

The service industry and professional categories were differentiated according to the minimum level of qualification required, with the professional category requiring level seven or above and the service industry category requiring level six or below (Quality and Qualifications Ireland, 2015). Although one can achieve higher level qualifications for their service industry career, the minimum level of qualification was used as the criterion.

Descriptive statistics supplied demographic information about participants and schools. Frequency descriptive statistics were used to explore the frequency of

different career aspirations amongst the sample. A chi-square analysis was conducted to explore whether there was a relationship between school location and students' career aspirations. Several multinomial logistic regression analyses were run to explore possible predictive factors of students' career aspirations and goal contents. An example of one of the research questions of one of these analyses was: Is there a gender and/or gender make-up of the school difference in choosing professional versus other types of careers? The results of these analyses will be discussed in the next chapter. Data decisions regarding qualitative information will be discussed next.

3.5.2 Qualitative data.

The qualitative data garnered from the survey question: 'why would you like to be this?' were transcribed into a word document and grouped according to participant's school. Microsoft word was used instead of a qualitative software programme, such as NVivo because the data did not require a specialised software programme. It was possible to qualitatively analyse the data with Microsoft word. This was because although the number of answers was quite large, there was generally one sentence per answer. Sub-themes were highlighted different colours within students' responses, with many responses containing multiple themes. After each response was colour coded according to sub-themes, the responses were coded again, according to the main theme. This was an additive process to the sub-themes, which were maintained. The main theme was colour coded in a space provided beside each response. Below is a description of the sub-themes and main themes that were found within the data.

Answers were first coded into sub-themes, such as financial success, interests and self-perceived aptitude. There were 19 different sub-themes. To allow for more manageable analysis and interpretation, these sub-themes were collapsed into main themes (Braun & Clarke, 2006). Goal contents were coded, where possible, into the main themes of extrinsic or intrinsic, in line with GCT (Kasser & Ryan, 1993, 1996). However, some sub-themes did not fit appropriately into these main themes and were subsequently coded as 'other'. Goal contents could also be dual-coded. Overall, the main themes were: extrinsic, intrinsic, extrinsic and intrinsic, 'other', and intrinsic and 'other'. There was one other main theme, extrinsic and 'other', but as

only one student's response fitted into this theme, it was eliminated. Throughout the thematic coding process, the researcher's supervisor was consulted. The researcher discussed with her supervisor about how the themes and sub-themes were decided upon and how they were then applied to the data. This application was then evaluated and the supervisor reviewed several examples of thematic analyses to gauge interrater reliability. The supervisor approved of the qualitative coding, thereby increasing the validity of the process. When coding students' responses, certain decisions were made about the data. These data decisions are outlined in the next section.

3.5.2.1 Data decisions.

This section details some of the decisions that were made when thematically coding the data, with accompanying examples. One such decision revolved around how to determine whether certain answers were to be coded as intrinsic or extrinsic. An example can be seen in the following quote. "I like drawing and when I'd have fun I'd get money. You'd do something fun to get money so it's even funner." Although the student mentions both extrinsic (money) and intrinsic (interest and fun) goal contents, the extrinsic goal content of money is predicated upon a desire to have fun and the student's interest. It can be interpreted that earning money is secondary to the intrinsic goal contents because of this. As such, this answer was coded as intrinsic.

The following quotation is another example of when both extrinsic and intrinsic goal contents are mentioned, but one was determined as having more importance. "it's like really really fun to do and the money that I earn could go to help animals in need." Although the student mentions the extrinsic goal content of money, it is a means to achieving the intrinsic goal content of helping animals. Hence, it was coded as intrinsic.

Numerous other students mentioned both intrinsic, extrinsic and/or 'other' goal contents. However, in some cases, one goal content did not appear to have higher importance over another. An example of this can be seen in the quotation below, where the different types of goal contents are linked by the word 'and'. In such cases, these were dual-coded. The following example was dual-coded as

extrinsic (money) and intrinsic (interest). "I don't know. You get paid well and I like the sport."

The following quotation is another example that was coded as intrinsic (health) and 'other' (influential person). "Because it's active and you're getting loads of exercise and Mohammed Sale inspires me." These examples demonstrate how it was not always possible to code responses into discrete categories. Sometimes there was no clear category and the decision was made to dual-code, as can be seen by the two previous examples. The rationale for not coding each response into a discrete category was to retain the complexity of students' responses, thereby avoiding simplification that could have undermined the integrity of the data.

Another decision that was made about the data was when students relayed that the implications of having the career were of interest to them. This sub-theme was collapsed into the main theme of 'other'. However, depending upon each student's response, the goal content could be intrinsic, extrinsic or 'other'. The following quotation is an example of this sub-theme arising. "I would like to be a teacher because I'm clever and you lots of holidays." The mention of holidays appears to fit with the sub-theme that the implications of this career are of interest to the student. When it is examined further as to whether it is intrinsic, extrinsic or 'other', it appears to fit with an extrinsic goal content. This is because the holiday may be serving as an extrinsic reward.

The following quotation is another example of this decision-making process. "because I can drive them live in places and make alot of money." This student aspired to be a car designer. As a result of this career, they can drive cars, live in other places and earn money. These are all extrinsic rewards, leading to the interpretation that this student expressed solely extrinsic goal contents. These decisions allowed the data to be collapsed into somewhat more manageable themes, permitting further analysis. In summary, seven main themes were used to sort students' goal contents. These included: intrinsic, extrinsic, extrinsic and intrinsic, 'other', intrinsic and 'other', extrinsic and 'other', and extrinsic, intrinsic and 'other'. The ethics process will be detailed in the next section.

3.6 Ethics

The current study underwent an ethical review process and received approval from Mary Immaculate College Research Ethics Committee (MIREC). Drawing was included in this survey as it is considered to be a child-centred approach (McDevitt, Ormrod, Cupit, Chandler & Aloa, 2012; Punch, 2002). It limits the need for literacy and language skills (Merriman & Guerin, 2006). It provides 'rich information concerning the children's social circumstances, values and aspirations' (DiCarlo, Gibbons, Kaminsky, Wright, & Stiles, 2000, p. 114). Merriman (2004) found that drawing elicited a greater number of careers in contrast to a closed questionnaire. This method can allow for a more reliable comparison to be made across populations, such as students attending DEIS schools, some of whom may have lower levels of literacy (Merriman & Guerin, 2006). In line with best practice guidelines (DCYA, 2011), this method demonstrates "a respect for children and promotes their entitlement to be considered as persons of value and persons with rights" (Merriman & Guerin, 2006, p.48). However not all students will enjoy drawing or wish for others to see their drawings (Punch, 2002). When students dissented to having their drawing included in the study, their right to do so was respected and their drawing were omitting from the data (DCYA, 2011; MacPhail & Kinchin, 2004; Pridmore & Bendelow, 1995; Punch, 2002). If students did not want to draw, this was also respected.

Another ethical concern that was addressed through the procedure, was administering a survey that required written responses. The average classroom is likely to contain students with additional needs and/or students for whom English is not their first language (DES, 2018b; McCoy et al. 2014). To account for such needs and to avoid singling out students, the following strategies were employed: all content was read aloud, everyone was offered the opportunity to have their answers scribed, they were told that spelling did not matter, and the classroom teacher and researcher provided support and assistance. The teachers were key here as they were best placed to identify students who may require additional support. The results will be discussed in the next section.

Chapter 4: Results

The first research question (what are students' career aspirations?), will be answered using descriptive statistics to examine the frequency of occurrence of different career aspirations. Career types will then be analysed descriptively according to gender. The second research question (what factors, if any, predict students' career aspirations?) will be explored broadly for associations using chi-square tests with more specific predictive questions asked using multinomial regression analyses. The third research question (what are the goal contents of students' career aspirations?) will be answered using thematic analysis. Quotes will be included as examples of the different themes. The following section will explore students' career aspirations using descriptive statistics.

4.1 Descriptive Statistical Analyses

Of the 209 participants, 95 were male and 114 were female. They ranged from 10 to 12 years old (M = 10.45, SD = .518). Participants were surveyed across nine schools, excluding the pilot school. These schools each met one of each of the three following criteria: DEIS status (DEIS or non-DEIS), gender make-up of the schools' students (male, female or co-educational) and location (urban or rural). These subgroups were detailed in the previous chapter (see table 9). There were 132 participants from non-DEIS schools and 77 participants from DEIS schools (see table 10). Of the total sample, 58 attended an all-boys school, 76 attended an all-girls school and 75 attended a co-educational school. Both urban and rural schools were included in the sample, with 151 students attending urban schools and 58 students attending rural schools.

Table 10

The number of students according to school SES, gender make-up of the school and location are detailed in this table.

School SES		Gender make-up of the School			Location	
Non-	DEIS	All-Boys	All-Girls	Co-	Urban	Rural

DEIS				educational		
n = 132	n = 77	n = 58	n = 76	n = 75	n = 151	n = 58

4.2 Descriptive Statistics

The frequency of students' career aspirations was analysed using descriptive statistics. Students reported 92 different career aspirations. Three students indicated that they did not know what career they aspired to and are therefore not included in the following tables and figures. Due to the large number of career aspirations, they were collapsed into four categories: non-professional, professional, creative and sports. Within the sample, 58 students reported non-professional careers (requiring less than a bachelor's degree), 65 reported professional careers (requiring a bachelor's degree or above), 34 reported creative careers and 48 reported careers in sports. The frequency of these career categories is visually depicted in figure 5.
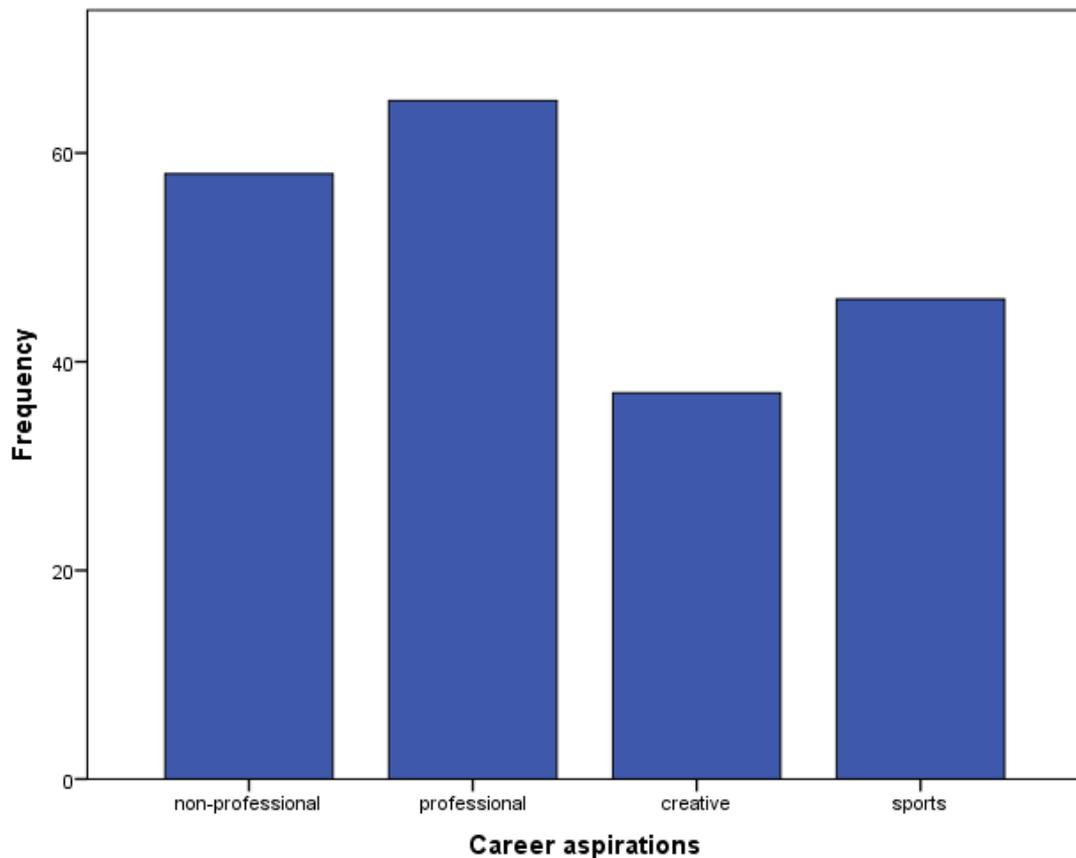
Figure 5. *Frequency of career aspirations according to non-professional, professional, creative and sports type.*

The 92 different career aspirations are detailed in table 11 according to how they were coded. It was necessary to collapse careers into categories for quantitative analyses to be conducted. The career aspirations are ranked from highest to lowest frequency within each category.

The most frequent career aspirations within the non-professional category were: beautician (n=10), in the professional category: teacher (n= 9), in the creative category: youtuber (n = 9) and in the sports category: soccer player (n = 28).

Figure 6. *Student who aspires to own a hairdressing salon.*

Table 11

Career aspirations for all respondents according to non-professional, professional, creative and sports type.

Non-professional (n = 58)	Professional (n = 65)	Creative (n = 37)	Sports (n = 46)
Beautician (n = 10)	Teacher (n = 10)	Youtuber (n = 9)	Soccer player (n = 28)
Makeup artist (n = 7)	Doctor (n = 8)	Singer (n = 6)	Rugby player (n = 4)
Garda (n = 6)	Architect (n = 7)	Artist (n = 5)	Olympian (n = 1)
Gymnastics teacher (n = 3)	Vet (n = 4)	Animator (n = 4)	Boxer (n = 1)
Lyrical dance teacher (n = 2)	Scientist (n = 3)	Special effects makeup artist	Olympic gymnast (n = 1)
Farmer (n = 2)	Archaeologist (n = 3)	(n = 3)	Olympic swimmer (n = 1)
Builder (n = 2)	Lawyer (n = 3)	Actor (n = 3)	Professional gymnast (n = 1)
Nail artist (n = 1)	Interior designer (n = 2)	Comedian (n = 1)	Professional 'riverdancer' (n = 1)
Dance teacher (n = 1)	Solicitor (n = 2)	Author (n = 2)	Professional jockey (n = 1)
Hairstylist (n = 1)	Biologist (n = 2)	Dancer (n = 1)	Gymwheel gymnast (n = 1)
Bank officer (n = 1)	Engineer (n = 2)	Musician (n = 1)	Hurler (n = 1)
Digger (n = 1)	Maths teacher (n = 1)	Acting director (n = 1)	Kickboxer (n = 1)
Dress maker (n = 1)	Pilot (n = 1)	Contortionist (n = 1)	Golfer (n = 1)
Baker (n = 1)	Robotics (n = 1)		Formula 1 driver (n = 1)
Chef (n =1)	Surgeon (n = 1)		Runner (n = 1)
Own a furniture shop (n = 1)	Brain scientist (n = 1)		American footballer (n = 1)
Cake decorator (n = 1)	Physicist (n = 1)		

Clothes designer (n = 1)	Primary school teacher (n = 1)
Café manager (n = 1)	
Own a hairdressers (n = 1)	Nurse (n = 1)
Horse trainer (n = 1)	Cryptographer (n = 1)
Electrician (n = 1)	Social worker (n = 1)
Computer repair technician (n = 1)	Car designer (n = 1)
	Nurse who works with
Puppy trainer (n = 1)	babies (n = 1)
Coffee shop owner (n = 1)	General practitioner (n = 1)
Company owner (n = 1)	Early intervention teacher (n = 1)
Boss for the builders (n = 1)	
Sports car garage owner (n = 1)	Mathematician for NASA (n = 1)
Mechanic (n = 1)	
Gaming technician (n = 1)	Secondary school teacher (n = 1)
Detective (n = 1)	
Fireman (n = 1)	Electrical engineer (n = 1)
Armed garda (n = 1)	Zoologist (n = 1)
	Egyptologist (n = 1)

In addition to discussing career aspirations by category, it is also useful to observe their occurrence across the sample as a whole. There were several career aspirations that were frequently reported. The most popular was soccer player, which 28 students reported as their career aspiration. Teacher and beautician followed this with 10 students reporting each. There were nine students who aspired to be a youtuber, eight who aspired to be a doctor and seven who aspired to be an architect, hairstylist and makeup artist, respectively. There were six students who aspired to be a garda and a singer, while five students aspired to be an artist. Vet, animator and rugby player were reported by four students, while three students aspired to be either an archaeologist, gymnastics teacher, scientist, special effects makeup artist, lawyer or actor. The remaining careers arose with frequencies of one or two and as such are not detailed here but can be seen in table 11.

Figure 7. *Student who aspires to be a garda.*

4.2.1 Career aspirations by gender.

Certain differences were observed in career aspirations according to gender. Although the predictive power of gender as a variable will be explored using a multinomial logistic regression later in this chapter, it is useful to view gender differences in reported career aspirations according to the collapsed categories and

across the overall sample. Table 12 depicts the frequency of each of the collapsed career categories, according to gender. Sports represented the most frequently reported career category amongst males at 39% (n = 37). In contrast, this career category was cited by only 8% of females. The most common career category reported by females was professional at 37%, which contained careers, such as doctor and vet. Males selected this category with less frequency, at 24%. A similar disparity in preference is seen between the percentage of males (20%) who selected a non-professional career versus females (34%). A creative career was reported by 16% of males and 20% of females. Approximately 1% of males and 2% of females did not know what they aspired to be.

Table 12

Career category differences according to gender.

	Male	Female	Total
Professional	23 (24.2%)	42 (36.8%)	65 (31.1%)
Non-professional	19 (20%)	39 (34.2%)	58 (27.8%)
Sports	37 (39%)	9 (7.9%)	48 (23%)
Creative	15 (15.8%)	22 (19.3%)	35 (16.8%)
Do not know	1 (1.1%)	2 (1.8%)	3 (1.4%)
Total	95 (100%)	114 (100%)	209 (100%)

Figure 8. *Student who aspires to be a social worker.*

Within these collapsed categories, there were careers which differed in frequency according to gender (see table 13). Quite a large percentage of males (26%) reported soccer player as their career aspiration. Following this, the most frequently occurring careers were youtuber (5%), garda (5%), architect (5%) and rugby player (4%). In contrast to males, there was no single career amongst females that occurred with a much larger frequency than others. Beautician (9%) was the most frequent career followed closely by teacher (8%), doctor (7%), makeup artist (6%) and singer (4%).

Table 13

Most popular career aspirations according to gender.

Male		Female	
Soccer player (n = 25)	26.3%	Beautician (n = 10)	8.8%
Youtuber (n = 5)	5.3%	Teacher (n = 9)	7.9%
Garda (n = 5)	5.3%	Doctor (n = 8)	7%
Architect (n = 5)	5.3%	Makeup artist (n = 7)	6.1%
Rugby player (n = 4)	4.2%	Singer (n = 5)	4.4%

*Please note, these percentages have been rounded and represent career aspirations as a percentage of the total number of careers selected by either males or females.

Figure 9. *Student who aspires to be a solicitor.*

None of the top five careers for males and females were the same. The closest overlap in career aspirations was youtuber which was selected by five males and four females. Gender will be further explored, using multinomial logistic regression analyses, to determine whether there is a relationship between gender and career aspiration. These tests, including a chi-square analysis, will be used to analyse other possible relationships between variables in the following sections.

4.3 Correlational Statistical Analyses

Correlational statistical analyses were run to ascertain relationships between and among the variables in the data. A chi-square analysis was conducted to determine whether there was a relationship between school location and career aspiration. A chi-square test for independence rather than a multinomial logistic regression analysis was selected. The rationale for this lies in one of the requirements for a regression analysis: that a baseline must be selected for the outcome variable (Field, 2018). Generally, this is a failed outcome or a 'does not know' category, so that the other levels of the outcome can be compared against this (Field, 2018). However, none of the categories within career aspirations lended themselves to be used as a baseline. Hence, a chi-square test was conducted. Following this, several multinomial logistic regression analyses were conducted to provide insight into the predictive power of other variables for career aspirations and goal contents.

Before conducting these analyses, certain data decisions were made to omit several respondents so that the categories within variables contained a sufficient number of cases for the analyses (both chi-square and multinomial logistic regression) to be run. This was in accordance with one of the assumptions of the analyses, that no more than 20% of the cells can have expected frequencies of less than five (Pallant, 2010; McHugh, 2013). There were 209 participants overall, three of whom did not know what they aspired to be. These three were omitted from analyses as the number was less than five and hence violated an assumption of the tests (Pallant, 2010; McHugh, 2013). Within the variable, goal contents, two categories (extrinsic and 'other', and extrinsic, intrinsic and 'other') were omitted for the same reason as they contained two cases respectively. This assumption also meant that one of the research questions (is there a relationship between goal contents and career aspirations?) could not be explored in this way. It was not possible to examine this as 45% of the cells contained less than the required count of five. This contravenes one of the assumptions of the test and as such, it could not be reliably conducted (Pallant, 2010; McHugh, 2013).

4.3 Chi-Square Analysis

Once each variable met the aforementioned assumption, a chi-square test was conducted to determine whether there was a significant relationship between the location of the school and students' career aspirations. A chi-square test for independence did not indicate a significant relationship between the location of the school (urban or rural) and career aspirations, χ^2 (3, n = 206) = 1.93, p = .587, cramer's V = .097. Several multinomial logistic regression analyses were conducted next.

4.4 Multinomial Logistic Regression Analyses

Multinomial logistic regression analyses were conducted to provide further insight into the predictive power of different factors by building a model (Field, 2018). Building a model refers to parsimoniously including factors that are thought to account for variability in the outcome (Field, 2018). In the current study factors, such as gender and school SES were entered in a forward step-wise method, into a model to determine whether they improved the model i.e. statistically predict what type of careers students aspired to.

Information was generated about how likely a student was to choose a specific type of career according to factors, such as gender and school SES (Field, 2018). Gender and school SES were also examined as possible predictive factors of students' goal contents. The information garnered from the analyses has been structured according to the research questions asked.

4.4.1 Is there a gender and/or gender make-up of the school difference in choosing professional versus other types of careers?

A multinomial logistic regression analysis was conducted with the following factors: gender, gender make-up of the school (all-boys, all-girls and co-educational) and an interaction between these two factors. The gender make-up of the school was not correlated with students' career aspirations. An interaction between gender and gender make-up of the school was also included in the model to explore whether there were differences in the career aspirations of males and females, and whether the pattern of differences depended upon the gender make-up of the school. It was hypothesised that males may be more likely to aspire to certain careers when they are in an all-boys school versus when they are in a co-educational school, with the same being hypothesised for females in an all-girls school versus a co-educational school. These interactive factors did not significantly add to the power of the predictive model and the null hypothesis

was therefore accepted. The only factor found to be significant was gender. The final model contained gender while the non-significant factors were excluded (see table 14).

It was hypothesised that females may be less likely to aspire to professional careers than males. In the current study, this was not found to be the case. Contrasting non-professional careers with professional careers did not produce a significant effect according to gender, indicating that the null hypothesis was to be accepted. Gender did not significantly predict whether a student aspired to a non-professional career versus a professional career, $b = -.117$, Wald $\chi^2(1) = .09$, $p = .76$ (see table 14). There was an odds ratio of .89. The odds ratio indicates that when a students' gender changes from male to female, the change in the odds of aspiring to a non-professional career compared to a professional career is .89. According to these results, it does not appear that females are less likely than males to aspire towards professional careers. Neither was gender found to be a predictive factor of whether students aspired to a creative or professional career, $b = .22$, Wald $\chi^2(1) = .27$, $p = .61$. This produced an odds ratio of 1.25.

Gender significantly predicted whether a male student aspired to a professional career or a sports career, $b = 2.012$, Wald $\chi^2(1) = 19.78$, $p < .001$. There was an odds ratio of 7.51 indicating that males were more likely to aspire to a career in sports than a professional career. As sports is the only significant sub-category and appears to be causing a lot of the observed variance, it was considered informative to explore gender differences, using sports as the baseline.

Table 14

Multinomial logistic regression for gender with professional career type as a baseline.

	b (SE)	95% CI for Odds Ratio		
		Lower	Odds Ratio	Upper
Non-Professional vs. Professional				
Intercept	-.07 (.22)			
Gender	-.12 (.38)	.42	.89	1.88
Creative vs. Professional				
Intercept	-.65 (.26)**			
Gender	.22 (.42)	.54	1.25	2.86
Sports vs. Professional				
Intercept	-1.54 (.37)***			
Gender	2.02 (.45)***	3.01	7.51	18.25

Note. $R^2 = .14$ (Cox-Snell), .15 (Nagelkerke). Model $\chi^2 (3) = 30.73$, $p < .001$. *$p < .05$, **$p < .01$, ***$p < .001$.

4.4.2 Is there a gender and/or school SES difference in choosing sports versus other career types?

As the previous analysis indicated that gender was a significant predictor of students' career aspirations, specific to sport careers, sports was used as a baseline for this analysis. To ascertain possible relationships, the following research question guided the analysis. Is there a gender and/or school SES difference in aspiring to careers in sports versus other career types? A multinomial logistic regression was used to assess the predictive power of gender, school SES (DEIS or non-DEIS school) and an interaction between these two factors on students' career aspirations.

The final model included only the main effect of gender as the other factors were found to be non-significant (see table 15). Gender was found to be statistically significant, $\chi^2 (3, N = 206) = 30.73$, $p < .001$. This indicates that this final model better explains variability in outcome, in contrast to the original model. According to the effect size, gender explains between 13.9% (Cox and Snell R-square) and 14.8% (Nagelkerke) of the variance in students' career aspirations.

Gender significantly predicted whether a male student selected a non-professional career or a sports career, $b = -2.13$, Wald $\chi^2 (1) = 21.02$, $p < .001$. There was an odds ratio of .12 which indicated that males were more likely to aspire to a career in sports than a non-professional career.

Gender also significantly predicted whether a male student selected a professional career or a sports career, $b = -2.02$, Wald $\chi^2 (1) = 19.78$, $p < .001$. There was an odds ratio of .13 which indicated that males were more likely to aspire to a career in sports than a professional career.

Finally, gender significantly predicted whether a male student selected a creative career or a sports career, $b = -1.80$, Wald $\chi^2 (1) = 12.90$, $p < .001$. There was an odds ratio of .17 which indicated that males were more likely to aspire to a career in sports than a creative career.

These results indicate that male students are consistently more likely to pick a career in sports over any other career type. The odds ratio for choosing a non-professional or professional career versus a career in sports are quite similar. The odds

ratio for aspiring to a creative career is slightly higher, indicating that this type of career is the least likely to be picked of the career types over a career in sports.

Table 15

Multinomial logistic regression for gender with sports career type as a baseline.

	b (SE)	95% CI for Odds Ratio		
		Lower	Odds Ratio	Upper
Non-Professional vs. Sports				
Intercept	1.47 (.37)***			
Gender	-2.13 (.47)***	.05	.12	.30
Professional vs. Sports				
Intercept	1.54 (.37)***			
Gender	-2.02 (.45)***	.06	.13	.32
Creative vs. Sports				
Intercept	.89 (.39)*			
Gender	-1.80 (.50)***	.06	.17	.44

Note. $R^2 = .14$ (Cox-Snell), .15 (Nagelkerke). Model $\chi^2(3) = 30.73$, $p < .001$. *$p < .05$, **$p < .01$, ***$p < .001$.

4.4.3 Is there a school SES difference in aspiring to a non-professional career versus other career types?

A multinomial logistic regression was conducted to explore whether school SES predicted students' career aspirations (see table 16). It was hypothesised that students attending a DEIS school would be more likely to aspire to a non-professional career than a professional career (Gore, Holmes, Smith, Southgate & Albright, 2015; Hannah & Kahn, 1989; Härtung et al. 2005; Moulton et al. 2018; Nelson, 1963; Phipps, 1995; Saw, Chang & Chan, 2018).

School SES was not found to explain variability in outcome better than the original model, $\chi^2(3, N = 206) = 7.72$, $p = .052$. The effect size explained between 3.7% (Cox and Snell R-square) and 3.9% (Nagelkerke) of the variance in students' career aspirations. School SES was used to explore whether there was a significant difference between students from a DEIS and non-DEIS school aspiring to a professional, creative or sports career versus a non-professional career. It is perhaps to be expected that school SES did not serve as an overall predictor as there would not be an expected difference between all of these career types and a professional career, only between the non-

professional and professional career type (Miller, 1986; Moulton, Flouri, Joshi & Sullivan, 2018; Nelson, 1963; Phipps, 1995). In this regard, students from a DEIS school were found to be more likely than students from a non-DEIS school, to aspire to a non-professional career versus a professional career, b = -1.05, Wald $\chi^2(1) = 7.26$, p = .007. There was an odds ratio of .35. This result indicates that the hypothesis, students attending a DEIS school would be more likely to aspire to a non-professional career than a professional career, may be accepted and that school SES only operates between these two career types (Miller, 1986; Moulton et al. 2018; Nelson, 1963; Phipps, 1995).

Attending a DEIS school did not significantly predict whether a student selected a creative or non-professional career, b = -.54, Wald $\chi^2(1) = 1.58$, p = .21. There was an odds ratio of .58. Attending a DEIS school did not significantly predict whether a student selected a sports career or a non-professional career, b = -.37, Wald $\chi^2(1) = .87$, p = .35. There was an odds ratio of .69. In conclusion, school SES did not significantly predict students' career aspirations overall but it was found that students from a DEIS school were more likely to aspire to a non-professional career than a professional career. The predictive power of gender and school SES will be explored next in relation to students' goal contents.

Table 16

Multinomial logistic regression for school SES with professional career type as a baseline.

| | b (SE) | 95% CI for Odds Ratio | | |
		Lower	Odds Ratio	Upper
Professional vs. Non-Professional				
Intercept	.49 (.23)*			
School SES	-1.05 (.39)**	.16	.35	.75
Creative vs. Non-Professional				
Intercept	-.22 (.27)			
School SES	-.54 (.43)	.25	.58	1.36
Sports vs. Non-Professional				
Intercept	-.07 (.26)			
School SES	-.37 (.40)	.31	.69	1.51

Note. $R^2 = .04$ (Cox-Snell), .04 (Nagelkerke). Model $\chi^2(3) = 7.72$, p = .052. *p < .05, **p < .01, ***p < .001.

4.4.4 Is there a gender and/or school SES difference in choosing extrinsic goal contents versus other types of goal contents?

Gender, school SES and an interaction between these two were considered as possible factors in predicting students' goal contents. The final model demonstrated that only gender served as a significant predictor of students' goal contents, χ^2 (4, N = 206) = 10.62, p = .031. The effect size explained between 5.1% (Cox and Snell R-square) and 5.6% (Nagelkerke) of the variance in students' goal contents.

Within this model (see table 17), gender did not significantly predict whether a student had an intrinsic or extrinsic goal content, b = -1.04, Wald χ^2 (1) = 3.58, p = .058. However, the p value is nearing significance. As such, it may be useful to consider the odds ratio which produced a value of .35, indicating that males may have been more likely to have an extrinsic goal content than an intrinsic goal content.

Gender did not significantly predict whether a student had an 'other' type of goal content or an extrinsic goal content, b = -.30, Wald χ^2 (1) = 3.58, p = .63. An odds ratio of .74 was produced. Gender did not significantly predict whether a student had an extrinsic and intrinsic goal content or an extrinsic goal content, b = 0.26, Wald χ^2 (1) = .14, p = .71. There was an odds ratio of 1.30. Gender did not significantly predict whether a student had an intrinsic and 'other' type of goal content or an extrinsic goal content, b = -.80, Wald χ^2 (1) = 1.14, p = .29. There was an odds ratio of .45. Overall, gender significantly predicted students' goal contents. Although there were no statistically significant findings within the analysis, one finding approached significance, indicating that males may have been more likely to have extrinsic goal contents.

Table 17

Multinomial logistic regression for gender with extrinsic goal contents as a baseline.

	b (SE)	95% CI for Odds Ratio		
		Lower	Odds Ratio	Upper
Intrinsic vs. Extrinsic				
Intercept	2.57 (.42)			
Gender	-1.04 (.55)	.12	.35	1.04
'Other' vs. Extrinsic				
Intercept	.77 (.49)			

Gender	-.30 (.64)	.21	.74	2.58
Extrinsic and Intrinsic vs. Extrinsic				
Intercept	.00 (.58)			
Gender	.26 (.71)	.32	1.30	5.27
Intrinsic and 'Other' vs. Extrinsic				
Intercept	.29 (.54)			
Gender	-.80 (.75)	.10	.45	1.95

Note. R^2 = .05 (Cox-Snell), .06 (Nagelkerke). Model χ^2 (4) = 10.62, p < .001. *p < .05, **p < .01, ***p < .001.

There were several key statistical findings arising from the quantitative analyses. The first was that gender significantly predicted students' career aspirations. This effect was predominantly concentrated in sports, with males more likely to pick this career type over others. Also, within gender, females were as likely as males to aspire to a non-professional career as a professional career. The second key finding was that students attending a DEIS school were statistically more likely to aspire to a non-professional career than a professional career. The third key finding was that gender significantly predicted students' goal contents, with males more likely to have an extrinsic goal content than an intrinsic goal content. The fourth key finding was that school SES did not significantly predict type of goal contents. The fifth and sixth key findings were that the location of the school and the gender make-up of the school did not correlate with students' career aspirations. The next section will describe the qualitative analysis.

4.5 Qualitative Analysis

This section will describe the qualitative analysis conducted using themes developed from students' expressed goal contents, according to the framework of GCT (Braun & Clarke, 2006). Students were asked why they would like to be in their chosen career. Their answers were coded thematically according to GCT which looks at the content of students' career aspirations. Goal contents can be categorised as either extrinsic or intrinsic (Kasser & Ryan, 1993, 1996). The research behind GCT specifically mentions the extrinsic goal contents of fame, wealth and physical appearance (Grouzet et al. 2005; Kasser & Ryan, 1996). Intrinsic goal contents mentioned in the research are: contributing to the community, health, personal growth and relationships (Grouzet et al. 2005; Kasser & Ryan, 1996). However, students provided numerous responses that could not be strictly coded as extrinsic or intrinsic. There were sub-themes that arose that were added to the main themes of extrinsic and

intrinsic. The remaining responses were coded as 'other' or were coded as multi-componential as they contained more than one type of goal content.

When coding students' responses, they were first coded according to sub-themes, such as fame, contributing to the community or financial success (Braun & Clarke, 2006). As the total sample of responses were deemed to contain 19 different sub-themes, these were collapsed into the following main themes: intrinsic, extrinsic, extrinsic and intrinsic, 'other', intrinsic and 'other', extrinsic and 'other', and extrinsic, intrinsic and 'other'. Two of the 209 responses were classified as extrinsic and 'other' and two other responses were coded as extrinsic, intrinsic and 'other' (n = 2). As these numbers are quite small relative to the overall sample size, they were removed for the variable of goal contents to allow for a more manageable data set and as such are not outlined in this section. The different themes will be discussed alongside examples of students' responses.

4.5.1 Theme one: intrinsic goal contents.

Responses coded as community contribution, health, personal growth, relationships, interests, express creativity and fun were collapsed into the theme of intrinsic goal contents. There were 124 students who reported solely intrinsic goal contents. This number, in and of itself, is significant, as it is quite high in comparison to the other themes. This theme represents a large proportion of the overall sample at 59%. Below are several quotations from students with solely intrinsic goal framing. The first student aspired to be a doctor. When asked why they wished to be this, their response was as follows: "I want to be a doctor because in my country I mean Afghanistan there is loads of people that are poor and sick so that's why I want to be a doctor."

This altruistic response was coded as 'community contribution', an intrinsic goal content. The following three quotations are from students who expressed intrinsic goal framing and whose responses were coded as 'community contribution'. The first student aspired to be a biologist, the second an early intervention teacher and the third a soccer player. "To help all the animals and save the Amazon Rainforest and protect all of the animals from pouchors." "My mams best friends daughter has autism and she was upset and I made her happy." "To take care of the poor. Like it's sad for people to see." These careers are diverse and not necessarily linked to a certain type of goal contents.

Altruistic responses appeared frequently within the theme of intrinsic goal framing. Another theme that frequently arose was 'interest' which was also coded as intrinsic. The quote below is from a student who aspired to be a singer. The student

outlines their interest in singing as well as the influence that another person has had in leading to the creation of this intrinsic goal content.

> Because when I was small there was a show at school and I had to sing and I had to sing a song called true colours and there was a teacher called X and she taught me how to sing and I fell in love with singing and I want to share the experience with everyone.

Although there were several sub-themes within intrinsic goal framing, the aforementioned sub-themes are those that occurred most frequently and therefore deserve mention. One other such sub-theme was 'fun'. Numerous students relayed that they aspired to a certain career because they believed it to be fun. "I would like to be this because I love movies and it seams really fun." This student aspired to be an acting director. Their goal content was coded as relating to both interest ("I love movies") and fun. Hence it was collapsed into the theme of intrinsic goal contents. Students also expressed extrinsic goal contents.

4.5.2 Theme two: extrinsic goal contents.

Responses which were coded as relating to financial success, fame, physical appearance and making another person proud were collapsed into the theme of extrinsic goal contents. There were 16 students (8%) who reported solely extrinsic goal contents. Financial success was the most frequently cited goal content by students expressing extrinsic goal contents. The following quote is from a student who aspired to be a special effects makeup artist and expressed an extrinsic goal content, relating to financial success. "I would like to be this because I will earn a lot of money, and I like MONEY!" A student who aspired to become an architect demonstrated extrinsic goal framing, as they mentioned financial success and getting a nice house (see figure 10). "I could popular earn lots of money, have a nice house etc."
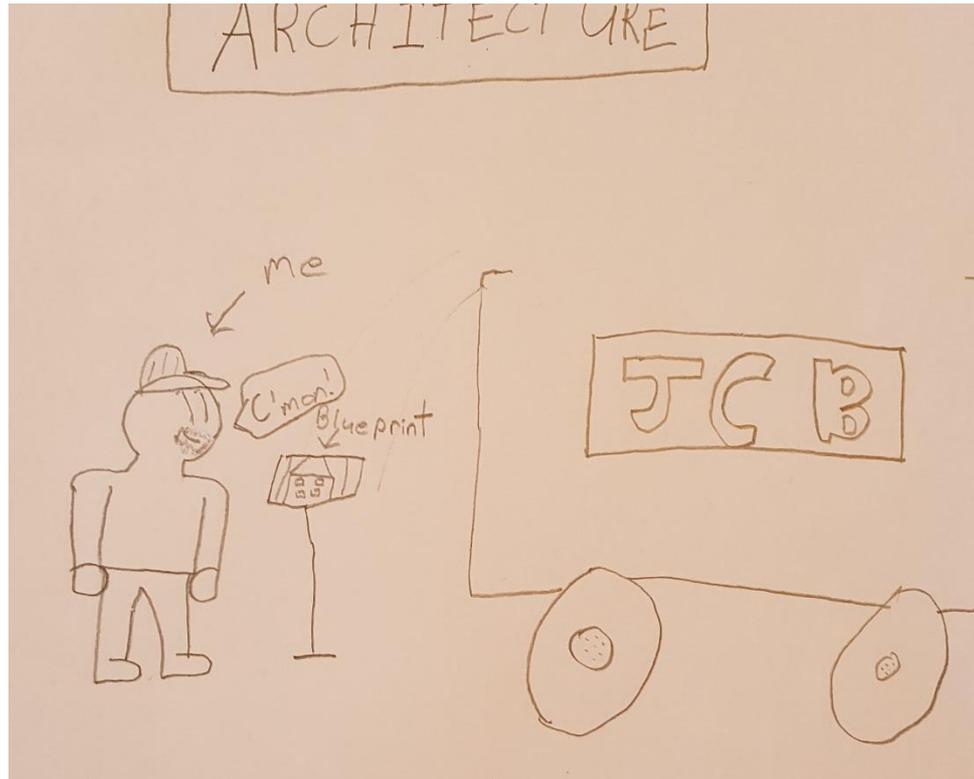
Figure 10. *Student who aspires to be an architect.*

Sometimes this theme of financial success co-occurred with another extrinsic goal content, fame. A student who aspired to become a soccer player for both fame and financial reasons said "because you can be famous and rich." One student relayed that they aspired to become a youtuber. "To get a lot of money and get a lot of supporters/subscribors." This is a career that would not have existed a decade ago. The type of fame that the student's goal content refers to, is linked specifically to vlogging i.e. that of acquiring "subscribers".

Figure 11. *Student who aspires to be a youtuber.*

Although the aforementioned student expressed extrinsic goal contents, this does not necessarily mean that such careers are exclusively associated with extrinsic goal contents. Prolific careers, such as actor, youtuber and footballer, are typically known for fame, money and appearance. Therefore, these would be expected to be chosen for their extrinsic goal contents. However, this was not universal in the data set. For example, one student aspired to become a youtuber and cited intrinsic goal contents: "because it will allow me to express my creaveity. It will make people happy and at the same time get paid." This student expressed both intrinsic goal contents (to express their creativity and make others happy) and an extrinsic goal content (financial success). As they expressed both extrinsic and intrinsic goal contents, it was dual coded as extrinsic and intrinsic. Aside from the last quote, these students' answers were all coded as extrinsic as they expressed solely extrinsic goal contents. Students' goal contents that contained both extrinsic and intrinsic components, similar to the above quotation, will be discussed next.

4.5.3 Theme three: extrinsic and intrinsic goal contents.

Students' responses which contained both extrinsic and intrinsic goal contents were coded as a combination, in an attempt to retain and respect a certain level of complexity to the answers. There were 19 students (9%) whose answers contained both extrinsic and intrinsic goal contents.

A student who aspired to be a doctor said the following: "So if I was a doctor then I could go around the world and help the poor just like mother teresa. And I want to be a famous doctor just like mother teresa." The first sentence was coded as 'community contribution', which is intrinsic goal framing. The second sentence was coded as 'fame', which is extrinsic goal framing. As the response contained both intrinsic and extrinsic components, it was thematically coded as an extrinsic and intrinsic goal content.

Another example which was coded as extrinsic and intrinsic can be seen in the following quotation. "1. It keeps you fit. 2. It keeps you healthy. 3. You make a lot of money if you are good. 4. And you might be famous if you are very good." This student aspired to become a soccer player. Point one and two were coded as 'health' which is intrinsic goal framing. The third point was coded as 'financial success' and the fourth point was coded as 'fame'. These last two points are extrinsically framed. Hence, this students' response was double goal framed.

Students' responses included a number of different combinations of extrinsic and intrinsic sub-themes. The above quotations are examples of some of these. Some responses were not categorically framed as extrinsic or intrinsic. The theme 'other' was developed for such responses.

4.5.4 Theme four: 'other' goal contents.

Responses initially coded as aptitude, as another person saying they have an aptitude, simple or easy job, worked hard at it, doing it since young, influential person/s, the implications of having the job are of interest to them and unknown were collapsed into the main theme of 'other'. There were 29 students (14%) who reported goal contents coded solely as 'other'.

The quotation provided below is from a student whose answer was coded as 'another person who said that they have an aptitude'. The student has reported that their mother has said that they are good at art and this appears to be the reason that the student aspired to this career. "I would like to be an artist because my mum said you are really good at art." As this is not clearly extrinsically or intrinsically framed, it falls into the theme of 'other'.

Another example of a response that was coded as 'other', contained sub-themes relating to 'doing it since young' and 'influential person'. "cause I always played soccer since I was small and my dad played soccer for Ireland." Sub-themes that frequently arose within the theme of 'other' were those where the student perceived that they possessed a certain aptitude, another person thought they had an aptitude and/or they

have been doing it since they were young. The rest of the responses varied and did not frequently re-occur amongst respondents. The next theme arose from responses which contained both intrinsic goal framing and those coded as 'other'.

4.5.5 Theme five: intrinsic and 'other' goal contents.

Responses which contained both intrinsic goal contents and those coded as 'other', were collapsed into a dual theme. There were 14 students (7%) in this theme. Responses which were coded as both intrinsic and 'other', demonstrated variability of sub-themes from both themes. Some students mentioned altruistic intrinsic goal contents, such as helping others, combined with the influence of another person. An example of this can be seen in the following quotation. "I would like to be camming and to help them and because when I saw my mam thought it was so camming and niece." This student aspired to become a nurse to help others. It may be inferred that their mother is a nurse and that seeing her working has had an influence on the student (influential person).

Another student aspired to become a soccer player. "Because it's active and you're getting loads of exercise and Mohammed Sale inspires me." They expressed an intrinsically framed goal around activity and exercise (health), as well as mentioning someone that inspires them. The latter was coded as the sub-theme, 'influential person', which is classified as 'other'. Their response was collapsed into the thematic category of 'intrinsic and other'.

The next student's response contains multiple components. Components which were coded as intrinsic, related to saving lives, making others happy and having an interest in biology. The student also mentions that their parents are doctors which was coded as 'influential person' and collapsed into the theme of 'other'. When these themes are considered together, they become classified as 'intrinsic and other'.

> I would like to be this because to save people lives and because my parents are doctors and because I like biology as well. I will try my best to study hard for a doctor. I really wanna be a heart surgeon. I wanna make people happy and don't wanna make them sad.

Such quotations demonstrate the multitude of themes that were discovered in students' responses. Collapsing sub-themes into more succinct primary themes and omitting themes with a low number of respondents, allowed for the variable of goal contents to be more easily analysed and interpreted. This was balanced with an attempt to retain the complexity of information within these themes.

This difficulty coding students' responses as intrinsic and/or extrinsic, has implications for developing GCT. This is the first study, to the author's knowledge, that goal contents have been measured using an open-ended question rather than an aspiration index questionnaire (Grouzet et al. 2005; Kasser & Ryan, 1996). Measuring goal contents in this way has revealed a complexity to participants' answers that may not have been sufficiently captured by the aspiration index in previous research. Sub-themes which were discovered in the data went beyond the traditional themes in the literature. For example, within intrinsic goal contents, students expressed the traditional goal contents of community contribution, personal growth and relationships but also expressed goals relating to interests, fun and creativity. This has implications for the development of GCT moving forward. Consideration may need to be given to how goal contents are measured, additional sub-themes that can arise within goal contents, a universal coding protocol and measurement tool. Aside from themes directly relating to GCT, autonomy-supportive and controlling elements arose which may be interpreted using SDT (Ryan & Deci, 2017).

4.5.6 Autonomy-supportive vs. controlling.

Within several students' responses, there were elements of autonomy-supportive and controlling aspirations. This will be briefly discussed as it was not an aim of the study to explore this and as such it was not directly assessed. There has been some research within SDT that has explored the effects of autonomy-supportive versus controlling environments (Black & Deci, 2000; Deci & Ryan, 2008a; Chantara, Kaewkuekool & Koul, 2011; Ryan & Deci, 2017). Autonomy-supportive environments are seen to support the basic psychological need for autonomy, thereby leading to intrinsic aspirations which are associated with psychological well-being and optimal functioning (Chantara et al. 2011; Deci & Ryan, 2008a). Controlling environments thwart this need, leading to extrinsic aspirations which are associated with ill-being (Chantara et al. 2011; Deci & Ryan, 2008a).

An example of a student who expressed an aspiration that appears to have arisen from an autonomy-supportive environment is as follows: "I would love to be a soccer player because I am good and people in courage me." The latter part of the sentence, "people in courage me", could be interpreted as the student having had experienced an autonomy-supportive environment. Such responses were coded as 'other' as they were neither extrinsic or intrinsic and were not the focus of the current study.

An example of a student who expressed an aspiration that may have been influenced by a controlling environment can be seen in the following quotation:

"Because my dad told me so." This student aspired to be 'a boss for the builders'. These two examples appear to represent two ends of a continuum, ranging from autonomy-supportive to controlling environments. This is mentioned because it is part of the broader psychological theory (SDT) and it may account for some of the variability in responses and possible outcomes. It is something to be mindful of when analysing and interpreting these results. However, as it was not directly assessed or occurred with much frequency, it may be something to examine in future research, which will be discussed in the conclusions chapter.

In conclusion, the majority of students expressed intrinsic goal contents (59%) while a minority of students expressed extrinsic goal contents (8%). The remainder demonstrated some complexity in their responses, with 9% expressing intrinsic and extrinsic goal contents, 7% expressing intrinsic and 'other' goal contents and 14% expressing 'other' goal contents. It was difficult to sort goal contents according to GCT. This was in part due to how goal contents were measured, using an open-ended question. It was also due to the complexity of fifth class students' goal contents. The next chapter will discuss the results presented in this chapter, relating them to psychological theory, other findings and a wider theoretical context.

Chapter 5: Discussion

The research questions will be addressed in the following order: (a) What are students' career aspirations? (b) Are there predictive factors for students' career aspirations and goal contents? (c) How do students' career aspirations compare with those found in older studies, within the framework of GCT? (d) What are the implications of students' goal contents? The results of descriptive statistics, a chi-square analysis, several multinomial logistic regression analyses and thematic analysis will be discussed in relation to these questions.

5.1 What are Students' Career Aspirations?

Students provided a large and diverse range of 92 career aspirations. To create a manageable data set for analysis, these careers were collapsed into five categories: do not know, non-professional, professional, creative and sports. Amongst the reported career aspirations, soccer player was the most popular (n = 28). Other frequently occurring careers included: teacher (n = 10), beautician (n = 10), youtuber (n = 9), doctor (n = 8), and architect, hairstylist and makeup artist which were each reported by seven students.

Four studies were systematically reviewed in chapter two, the findings of which will be compared with the results of the current study. As each of the studies used different methods to categorise their data and did not provide a breakdown of the different careers within these categories, it is difficult to directly compare their results with that of the current study. However, certain similarities can be identified.

Of the four reviewed studies, three provided information about the types of careers that students aspired to. Of the three, two studies (Auger et al. 2005; Phipps, 1995) reported findings for specified versus non-specified careers. Non-specified may be interpreted as equating to 'do not know' in the current study. The two studies reported a figure similar to that found in the current study, 1.4%. In the third study a far higher percentage of participants (36.7%) did not specify a career (Donelly, 2006).

Donelly (2006) found that 13.7% aspired towards a medical profession versus 7.3% in the current study, 13.3% aspired to become a garda versus 2.9% and 10% aspired towards a creative or teaching career versus 26% in the current study. Phipps (1995) sampled 72 students, of which 13.9% reported a realistic career, 23.6% an investigative career, 12.5% an artistic career (similar to 16.8% in the current study), 40.3% a social career, 8.3% an enterprising career and 1.4% a conventional career.

Auger et al. (2005), Donelly (2006) and Phipps (1995) reported that prestigious careers was a popular and recurrent finding.

A recent large-scale survey (N = 13,070) was conducted by Chambers et al. (2018) with students ranging in age from 7 to 11 years old across 146 primary schools. Students drew a picture of what they wanted to be. Several types of careers were collapsed in this study for example, engineer careers (civil, mechanical and electrical), leading to a total of 67 career choices. When this is taken into account, the number of reported career aspirations by Chambers et al. (2018) and the current study are similar. This appears to demonstrate the awareness that students at this age have of a diverse range of career options.

Several careers were found by Chambers et al. (2018) which did not appear in the current study, for example, ambulance worker and waiter. Many more were shared between studies, such as 'sportsman/woman' which was reported by 21.3% students (Chambers et al. 2018) and by 23% students in the current study. Although the studies referenced categorised careers differently, students appear to report a large variety of careers with sports careers frequently mentioned.

The students in the current study expressed a large and diverse array of careers (N=92), with each student reporting an aspiration, aside from three students. Situated within career development theory, this appears to reflect their stage of career development. At the age of 10 or 11, children have progressed from an awareness of the practicalities of finding a job to a more dynamic exploration of the world of work (Goldstein & Oldman, 1979). This exploration coincides with a more developed knowledge of a wider variety of available careers and an ability to envision themselves in different careers (McGee & Stockard, 1991).

There was very little overlap in the reported career aspirations of students in the current study. This appears to reflect the extensive knowledge that children at this age have of different career types. The diversity may also be partly explained by career development theory. Children at this age, as part of their dynamic exploration of the world of work, use their interests and aptitudes to guide their exploration (Goldstein & Oldman, 1979). As children develop an awareness of their strengths and interests, these lead them to specific career aspirations. Therefore, this diversity of career aspirations with little overlap, may partly reflect the individual interests and aptitudes of each student.

Children's perception of careers is more realistic and developed (Nelson, 1963). According to lifespan development theory, this age cohort presents the perfect opportunity to garner the largest and most diverse array of careers. While their awareness, knowledge and dynamic exploration of careers is developed by this age, it is not yet subject to a refinement of options. When students reach sixth class, their available career options will begin to be funnelled by their choice of secondary school, then by their subject choices and CAO options. Young adolescents become aware of obstacles to their career aspirations and adjust their aspirations accordingly (Hartung et al. 2005). Therefore, it is perhaps to be expected that the majority of this age cohort are able to report a career aspiration and that there is such a large and diverse range of career aspirations reported.

Nearly each student expressed a career aspiration. Their developed understanding of the different available careers may have assisted their choosing of a career aspiration as they had a knowledge base to draw upon. Their interests and awareness of their aptitudes guided their exploration of these options, allowing them to make informed decisions about what they would like to be. Being able to envision themselves in their chosen career and having a realistic understanding of different careers, perhaps made this process more concrete and realistic. Therefore, most students were able to engage in this dynamic exploration because they were developmentally ready. Hence, the majority of students reported a career. Children's awareness, knowledge and alignment towards the world of work, "not only starts early, but is far more extensive and rapid than many of us would have otherwise been prepared to believe" (Goldstein & Oldman, 1979, p.177). As well as exploring students' career aspirations, previous studies have also explored predictor variables. The same has been done in the current study, the findings of which will be discussed next.

5.2 Is there a Relationship between School Location and Career Aspiration?

A chi-square test of independence was conducted in the current study using the variables of school location (urban and rural) and students' career aspirations. The results of this analysis indicated that there was a non-significant relationship (p = .587) between the two variables. This is contrary to Härtung et al.'s (2005) finding who found that students who attended a rural school aspired to their parents' careers more so than those attending urban schools.

Theoretically, there may be differences in the career aspirations of students living in rural areas due to a finite number of careers available to them. According to career development theory, children's knowledge of career options at this age should be

well developed. However, this knowledge may be inhibited by the contextual factor of location. Children living in rural areas, may be exposed to fewer career options. Within this, parental occupations may be less diverse, for example, in Ireland farming is a popular occupation in rural areas. These contextual factors may coalesce to affect children's career aspirations. As Ireland has a unique geographical layout, with a substantial amount of small rural schools, this finding may hold particular relevance, signalling an area for exploration.

Although the finding for the current study was not significant, this may be due to methodological limitations.

The rural schools included in this sample may not have been representative, in terms of location and size. Those included in the current study were relatively average sized, with one located on the outskirts of a city. If the sample included in the current study was more representative of very small remote rural schools, significant differences may have been found in the career aspirations of students according to school location. Due to the limited amount of research conducted on school location as a predictor variable and the unique geographical relevance that this has for Ireland, future research appears to be warranted. Other predictor factors that were analysed were gender and school gender.

5.3 Is there a Gender and/or School Gender Difference in Choosing Professional versus Other Types of Careers?

In the current study a multinomial logistic regression analysis was conducted using the factors of gender, gender makeup of the school (all-boys, all-girls and co-educational) and an interaction between the two. School gender did not produce a significant result. An interaction between gender and school gender was also explored to determine whether it explained variability in students' career aspirations. This interaction did not produce a significant effect. It was hypothesised that boys would be more likely to aspire to certain careers when attending a single-sex school versus a co-educational school. The same was hypothesised for girls. As the results were non-significant, the null hypothesis was accepted.

These findings are contrary to Watson et al's (2002) finding of differences in the career aspirations of girls from a single-sex school and that of girls and boys from a co-educational school. Girls from a single-sex school, reported more prestigious realistic career aspirations. The aspiration scores (measured in terms of prestige) of girls in a

single-sex school remained static but the scores of boys and girls in a co-educational school decreased as they progressed.

A possible explanation for the non-significant finding may be due to the age of the sample. Watson et al.'s (2002) study included participants from 6th class and 2nd, 4th and 6th year. Career aspiration scores were found to decrease as students neared the end of their schooling (Watson et al. 2002). As only 5th class students were included in the current study, this may be why no differences were found. How careers were coded in the current study were different to Watson et al. (2002) making it difficult to make comparisons. This may offer another possible explanation for no statistically significant difference.

Bardick and Bernes (2005) explored what factors children and adolescents believed to be affecting their career aspirations. They found that school was perceived as a significant influential factor (Bardick & Bernes, 2005). Considering Watson et al.'s (2002) findings, it may be possible that the contextual factor of school is producing a differential impact upon students' career aspirations, depending upon the gender make-up of the school. Perhaps there are differences in what is being role-modelled within the school. There may be different obstacles, depending upon the gender make-up of the school that students perceive and consequently adjust their aspirations accordingly (Hartung et al. 2005). It may also be due to the gender make-up of peers. Girls have been found to aspire to more prestigious careers than boys (Watson & McMahon, 2016). Perhaps attending school in a predominately female environment, impacts upon the development of career aspirations, leading to a static trend in prestigious career aspirations. Students attending a co-educational school may be influenced by male and female peers, leading to a decrease in prestigious career aspirations. This effect may be due to the value that adolescents place on their peers opinions, in contrast to children, who place more value on adults opinions (Biddle, Bank & Marlin, 1980). Further research is needed to discern whether the gender make-up of the school impacts upon the career aspirations of students.

Factors which may have accounted for variability in students' career aspirations were parsimoniously included in a model (Field, 20180). The only factor within this model that was found to significantly predict students' career aspirations was gender. A multinomial regression analysis indicated that the effect of gender appeared to be specific to the career of sports, with males being statistically more likely to aspire to this career type than females. It was selected with such frequency, that it was more likely to be picked as a career by males over any other type of career. It was hypothesised that

females may be more likely to aspire to a non-professional career versus a professional career, but the findings did not support this hypothesis.

The systematic review of students' career aspirations conducted in chapter two, demonstrated controversial findings in relation to gender. Each study used a different method to differentiate types of careers, making it difficult to make comparisons, although the following has been observed. Auger et al. (2005) and Phipps (1995) found differences in aspirations according to gender but Schmitt-Wilson and Welsh (2012) did not. Auger et al (2005) found that a large proportion of males aspired to become professional athletes, mirroring the findings of the current study. Phipps (1995) found that females were less likely to aspire to artistic careers. Conversely, the current study found that females were as equally likely as males to aspire to artistic careers. These contrasting results may be due to an equalisation of gender roles and professions since Phipps' (1995) study. As each of these studies received high WoE, signalling good methodological quality and relevance, further research appears to be needed.

Other studies have also produced contrasting results. McMahon and Patton (1997) found that primary aged girls aspired to fewer careers than boys. Other research has indicated that as girls become older, they decide upon their careers earlier than boys (Dorr & Lesser, 1980). However, this may be because they previously aspired to fewer careers than boys, meaning that they decide earlier because of having fewer options to deliberate over (Härtung et al. 2004). The results of the current study contradict the findings of McMahon and Patton (1997) as females reported a wider variety of careers (n = 60) than males (n = 46).

A study conducted in 1989 in Belfast by Hammond and Dingley discovered gender differences in the career aspirations of students. Males and females were found to aspire to sex-typed careers with females expressing less prestigious career aspirations than males (Hammond & Dingley, 1989). Sellers, Satcher and Comas (1999) also found gender stereotyped career aspirations. When these gender-typed careers are viewed from a developmental perspective, males aspire to highly gendered careers while females increasingly aspire to male-dominated careers as they grow older (Sandberg, Ehrhardt, Ince & Meyer-Bahlburg, 1991). In order to examine gender-typed careers in the current study, the careers within the coded categories need to be explored.

Certain gendered roles were found to exist, such as beautician, teacher and makeup artist which feature in the top five of female career aspirations. Amongst males, sport careers are clearly favourited, with both soccer player and rugby player in the top

five. Youtuber, garda and architect are also in the top five for males. These types of careers will be compared with the findings of previous studies, according to gender.

Bobo, Hildreth and Durodoye (1998) explored the career aspirations of 1,611 students from first through to sixth class, across five schools in America. Participants listed 98 different careers, somewhat similar in number to the current study. Within fifth class, the most popular careers amongst boys were athlete (n = 33), doctor (n = 11), pilot (n = 7), truck driver (n = 5) and garda (n = 2) (Bobo et al. 1998). In the current study, athlete remains a favourite career aspiration amongst boys, with the introduction of youtuber, which would not have existed as a career at the time of Bobo et al.'s (1998) study. In the current study, garda is also listed amongst the top five career aspirations of boys.

Bobo et al. (1998) reported that the most popular careers amongst girls were teacher (n = 32), doctor (n = 20), vet (n = 8), lawyer (n = 2) and fashion designer (n = 2). Comparatively in the current study, teacher (n = 9) and doctor (n = 8) are both listed within the top five career aspirations amongst girls. The current study also found that vet (n = 4), lawyer (n = 3) and fashion designer (n = 1) occurred with similar frequency to Bobo et al.'s (1998) study, while beautician (n = 10) and makeup artist (n = 7) occurred more frequently than in Bobo et al.'s (1998) study. Overall, students' career aspirations share a number of similarities with Bobo et al.'s (1998) findings.

Hewitt (1975) used an open-ended question to garner students' career aspirations, similar to the current study. Of the 128 students sampled by Hewitt (1975) (aged between six and eight years old), 64 were in first class and third class, respectively. The results of third class will be reviewed as it is closest in age to the sample of the current study. Hewitt (1975) found a diverse range of career aspirations that occurred with low frequency, similar to the findings of the current study. Amongst boys, football player was the second most popular (Hewitt, 1975) while it was the most popular in the current study. Garda was listed as the most popular by Hewitt (1975) and is the third most popular career in the current study. Gym teacher and carpenter were frequently reported by Hewitt (1975) but neither appeared in this current study. Carpenter may not have occurred because it has declined as a profession since the 1970's.

Amongst girls, teacher was the second most popular, mirroring the findings of the current study. Nurse was reported more frequently in Hewitt's (1975) study than in the current study. Hairdresser occurred across both studies. Saleslady, salesman and childminder which appeared somewhat frequently in Hewitt's (1975) findings, did not

occur in the current study. It may be that these careers are quite dated. Six students did not know what they wanted to be, similar to the finding of the current study.

Overall, gender was a significant predictor of students' career aspirations, specific to sports careers. Males were significantly more likely to pick a career in sports than females. This will be discussed in the next section. Females were as equally likely to pick a professional career as a non-professional career. According to the research on career development, females tend to aspire to more prestigious careers than males (Watson & McMahon, 2016). If the participants were reassessed at a later time point in adolescence, it could be hypothesised that females would report more prestigious careers than males. Females may aspire to more prestigious careers because of a desire for social recognition (Etaugh & Bridges, 2015). They may receive more social support and encouragement to pursue such aspirations in contrast to males (Etaugh & Bridges, 2015). This may be due to a gender difference in how others treat them. For example, there is a higher expectation for females to attain higher educational levels (Eccles, Jacobs & Harold, 1990). This may stem from male-dominated jobs that require physical labour and perhaps lower educational levels. Females tend to have more intrinsic values which may be due to the social construction that women are viewed as caring and nurturing (Adler, Kless & Adler, 1992; Eccles et al. 1990). Thus, there are gender differences in how they are raised and such values instilled (Adler, Kless & Adler, 1992; Eccles et al. 1990). This then leads to a tendency for females to aspire to caring professions. These professions may be more likely to require further education, leading to prestigious careers, such as doctor or social worker.

This gender difference in the values instilled may also offer a hypothesis for why gender-typed careers were observed in the current study. Teacher and doctor were amongst the most frequently cited career aspirations amongst female students in the current study. Girls may be more likely to aspire to such caring professions due to the social construction of women as caring and nurturing (Adler et al. 1992; Eccles et al. 1990). As primary school teachers tend to be female, primary-aged children are exposed to a profession that is female-dominated (Johnston, McKeown & McEwen, 1999). This role-modelling may be why teacher is such a popular aspiration amongst girls but not amongst boys. Sports careers dominate the most popular career aspirations reported by boys in the current study. This will be discussed further in the next section. Youtuber was reported by five boys and four girls, demonstrating similar popularity across genders.

Contrary to previous research, females reported a greater breadth of careers in contrast to males (McMahon & Patton, 1997). In the current study, girls reported 60 different career aspirations and boys reported 46 different career aspirations. As outlined earlier, in relation to career development theory, this age provides the perfect window to assess aspirations as career knowledge is relatively well developed, children can engage in dynamic exploration and envision themselves in different careers (Goldstein & Oldham, 1979; Hartung et al. 2005; McGee & Stockard, 1991). Options have not yet become closed to children due to such factors as subject choices (Hartung et al. 2005). Within the literature, it has been indicated that girls engage in less career exploration, in contrast to boys (Hartung et al. 2005). They are also thought to aspire to a more restricted range of career aspirations (Hartung et al. 2005).

This may be due to a complex interplay of factors, including socialisation experiences, social environments, the difference in how girls and boys are treated, different expectations according to gender, media and the influence of peer relationships (Adler et al. 1992; Biddle et al. 1980; Eccles et al. 1990). Socialisation experiences refers to a lifelong social learning process whereby people learn through interactions with others, how they view themselves according to their gender (Adler et al. 1992). Role models, such as parents and teachers, tend to treat children and adolescents differently according to their gender (Eccles et al. 1990). There are different expectations, with boys expected to be more physically active and outgoing while girls are expected to be more sociable and sensitive (Adler et al. 1992). This construction is translated into media, through gender-typed careers. When children reach adolescence and begin to value the opinions of their peers over adult role models, it can be difficult to overcome these gender restrictions (Biddle et al. 1980; Etaugh & Bridges, 2015). Male-dominated careers tend to be more prestigious and have higher pay, leading to pay inequality according to gender (Etaugh & Bridges, 2015).

Although gender-typed careers existed within the current study, girls reported a wider variety of careers in contrast to boys. This is contrary to previous research, perhaps signalling a significant shift to that seen in previous studies (McMahon & Patton, 1997). With a greater recognition of socialisation and differing expectations according to gender, children's role models may be attempting to manage these expectations. Consequently, this may be affecting how careers are communicated in the media, with a growing awareness of the need to communicate both males and females in different career types. This could be encouraging girls to engage in a more dynamic exploration of careers and aspire to a broader range of career aspirations.

According to the findings of the current study, there appears to be a move towards gender equalisation of careers, although gendered roles do still exist. At a societal level, this gradual move may reflect an increasing awareness of the still present single-gender dominated careers. For example, a current issue is the lack of females enrolling in science, technology, engineering and mathematics (STEM) degrees (Riegle-Crumb, Moore & Ramos-Wada, 2011; Sadler, Sonnert, Hazari & Tai, 2012). This growing awareness and societal drive to value gender equality may be one of the reasons for the gender effect only being evident in sports and females reporting more careers than males. However, further research is needed to unravel gender effects. As sports played a large role in these gender differences, gender as well as school SES will be further explored in relation to students' career aspirations.

Figure 12. *Student who aspires to be a scientist.*

5.4 Is there a Gender and/or school SES Difference in Choosing Sports versus Other Careers?

In order to further examine the role that sports plays, it was included as a baseline and compared against other types of careers. For the purpose of this analysis, gender, school SES (DEIS and non-DEIS schools) and an interaction between the two

factors were examined for predictive power in relation to the outcome of students'
career aspirations. School SES and an interaction between gender and school SES did
not produce a significant effect on students' career aspirations. School SES was
included to explore the hypothesis that boys from a DEIS school were more likely to
aspire to a sports career. As the result was not significant, the null hypothesis was
accepted.

Gender did explain variability in students' career aspirations better than the
original model and was accepted as a predictor. It was consistently predicted that males
would choose a career in sports over other career types (non-professional, professional
and creative). The popularity of sports amongst males is mirrored in the findings of
previous studies (Auger et al. 2005; Bobo et al. 1998; Chambers et al. 2018; Hewitt,
1975). In the previous analysis, where professional career type served as the baseline,
sports career type was the only significant category. Male students were statistically
more likely to aspire to a career in sports over a professional career type. In this
analysis, where sports is the baseline, all of the career types become significant when
contrasted with it. Therefore, gender differences appear to predominately operate around
the sports category. This may be because of the disproportionate number of males who
reported a sports career. A career in sports was the most frequently cited category by
boys in the current study (39%).

When attempting to explain why such a large proportion of boys reported sports
careers, it may be useful to look at the type of role models that they are exposed to and
the influence of media upon their career development (Bricheno & Thornton, 2007;
Lines, 2001). Within sports, it is a predominately male-dominated field (Bricheno &
Thornton, 2007). While there are female sports teams, they generally receive far less
media coverage than male teams (Biskup & Pfister, 1999). This media imbalance
consequentially limits how much children and adolescents are exposed to female role
models in sports. There is a pay imbalance between male and female sports people, due
to this lack of recognition and media coverage (Biskup & Pfister, 1999; Bricheno &
Thornton, 2007; Lines, 2001). This may then make a career in sports less appealing for
girls because of the lower pay in contrast to their male counterparts. Another factor that
may be contributing to this overrepresentation of boys in sports careers in the current
study is the gender difference in the career development of fantasy and realistic careers
(Helwig, 1998, 2001, 2004).

Boys have been found to progressively report less fantasy careers while girls
report more fantasy careers (Helwig, 1998, 2001, 2004). This trend has been observed to

take place from second class to sixth year (Helwig, 1998, 2001, 2004). According to the literature, if the cohort in the current study were reassessed at a later time point, for example during secondary school years, it could be hypothesised that boys would progressively report fewer fantasy type careers, such as soccer player, while girls may report more fantasy type careers. An interplay between the factors of role models, the influence of media and gender differences according to fantasy and realistic type careers may offer an explanation for the significant proportion of males that were found to aspire to a sports career in the current study. School SES will be discussed next as a predictor factor for students' career aspirations.

5.5 Is there a School SES Difference in Aspiring to a Non-Professional Career versus Others?

The previous research question included SES as a possible explanatory factor for the significant gender difference of aspiring to a sports career. This research question took a different perspective on school SES by using the non-professional career type as the baseline category. This was done to explore the hypothesis that students attending a DEIS school would be more likely to aspire to a non-professional career than a professional career. This hypothesis was informed by the findings of the systematic review outlined in chapter two, which demonstrated some apparently controversial findings. Phipps (1995) found differences according to SES but Schmitt-Wilson and Welsh (2012) did not.

In the current study, school SES was not found to be an overall significant predictor of students' career aspirations. This was because sports and artistic careers were included alongside professional and non-professional careers. If only professional and non-professional careers were contrasted according to DEIS status, the result may have been significant. Therefore, it may be more meaningful to emphasise the results for non-professional careers versus professional careers. Within the produced model, a statistically significant result showed that students from a DEIS school were .35 times more likely than those from a non-DEIS school to aspire to a non-professional career versus a professional career. If this result is emphasised rather than the overall impact of school SES for each career type, the hypothesis that students attending a DEIS school are more likely to aspire to a non-professional career than a professional career is supported. This is in line with Phipps (1995) finding of observed differences according to SES.

Hannah and Kahn (1989) demonstrated that students with a low SES aspired to less prestigious careers. Saw et al. (2018) found that students with a low SES were less

likely to aspire to STEM careers than students with a high SES. Within the limitations of the current study, prestigious careers could be likened to professional careers, those that require a degree or above. Although it is not possible to make direct comparisons, certain inferences can be made, indicating similarities between the current study and previous findings. Gore, Holmes, Smith, Southgate and Albright (2015) found that students with a low SES expressed lower career aspirations, though not to the level expected.

Although school SES was not a significant predictor of students' career aspirations, students attending a DEIS school were more likely to aspire to a non-professional career versus a professional career. Perhaps there was only a statistically significant difference between these two career types, as it would not be expected for there to be a significant difference between non-professional careers and sports careers or between non-professional careers and creative careers. What would be expected given previous findings is that the difference would operate solely between professional and non-professional careers (Hannah & Kahn, 1989; Härtung et al. 2005). According to the literature, this is because students from a low SES background are exposed to fewer career choices, and careers that are modelled at home may be less prestigious (Moulton et al. 2018; Nelson, 1963). They also may be becoming aware of their own SES and match their aspirations to what they believe is in line with their SES (Miller, 1986; Saw et al. 2018).

This finding may indicate that the socioeconomic make-up of the schools and communities they serve are of a relatively low SES. The DEIS schools and their surrounding areas may be home to families that have a predominately low SES. The communities themselves may then reflect this due to lower levels of disposable income. It could be hypothesised that one of the main career types in areas surrounding DEIS schools is non-professional. According to career development theory, this then impacts upon what type of careers children are exposed to and what is role modelled for them. This can create a cyclical effect whereby children's parents are employed in non-professional careers, limiting children's exposure to and knowledge of different career types. Children from a DEIS school may be then more likely to aspire to such careers, resulting in a cycle of non-professional career aspirations and employment. These types of careers result in less pay and disposable income which then affects the community, resulting in the maintenance of a low SES area.

Smyth, McCoy and Kingston (2015) found that students attending a DEIS school are less likely to aspire to attend further education, in contrast to students attending a

non-DEIS school. The school culture of a DEIS school may be an important and influential factor upon children's career development. Students attending a DEIS school versus a non-DEIS school may experience different expectations (Smyth et al. 2015). Professional careers may not be as valued as they are in non-DEIS schools. It may also be that non-professional careers are presented as a more realistic aspiration to students in a DEIS school. Disengagement can be a concern for students attending DEIS schools. Although this has improved with the DEIS scheme, there are still a minority of students in DEIS schools who become disengaged and may leave school early (Smyth et al. 2015). This disengagement can, in turn, affect the career development of students and may contribute to a higher number of students in DEIS schools aspiring to non-professional careers. As certain findings on SES and school SES have been contradictory, future research may be warranted. The following section will move from career aspirations to goal contents, using the framework of GCT.

5.6 Students' Goal Contents

SDT and its mini-theory GCT will be outlined in this section. Students' goal contents will be explored within the framework of GCT. A multinomial logistic regression model will be discussed to identify possible predictors of students' goal contents. The results of a thematic analysis will then be outlined and compared to the findings of older empirical studies. Finally, the implications of students' goal contents will be explored according to previous findings within the GCT literature.

5.6.1 An overview of Self-Determination Theory.

Goal Contents Theory (GCT) is one of six mini-theories of the macro-theory of Self-Determination Theory (SDT) (Ryan & Deci, 2017). SDT and its mini-theories address certain facets of behaviour and/or personality functioning (Deci & Ryan, 2008a). Underlying SDT are organismic dialectic theory and basic needs theory (Ryan & Deci, 2017).

Organismic dialectic theory assumes that humans possess an inherent tendency to proactively engage with their environment (Deci & Ryan, 2000). This tendency can be supported or thwarted by the social context (Deci & Vansteenkiste, 2004). If it is thwarted, psychological development may be inhibited (Deci & Vansteenkiste, 2004). Basic needs theory specifies that the type of support needed is the fulfilment of all three of the basic psychological needs (autonomy, competence and relatedness) (Ryan & Deci, 2017). Fulfilment of these needs are associated with psychological well-being and optimal functioning (Ryan & Deci, 2000). If one or more of these needs are thwarted,

psychological ill-being and non-optimal functioning can be expected (Deci & Vansteenkiste, 2004).

5.6.2 An overview of Goal Contents Theory.

GCT is concerned with the contents of one's goal, whether they are extrinsic or intrinsic (Kasser & Ryan, 1993, 1996). Extrinsic goal contents include: fame, wealth and physical appearance (Grouzet et a. 2005; Kasser & Ryan, 1996). Intrinsic goal contents include: contributing to the community, health, personal growth and relationships (Grouzet et a. 2005; Kasser & Ryan, 1996).

In the current study, students were asked why they would like to be their selected career aspiration, in an attempt to discern their goal contents. "Life goals, which include both extrinsic and intrinsic aspiration perspectives, are central to understanding the career aspirations that our students have" (Chantara et al. 2011, p.215). Responses were thematically coded according to whether they were extrinsically or intrinsically framed. As there was a certain amount of complexity within the responses, an attempt was made to respect and retain this richness of data while also making it manageable for analysis and interpretation. To this end, 19 themes were collapsed into the categories of extrinsic, intrinsic, 'other', extrinsic and intrinsic, and intrinsic and 'other'.

There were 16 students (8%) whose answers were coded as extrinsic, 124 students (59%) with intrinsic goal contents, 29 students (14%) whose responses were coded as 'other', 19 students (9%) whose responses were dual coded as extrinsic and intrinsic and 14 students (7%) with goal contents coded as intrinsic and 'other'. The majority of students expressed intrinsic goal contents with far fewer reporting extrinsic goal contents. According to previous research, whether a person has an extrinsic or intrinsic goal content, produces differential effects on well-being (Kasser & Ryan, 1996). Although well-being was not assessed in the current study, these implications will be discussed later. Firstly, certain factors will be examined to determine whether they predicted what type of goal contents students had.

5.6.3 Is there a gender and/or school SES difference in choosing extrinsic goal contents versus other types of goal contents?

Gender, school SES and an interaction between these two factors were inputted into a model to determine their predictive value of what type of goal contents students had. Extrinsic goal contents were selected as a baseline for comparison because of the

associated maladaptive outcomes, within the framework of GCT (Kasser & Ryan, 1993, 1996). As shown in the systematic review in chapter two and previous research, extrinsic goal contents are linked to ill-being as opposed to intrinsic goal contents which are associated with well-being (Hyvönen et al. 2009, 2010; Jongho et al. 2016; Kasser & Ryan, 1993, 1996; Kökönyei et al. 2008; Salmela-Aro, & Nurmi, 1997; Sheldon et al. 2004).

Due to the majority of males (39%) selecting sports and the assumption that this career type is generally associated with extrinsic goal contents, it was deemed appropriate to explore gender as a possible predictive factor. Please note, this is an assumption and generalisation. As can be seen in the qualitative data, possessing such an aspiration did not necessarily equate to an extrinsic goal content, with some students demonstrating intrinsic goal contents. However, this can be an assumption arising from certain media outlets portraying a materialistic society and perhaps encouraging materialism amongst users (Mazahir, Masood & Musarrat, 2016; Sidhu, 2015;).

School SES was selected as it may operate as a mediatory factor between the variable of goal contents and well-being. Some studies carried out with populations with a low SES, found that financial success was closer to safety/health and affiliation in contrast to populations with a higher SES, where financial success was more closely associated with self-gratification, materialism and status (Brdar, Rijavec & Miljkovic, 2009; Grouzet et al. 2005; Rijavec et al. 2011; Wong & Ahuvia, 1998). This is mirrored in the results of Rijavec et al.'s (2011) study which was conducted with a 'poorer' population. Phipps (1995) found that SES was related to career aspiration, required level of education and goal content. Children with a higher SES, were more likely to possess goal contents related to generativity or their interests (Phipps, 1995). Children with a lower SES, were more likely to possess goal contents related to finances or role models (Phipps, 1995).

Such findings amongst populations with a low SES may be explained through Maslow's hierarchy of needs (Maslow, 1943). People may possess extrinsic goal contents for the satisfaction of their basic needs (physiological and safety needs) (Maslow, 1943). According to Maslow, these needs must be satisfied in order for the person to then seek to have their psychological and self-actualisation needs met (Maslow, 1943). In relation to GCT, a person may need the extrinsic goal content of financial stability to be met before they can fully strive for intrinsic goal contents, such as generativity (Rijavec et al. 2011; Brdar et al. 2009; Grouzet et al. 2005; Rijavec et al. 2011). People may also need to fulfil an extrinsic goal content, usually earning money,

to progress to a career that they enjoy. An example of this was seen in the current study by a student who aspired to become a mathematician for NASA. "So that I can help space travel and get money and try to follow a career in chess when I have enough money." It could be interpreted that they want to earn money to provide them with the means to follow a career that they enjoy.

School SES and goal content were analysed to determine whether school SES predicted a student's goal content. The result was non-significant. The hypothesis that students attending a DEIS school may strive for extrinsic aspirations, perhaps due to a drive to fulfil the basic psychological need for safety (financial stability), was not accepted (Brdar et al. 2009; Grouzet et al. 2005; Maslow, 1943; Rijavec et al. 2011; Wong & Ahuvia, 1998). An interaction between school gender and school SES was also explored as a possible predictor but was not found to be significant. Only gender was found to significantly account for variability in students' goal contents. Upon a more in-depth analysis of the model, there are no significant interactions between extrinsic and other types of goal contents, mediated by gender. However, there is one interaction that is nearing significance ($p = .058$), which indicates that males were .35 times more likely than females to have an extrinsic goal content versus an intrinsic one.

When this finding is placed within the context of a large percentage of males aspiring towards a career in sports, it could be queried whether such careers are linked to extrinsic goal contents. It was not possible to explore whether there was a relationship between goal contents and career aspirations as there were not enough cases in some of the cells, violating an assumption of the analysis (Pallant, 2010; McHugh, 2013). This may be an area for further research. Previous findings appear to corroborate the gender difference found in the current study as females have been found to report higher intrinsic aspirations, in contrast to males (Kasser & Ryan, 1996; Rijavec, Brdar & Miljkovic, 2006).

Students' goal contents will be discussed next in relation to their aspirations and whether these have changed with the influx of new communication methods and technology. No previous studies have been conducted that combine goal contents and children's career aspirations. The results of the current study will be examined through the lens of GCT, alongside the findings of previous studies and possible implications will be discussed.

5.6.4 Changing patterns in career aspirations, within the framework of GCT.

Teigen, Normann, Bjorkheim and Helland (2000) conducted a study on who CYP most wanted to be like, with two samples in Norway. The first sample included 2,500 students in fourth year, ranging in age from 16 to 17 years. The second samples included 200 participants in first year, ranging in age from 13 to 14 years. Participants were asked `who would you most like to be like?' The results were compared to that of a Norwegian study conducted in 1914. Teigen et al. (2000) found that famous influential people mentioned by students predominantly included: sports stars, actors and pop stars while the older study found that students were influenced by authors and historical heroes.

Although the current study has been conducted with a population sample from Ireland, which may influence comparison between findings, it is of note that there has been another change in famous influential people, coinciding with the digital age. The career of youtuber is relatively new although careers, such as actor, are still somewhat popular. In the current study youtuber was the fourth most popular career aspiration.

The world has entered a digital age where the media is rife with discussion around peoples increasing preoccupation with materialism (Khalid & Qadeer, 2017; Sidhu, 2015). Studies have demonstrated a rise in career aspirations within the field of new media and technology (Chambers et al. 2018). These types of careers are generally associated with fame, financial success and physical appearance. It can then become a common assumption that those who aspire towards these careers have extrinsic goal contents. However, this assumption does not appear to be validated by current research. As part of the study mentioned above by Teigen et al. (2000), students were asked about what qualities they highly valued. Even though students aspired to be most like popular figures, they relayed that they valued moral and social qualities more than success and physical appearance. They chose careers often associated with extrinsic goal contents but their expressed goal content appeared to be more intrinsic.

The career itself is not an extrinsic aspiration, rather it is the goal content of the individual aspiring to that career. For example, a youtuber may have an intrinsic aspiration in that they wish to give back to the online community and engage in personal development. This career type does not necessarily denote an extrinsic goal. However, society tends to place higher value on financial success, popularity and physical appearance, all extrinsic goal contents. As CYP spend more time on screens and are more involved with social media, the basic need for relatedness may be overlooked (Vallerand, Pelletier & Koestner, 2008). As this is one of the basic psychological needs, this could be leading to extrinsic aspirations as they seek relatedness in the form of

subscribors/followers. This may then result in a person connecting on a superficial level to a multitude of people but conversely lacking deeper connections. As this basic need is thwarted, there are associated consequences of ill-being and non-optimal functioning (Deci & Vansteenkiste, 2004).

Conversely, the findings from the current study indicated that 59% of children had intrinsic aspirations and 8% had extrinsic aspirations. This indicates that although societal values appear to be becoming more extrinsic, the findings of the current study, alongside others, do not support this assumption (Teigen et al. 2000). However, further research is needed to fully explore CYPs' goal contents and associated outcomes as well as possible associations between certain careers and goal contents. Considering the negative outcomes associated with extrinsic aspirations, it may be important to consider what values people in these careers espouse as well as broader societal values, specifically, the values which place importance upon extrinsic goals (fame, wealth and attractiveness) (Grouzet et a. 2005; Kasser & Ryan, 1996).

Such extrinsic goals are synonymous with the attainment of external rewards, often materialistic things (Kasser & Ryan, 1996). Society plays a large role in prioritising materialism and as an extension extrinsic goals, espousing how much importance should be placed upon each type of goal. "Cultural (and developmental) influences produce variations in the importance of goals, the pursuit of which, in turn, yields different satisfaction of basic needs and different levels of well-being" (Ryan & Deci, 2000, p.75). Striving to attain such goals, thwarts basic needs satisfaction and is associated with ill-being (Kasser, 2018). Materialistic extrinsic goals have also been found to be negatively associated with pro-environmental and pro-social behaviours (Kasser, 2018). This important link between extrinsic aspirations and well-being indicate the importance of re-evaluating societal values. This link to well-being will be more closely examined, according to relevant empirical findings.

5.6.5 Implications of GCT.

GCT possesses implications for the well-being of students according to the contents of their career aspirations. This implication is explained through the underlying theories of GCT: organismic dialectical theory and basic needs theory (Deci & Ryan, 2000). If one or more of the three basic psychological needs (autonomy, competence and relatedness) are thwarted by the social context, psychological ill-being and non-optimal functioning can be expected (Deci & Vansteenkiste, 2004). Fulfilment of these needs are associated with psychological well-being and optimal functioning (Ryan & Deci, 2000).

The basic need for autonomy has been found to play a large role in well-being (Bartholomew et al. 2011; Black & Deci, 2000; Gagné & Deci, 2005; Niemiec, & Ryan, 2009; Ryan & Deci, 2006; Teixeira, Carraca, Markland, Silva & Ryan, 2012; Vansteenkiste, Lens & Deci, 2006). If a person possesses an extrinsic aspiration, they are reliant upon extrinsic rewards (Ryan & Deci, 2017). This reliance takes away a persons' control and autonomy (Teixeira et al. 2012). If a person has an intrinsic aspiration, they are more likely to experience autonomy, as they, for the most part, retain control of the outcome, which satisfies this basic need, leading to well-being (Ryan & Deci, 2000).

Possessing intrinsic goal contents have been found to predict greater fulfilment of the basic psychological needs for autonomy, competence and relatedness (Hope et al. 2018; Sibley & Bergman, 2018). The majority of students in the current study expressed solely intrinsic aspirations (59%). Although outcomes of intrinsic aspirations were not assessed, the findings of the following empirical studies may possess implications for students with this type of goal content.

Research has indicated that intrinsic goal contents may be associated with increased life satisfaction, learning, performance, persistence, participation, school success, greater spirituality and subjective well-being, and lower levels of greed (Cozzolino et al. 2004; Fryer et al. 2014; Ku et al. 2014; Nishimura & Suzuki, 2016; Romero et al. 2012; Sibley & Bergman, 2018; Teixeira et al. 2012; Vanteenkiste et al. 2004; Vansteenkiste et al. 2006). People with intrinsic aspirations have been found to have higher quality relationships than those with extrinsic aspirations and engage in more give and take, possibly fuelled by generativity goals (Kasser & Ryan, 2001; Sheldon & Kasser, 1995).

Vanteenkiste, Soenens, Verstuyf and Lens (2009) reviewed several studies, exploring the effects of intrinsic versus extrinsic goal framing upon students learning. If the value of an activity was specifically linked to an intrinsic goal content, learning and performance were enhanced (Vanteenkiste et al. 2009). Regardless of the type of goal content profile of individual students, if the activity was intrinsically framed, such benefits were observed (Vanteenkiste et al. 2009).

In the current study, a minority of students reported solely extrinsic aspirations (8%). The following are findings from various studies that may possess implications for extrinsic aspirations. Extrinsic goal contents may be negatively associated with life satisfaction, subjective well-being, learning, performance, persistence, participation and school success (Fryer et al. 2014; Ku et al. 2014; Nishimura & Suzuki, 2016; Romero et

al. 2012; Sibley & Bergman, 2018; Vanteenkiste et al. 2004; Vansteenkiste et al. 2006). Other research has found that extrinsic goal contents can increase high risk behaviours, drug and television usage and job burnout (Schmuck et al. 2000; Roche & Haar, 2013; Williams, et al. 2000). People with extrinsic goal contents have been found to have more conflictual relationships, can be less empathic and may use relationships to further their own goals (Dittmar et al. 2014; Kasser & Ryan, 2001; Sheldon & Kasser, 1995).

The current study was limited to measuring students' goal contents and did not explore any of the outcomes that are listed above. However, the research to date appears to repeatedly demonstrate the link between type of goal contents and differentially associated outcomes. This may pose implications for the goal contents students expressed in the current study but it cannot be definitively stated. The majority of students expressed intrinsic aspirations which may have positive implications, according to previous research. A relative minority of students expressed extrinsic aspirations which may have negative implications. Some students expressed both extrinsic and intrinsic aspirations, the implications of which will be discussed in the next section according to relevant empirical findings.

5.6.6 Cluster of goal contents.

The results of the current study demonstrated that students expressed a complex range of single, dual- and triple-coded goal contents. These included: extrinsic (8%), intrinsic (59%), 'other' (14%), extrinsic and intrinsic (9%), intrinsic and 'other' (7%), extrinsic and 'other' (1%), and extrinsic, intrinsic and 'other' (1%) goal contents. Much of the research within GCT has focused on the discrete categories of intrinsic and extrinsic and have used the Aspiration Index to measure these (Grouzet et al. 2005; Kasser & Ryan, 1996). Due to the age cohort of the current study, it was judged that this index was not developmentally appropriate. As an alternative, students were asked why they would like to be in their selected career. Due to the open-ended nature of this question, it was not possible to code answers into discrete themes. However, the findings are of interest and will be framed using previous research. Please note, other studies used different measures, but some discuss clusters of goal contents, similar to the findings of the current study.

Approximately 9% of the sample expressed extrinsic and intrinsic aspirations. This type of dual goal content needs to be interpreted differently to a discrete aspiration. Rijavec et al. (2011) surveyed the goal contents, basic psychological needs and well-being of 835 college students in Croatia. Rijavec et al. (2011) clustered respondents into

four groups according to their ratings on the Aspiration Index (Kasser & Ryan, 1996). These included participants:

1. High on extrinsic aspirations and low on intrinsic aspirations.
2. Low on extrinsic aspirations and high on intrinsic aspirations.
3. High on extrinsic aspirations and high on intrinsic aspirations.
4. Low on extrinsic aspirations and low on intrinsic aspirations.

Students in cluster 3 demonstrated the highest well-being and satisfaction of basic psychological needs. Students in cluster 2 demonstrated the next highest level of well-being. Clusters with low intrinsic aspirations demonstrated less satisfaction of the basic psychological needs.

Although it was not possible to rate goal contents in the current study, as has been done by other studies that used the Aspiration Index, the findings of Rijavec et al.'s (2011) study still possesses implications. Rijavec et al.'s (2011) findings are particularly relevant for the respondents of the current study who expressed multi-componential goal contents, especially those who expressed both extrinsic and intrinsic goal contents. As discussed in the previous section, intrinsic aspirations have been linked to optimal functioning and psychological well-being while extrinsic aspirations have been linked to non-optimal functioning and ill-being (Deci & Vansteenkiste, 2004; Hope et al. 2018; Kasser & Ryan, 1996; Ryan & Deci, 2000). However, there may be some grey area operating between these two categories. As demonstrated by Rijavec et al. (2011) students can possess both goal contents, at varying levels and that those with high extrinsic and intrinsic aspirations were highly rated for well-being. A possible explanation for why this combination resulted in the highest ratings for well-being may lie in the cultural context (Rijavec et al. 2011). As Croatia is considered a 'poorer' country, these high extrinsic ratings may serve to satisfy the basic psychological need for financial stability, as previously discussed. It is important to consider the SES of participants whose goal contents are being assessed and how extrinsic aspirations may serve different purposes according to SES and the differential effects this may have on well-being (Rijavec et al. 2011; Brdar et al. 2009; Grouzet et al. 2005; Maslow, 1943; Wong & Ahuvia, 1998). It may not be correct to simply predict that students who have an extrinsic component to their goal content will experience ill-being. The overall findings of the current study will be discussed next.

In conclusion, 92 different careers were reported which were coded according to: do not know, non-professional, professional, creative and sports. The popularity of sports amongst males was mirrored as a recurrent finding in previous studies (Auger et

al. 2005; Bobo et al. 1998; Chambers et al. 2018; Hewitt, 1975). There was a non-significant relationship between school location and career aspiration. While school SES did not significantly predict career aspirations overall. It was found that students attending a DEIS school were statistically more likely to aspire to a non-professional career than a professional career. The gender make-up of the school (single-sex and co-educational) did not significantly predict students' career aspirations. Gender was found to significantly predict students' career aspirations. This effect was concentrated on the category of sports, with males being more likely to aspire to a career in sports than females as well as being more likely to aspire to a career in sports over other types of careers. Females were as equally likely as males to aspire to professional career as a non-professional career. Within the career types, there were gender-stereotyped career aspirations. Contrary to previous research, females reported more careers than males (McMahon & Patton, 1997). Regarding students' goal contents, school SES was not a significant predictor. Gender significantly predicted students' goal contents with one effect nearing significance ($p = .058$): males were more likely to have extrinsic goal contents than intrinsic goal contents. The majority of students expressed intrinsic goal contents (59%), while relatively few expressed extrinsic goal contents (8%). The implications of students' goal contents for well-being were discussed, within the framework of GCT. The next chapter will focus on conclusions drawn from the current study.

Chapter 6: Conclusion

This chapter will focus on the contribution of the study as well as implications for further study. Implications for the practice of educational psychology will be discussed. The limitations of the study and areas for future research will be explored. Finally, how the findings will be disseminated will be outlined. The following section addresses the 'so what' question.

6.1 Contribution of the Study

The contribution of the current study will be considered in terms of students' career aspirations and associated predictive factors. The possibility of continuing the current study with the same participants, using a longitudinal design, will be discussed. Finally, students' goal contents will be examined within the context of educational psychology and what implications these findings may hold for EPs will be explored.

6.1.1 Students' career aspirations.

Through anecdotal reports over the past several years, EPs often hear about students who aspire to become youtubers or gamers. It is an important area for EPs to keep updated about, in order to be in tune with the aspirations and interests of those whom they are working with. As technology and communication methods are continually advancing, it is a never-ending race for adults to keep up with the latest 'fad'. One of the roles of the EP is to support professionals working with the student, which may include teachers and guidance counsellors (Brich et al. 2015; Hagstrom, Fry, Cramblet & Tanner, 2007; Holliman, 2013). Therefore, it is necessary for EPs to have an evidence-base and relevant research to inform their practice (Hagstrom et al. 2007). It is hoped that the current study will provide information for EPs and other professionals in this area. As no recent studies have been conducted in the Republic of Ireland, this research serves as culturally relevant and relatively recent.

Aside from providing information about the types of careers that students aspire to, the current study also provides information about predictors of students' career aspirations. This knowledge adds to the work of EPs at a broader systemic level (Boyle & MacKay, 2007; Pellegrini, 2009). As EPs work with a range of clients, it is necessary to know, for example, if a student with a low SES may be more likely to aspire to a non-professional career than a professional career. This finding may indicate work for EPs at the systemic level, to attempt to equalise what might be an SES imbalance, subject to further exploration in future research. Research has indicated that low SES students may be matching their career aspiration to their SES (Miller, 1986). In response, EPs could

take a two-pronged approach. The first prong being a universal intervention targeting students attending a DEIS school and attempting to expose them to a wider variety of careers, regardless of prestige level and supporting them in aspiring to these (Moulton et al. 2018; Nelson, 1963). The second prong is to address a wider societal imbalance in the opportunities available to those with a low SES. This could begin with equalising access to qualifications, regardless of finances. The role for the EP here may be at the level for policy change (Brich et al. 2015; Pellegrini, 2009).

Another factor to consider is school location. A question that EPs who work with rural communities may have is whether such a setting will affect students' career aspirations, for which the current study did not find supporting evidence. In contrast to this, Härtung et al. (2005) did find evidence to support location (rural) as a predictive factor, indicating further research is needed. Neither was the gender make-up of the school (all-boys, all-girls or co-educational) found to predict students' career aspirations, although future research is again required due to conflicting findings with previous research (Watson et al. 2002).

The final predictor variable that was explored was gender. Gender was found to significantly predict students' career aspirations, specific to sports, with males more likely to pick a career in sports than females as well as males being more likely to aspire to this type of career over any other. Females were as likely as males to aspire to a professional career. Although gendered careers existed within the different career types, females reported more careers than males. These results appear to reflect the societal move towards equalisation of gender (Syed & Ali, 2019). These gender differences seem to be slowly diminishing, although gendered careers still exist (Chambers et al. 2018; Riegle-Crumb et al. 2011; Sadler et al. 2012). This change alongside the introduction of new careers, such as youtuber, signal the need for continuous and up-to-date research (Chambers et al. 2018). There is also a need for longitudinal research as many studies conducted in the area have used cross-sectional designs (Härtung et al. 2005). The current study could be extended into a longitudinal design to explore how students' career aspirations change over time. This will be discussed next.

6.1.2 Do students' career aspirations and goal contents change over time?

The current study may present an opportunity to further our understanding of Irish students' career aspirations and goal contents, and how these change over time (Härtung et al. 2005). This could be done by continuing the current study with the same participants and employing a longitudinal design. Their career aspirations and goal contents could be reassessed after the junior certificate and the year of the leaving

certificate, culminating in three time points overall. This would add to the dearth in longitudinal research on whether career aspirations and goal contents change over time (Härtung et al. 2005). These (two) components have not been researched together to date and therefore have not been longitudinally assessed.

Research has demonstrated that the career aspirations of students as they transition from primary school to secondary school, change from fantasy to reality (Trice, 1991; Trice & King, 1991). Multiple times points and an examination by gender may be key here as research has shown that while males may aspire to fantasy-careers less, females tend to increasingly aspire to fantasy-careers as they grow older (Helwig, 1998, 2001, 2004). In the current study, quite a large and diverse array of careers were reported. It would be interesting to observe whether this variety of careers remains static or increases or decreases, as previous research has demonstrated conflicting results (Miller & Stanford, 1987; Trice, 1991; Sandberg et al. 1991). It may also be beneficial to include a measure of well-being, such as subjective well-being, to gauge the differential effects of goal contents. According to GCT research, type of goal content is differentially associated with well-being (Deci & Vansteenkiste, 2004; Ryan & Deci, 2000). The implications of this for EPs will be discussed next.

6.1.3 Implications of students' goal contents for educational psychologists.

The majority of students expressed intrinsic goal contents (59%), while a minority expressed extrinsic goal contents (8%). Whether students attended a DEIS or non-DEIS school did not significantly predict their goal contents. Gender did significantly predict goal contents. Within gender, a result that approached significance, was that males may be more likely to have an extrinsic aspiration than an intrinsic aspiration. As these results are quite tentative, further research is required. The finding that the majority of students expressed intrinsic aspirations, may indicate positive implications.

There are numerous positive outcomes associated with intrinsic goal contents. Some of these include: optimal functioning, increased well-being, learning and performance (Cozzolino et al. 2004; Fryer et al. 2014; Ku et al. 2014; Nishimura & Suzuki, 2016; Romero et al. 2012; Sibley & Bergman, 2018; Teixeira et al. 2012; Vanteenkiste et al. 2004; Vansteenkiste et al. 2006). Extrinsic aspirations have been found to be negatively associated with these outcomes (Cozzolino et al. 2004; Fryer et al. 2014; Ku et al. 2014; Nishimura & Suzuki, 2016; Romero et al. 2012; Sibley & Bergman, 2018; Teixeira et al. 2012; Vanteenkiste et al. 2004; Vansteenkiste et al. 2006).

The link between goal contents and the aforementioned outcomes has implications for the practice of EPs. One of the roles of an EP is to support the well-being of the CYP (Brich et al. 2015; DES, 2018c; Roffey, 2015). To this end, the implications of students' goal contents are particularly relevant. There may be a role for the EP to provide psychoeducation to the CYP, parents, teachers and other professionals, about the implications of GCT for career aspirations but also for any goal that a CYP may have. If the CYP and those supporting them are aware of their goal contents and associated outcomes, intrinsic goal contents could be emphasised and positive outcomes may be experienced (Sibley & Bergman, 2018). If the intervention focuses on encouraging intrinsic aspirations, by instilling values of generativity and the like, well-being may be supported (Kasser, 2018). This could be achieved by encouraging students to reflect on their own goals and critically think about the messages that materialistic societies and consumerism are trying to convey (Kasser, 2018). As autonomy, competence and relatedness predict intrinsic goal contents, parents, professionals and systems, such as the education system, could work to promote and support these basic psychological needs.

This type of universal preventative approach operates at the 'support for all' in the National Educational Psychological Service's (NEPS) Continuum of Support model (2007) or tier one of the Response to Intervention (RTI) model (Van Der Heyden & Burns, 2010). This type of work may have a positive inverse impact upon the number of CYP who require intervention at the 'support for some' and 'support for a few' levels (NEPS, 2007), which equate to tier two and three of the RTI model (Van Der Heyden & Burns, 2010). Knowledge of GCT may influence the practice of EPs, both through their role in supporting and intervening with clients, as well as adding a new theoretical perspective to their work. Exploring the content of CYPs' aspirations can allow for insight into their psychological well-being and functioning (Romero et al. 2012).

Not only does the content of students' aspirations have implications for well-being, but also for learning and performance. This is particularly relevant for the work of the EP. If a student is experiencing difficulty with learning and/or performance, GCT may possess certain implications for practice. Vanteenkiste et al. (2009) found that when the value of a learning activity is intrinsically framed, learning and performance are enhanced. If an activity is extrinsically framed, no such benefits are to be expected (Vanteenkiste et al. 2009). In practice, the intrinsic goal content is specified, and explicitly and clearly linked to the activity (Vanteenkiste et al. 2009). If this is done in an autonomous-supportive environment rather than a controlling one, a basic

psychological need will be satisfied, which is linked to intrinsic goal content (Sibley & Bergman, 2018; Vanteenkiste et al. 2009). As observed in the current study, students reported different types of goal contents. Regardless of individual student's goal content profile, if a learning activity is intrinsically framed it will enhance performance and learning (Vanteenkiste et al. 2009). Students' goal contents have implications for the work of EPs in relation to supporting students' well-being, learning and performance, within the framework of GCT. The limitations of the study will be discussed next.

6.2 Limitations of the Study

The limitations that will be discussed include: the interpretation of goal contents and how they were coded, possible confounding extraneous variables, measurement of SES and the depth of qualitative data that was gathered.

6.2.1 Interpretation of goal contents.

There are numerous limitations regarding the interpretation of individuals' goal contents. Although the researcher attempted to be as subjective as possible, they are bringing their own personal knowledge and experience to the research process (Denzin & Lincoln, 2017; Mertens, 2010). Subjectivity was attempted through the framing of responses using GCT and by recoding data-informed decisions.

The words students used to express their goal content may result in misinterpretation. For example, one student reported that they wanted to 'have a nice house'. This could hold multiple meanings. It could be an extrinsic aspiration, in that having a house serves as an external reward or it could be an intrinsic aspiration, whereby having a house is associated with family and relationships. In this case, it was coded at surface level as extrinsic, but if this had been discussed further with the student, it may have turned out to be an intrinsic aspiration.

An example of another possible misinterpretation is if a student reports a goal content as a means to achieve another primary goal, but not enough information is given to uncover this (Ryan & Deci, 2017). For example, one student reported that they wanted to 'help space travel' and earn money so that they could follow a career in chess. If they had only reported that they wanted to earn money, it would be coded as extrinsic. When further information is given, that earning a money is a means to achieving a career in their area of interest, it becomes intrinsic. There may have been other students who did not articulate this, making it difficult for the researcher to accurately discern their goal content/s.

Another point that may serve as a limitation for interpretation is the influence of different cultures upon meaning (Denzin & Lincoln, 2017; Ryan & Deci, 2017). For example, enlisting in the American army would be culturally seen as an intrinsic aspiration, as it is relational, whereas in Cyprus, military service is mandated, which may equate to an extrinsic aspiration if viewed negatively. Within Ireland, students from the travelling community would have their own culture and traditions which may influence goal contents, as demonstrated by the example above (Helleiner, 2003). Different cultures place different meanings upon things and this is something to be cognisant of.

Part of interpretation also involves how the results will be thematically coded. How the categories were coded limited the type of analyses that could be conducted, how the analyses were conducted and how the research questions were phrased. Although GCT provided a framework, students' responses did not neatly fall into the categories of extrinsic and intrinsic. As was outlined in the discussion section, data informed decisions were made to add themes and collapse them into categories. This was done for both goal contents and career aspirations. The rationale for doing so was to create a more manageable data set for analysis and interpretation. However, creating themes is a form of interpretation and as such is open to bias (Denzin & Lincoln, 2017). Regarding career aspirations, there is no single universally accepted protocol for categorisation, so by no means is the technique used in the current study optimal, rather the data lent itself to this method. Hence interpretation, no matter how objective it may seem, always holds limitations and it is important to be mindful of these when conducting research (Denzin & Lincoln, 2017). Additional to the limitations of interpretation, were possible uncontrolled effects of extraneous variables.

6.2.2 Extraneous variables.

The current study was conducted with school populations. However, the environment of students, especially primary and secondary school students, may be viewed as controlling rather than autonomy-supportive, depending upon the school. As well as looking at the school system, it is also important to account for the home environment and parenting style. There is some evidence that suggests autonomy-supportive and involved parenting is linked with the development of children's intrinsic aspirations while controlling and uninvolved parenting is linked with the development of extrinsic aspirations (Black & Deci, 2000; Chantara et al. 2011; Deci & Ryan, 2008a).

As autonomy is one of the basic psychological needs, the type of sample may be confounding observed results (Ryan & Deci, 2017). Yet despite this, quite a large proportion of the sample reported intrinsic aspirations. Accounting for this variable in future research may provide supporting contextual evidence for participants' basic psychological needs and goal contents (Guay, Ratelle & Chanal, 2008). This could be accounted for within the proposed longitudinal piece of research that continues to assess the same participants in secondary school.

6.2.3 Other limitations.

Other limitations of the current study include measurement of SES, threats to validity and the richness of qualitative data. Across the literature, it is broadly recognised that accurately measuring SES can be difficult, especially with limited available background information (Harwell & LeBeau, 2010; Hauser, 1994). The current study approximated school SES according to whether participants attended a DEIS or non-DEIS school (DES, 2018a). However, this possesses limitations as this measure does not equate to students' SES. Students from a variety of backgrounds may attend a school that is designated disadvantage. Rather it is the school that is designated disadvantaged than the student population.

Another possible limitation lies in the methodology. Students completed a survey seated beside each other in a classroom. They may have heard others' answers which could have impacted upon their own response. This might have resulted in a snowball effect where one student picks a career and then the student next to them copies this and so on and so forth. This would pose an internal threat to validity (Mertens, 2010). Future research could seat students apart and prohibit talking during the survey. Another option is to conduct interviews with students separately.

A final limitation is the richness of the qualitative data. In order to achieve a large enough sample size to answer the research questions, it was not possible to garner more in-depth qualitative data, considering the resources available. As a result, the qualitative data is somewhat superficial. This is an area that future research may wish to address by conducting interviews. Other possible directions for future research will be discussed in the next section.

6.3 Areas for Future Research

Several avenues exist for further exploration in light of the findings of the current study. As discussed previously, future research could endeavour to continue the current study using a longitudinal design. The findings of the current study also suggests

paths for further exploration. These will be discussed first according to goal contents and then according to career aspirations.

One such path is the relationship between goal contents and career aspirations. In the current study, it was not possible to explore this as there were not enough cases in some of the cells, violating an assumption of the required analysis (Pallant, 2010; McHugh, 2013). This may be an area for future research. Another variable to explore is SES. Although school SES did not significantly predict students' goal contents, previous research conducted within the framework of GCT posits that those from a low SES may aspire to extrinsic aspirations, such as money, to achieve the basic need for financial stability (Grouzet et al. 2005; Maslow, 1943; Rijavec et al. 2011; Wong & Ahuvia, 1998). In this context, extrinsic aspirations are not simply equated to ill-being, as they serve the purpose of meeting a basic need (Maslow, 1943; Rijavec et al. 2011). Therefore, the intricacies of this may require further exploration alongside the outcome of well-being. Gender significantly predicted students' goal contents but further research may be warranted to discern whether this effect was swayed by the disproportionate amount of males aspiring to a career in sports, a career choice possibly more associated with extrinsic goal contents. Findings according to career aspirations will be discussed next in relation to future research areas.

The non-significant finding of school location as a predictor of students' career aspirations, contradicts previous research, signalling a need for further exploration (Härtung et al. 2005). Future research may wish to obtain samples from smaller, more ruralised schools to gain a truly representative sample. Students attending DEIS schools were found to be more likely to aspire to a non-professional career than a professional career. Future research could explore this further by using a more accurate means of measuring SES than whether the school was designated DEIS. The Haas Index may offer a more accurate measure (Haase & Pratschke, 2017). It may also be useful for future research to code careers according to those that are prestigious and non-prestigious to further unravel possible differences in aspirations, according to SES.

The gender make-up of the school did not significantly predict students' career aspirations. This is contrary to previous research, indicating further research is needed (Watson et al. 2002). Gender significantly predicted career aspirations, but this effect appeared to be swayed by the frequency with which males aspired to careers in sports. There was no significant difference in the likelihood of males or females selecting a non-professional career over a professional career. This could be explored in future research, using the categories of prestigious and non-prestigious career types. The

findings of the current study according to goal contents and career aspirations offer avenues for future research. How the findings of the current study will be disseminated will be discussed next.

6.4 Dissemination of Findings

The findings of the current study will be disseminated in the form of a journal article which will be submitted for publication. This journal article (see appendix F) will be submitted to the British Journal of Educational Psychology (BJEP). The article will be formatted in line with the BJEP's guidelines. This journal has been selected because of its high impact rating. As the current study is rooted in educational psychology, this journal is of particular relevance.

6.5 Summary and Conclusions

The results of the current study have both corroborated and contrasted against previous findings. As career options are ever-evolving with the influx new communication methods and technology, research needs to be concurrently and continuously updated. SDT and its mini-theory, GCT, provide an important theoretical lens through which to view students' career aspirations. "SDT is a vital tool in the understanding of how students turn their intrinsic and extrinsic aspiration perspectives into life goals and as a consequence develop their career aspirations" (Chantara et al. 2011, p.215). Not only are their aspirations important, but also their goal contents, whether they be intrinsic or extrinsic. Their aspirations indicate a possible future life path and their goal content may be associated with well-being (Deci & Vansteenkiste, 2004). To the researcher's knowledge, this is the first study that includes measures of both children's career aspirations and their goal contents. It is hoped that the findings of the current study will lay a foundation for future research.

References

Adler, P. A., Kless, S. J., & Adler, P. (1992). Socialization to gender roles: popularity among elementary school boys and girls. *Sociology of education*.

Arbona, C., & Novy, D. M. (1991). Career aspirations and expectations of Black, Mexican American, and White students. The Career Development Quarterly, 39(3), 231-239.

Auger, R. W., Blackhurst, A. E., & Wahl, K. H. (2005). The development of elementary-aged children's career aspirations and expectations. *Professional School Counseling*, 322-329.

Bardick, A. D., & Bernes, K. B. (2005). Occupational aspirations of students in grades seven to twelve. NATCON Papers. Retrieved from: http://www.natcon.org.

Bartholomew, K. J., Ntoumanis, N., Ryan, R. M., Bosch, J. A., & Thøgersen-Ntoumani, C. (2011). Self-determination theory and diminished functioning: The role of interpersonal control and psychological need thwarting. *Personality and Social Psychology Bulletin*, *37*(11), 1459-1473.

Biddle, B. J., Bank, B. J., & Marlin, M. M. (1980). Parental and peer influence on adolescents. *Social forces*, *58*(4), 1057-1079.

Biskup, C., & Pfister, G. (1999). I would like to be like her/him: Are athletes role-models for boys and girls?. *European physical education review*, *5*(3), 199-218.

Black, A. E., & Deci, E. L. (2000). The effects of instructors' autonomy support and students' autonomous motivation on learning organic chemistry: A self-determination theory perspective. *Science education*, *84*(6), 740-756.

Blackhurst, A. E., & Auger, R. W. (2008). Precursors to the gender gap in college enrollment: Children's aspirations and expectations for their futures. *Professional School Counseling*, *11*(3), 2156759X0801100301.

Bobo, M., Hildreth, B. L., & Durodoye, B. (1998). Changing patterns in career choices among African-American, Hispanic, and Anglo children. *Professional School Counselling*, *1*(4), 37-42.

Boyle, J. M., & MacKay, T. (2007). Evidence for the efficacy of systemic models of practice from a cross-sectional survey of schools' satisfaction with their educational psychologists. *Educational Psychology in Practice*, *23*(1), 19-31.

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative
    Research in Psychology, 3, 77-101.

Braun, V., & Clarke, V. (2013). *Successful Qualitative Research: A Practical Guide for
    Beginners.* London: Sage.

Brdar, I., Rijavec, M., & Miljković, D. (2009). Life goals and well-being: Are extrinsic
    aspirations always detrimental to well-being?. *Psihologijske teme*, *18*(2), 317-
    334.

Brich, S., Frederickson, N., & Miller., A. (2015). What do educational psychologists do?
    In Cline, T., Gulliford, A., & Birch, S. (Eds.) *Educational Psychology: Topics in
    applied Psychology* (2nd ed.) (pp. 3-21). London and New York: Routledge.

Bricheno, P., & Thornton, M. (2007). Role model, hero or champion? Children's views
    concerning role models. *Educational research*, *49*(4), 383-396.

Bronfenbrenner, U. (1992). *Ecological systems theory*. Jessica Kingsley Publishers.

Campbell, A., Converse, P. E., & Rogers, W. L. (1976). *The Quality of American Life.*
    New York: Russell Sage Foundation.

Chambers, N., Kashefpakdel, E. T., Rehill, J., & Percy, C. (2018). Exploring the career
    aspirations of primary school children from around the world. Retrieved from
    https://www.educationandemployers.org/wp-content/uploads/2018/01/Drawing-
    the-Future-FINAL-REPORT.pdf

Chantara, S., Kaewkuekool, S., & Koul, R. (2011). Self-determination theory and career
    aspirations: A review of literature. *institutions*, *7*, 9.

Cozzolino, P. J., Staples, A. D., Meyers, L. S., & Samboceti, J. (2004). Greed, death,
    and values: From terror management to transcendence management
    theory. *Personality and Social Psychology Bulletin*, *30*(3), 278-292.

Csikszentmihalyi, M., & Schneider, B. (2000). *Becoming adult: How teenagers prepare
    for the world of work*. New York, NY: Basic Books.

Deci, E. L., & Ryan, R. M. (1985). Intrinsic motivation and self-determination in human
    behaviour. New York: Plenum.

Deci, E. L., & Ryan, R. M. (2000). The" what" and" why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological inquiry*, *11*(4), 227-268.

Deci, E. L., & Ryan, R. M. (2008a). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian psychology/Psychologie canadienne*, *49*(3), 182.

Deci, E. L., & Ryan, R. M. (2008b). Hedonia, eudaimonia, and well-being: An introduction. *Journal of happiness studies*, *9*(1), 1-11.

Deci, E. L., & Vansteenkiste, M. (2004). Self-determination theory and basic need satisfaction: Understanding human development in positive psychology. *Ricerche di psicologia*. *27*(1), 23-40.

Denzin, N. K. & Lincoln, Y. S. (2017) The SAGE Handbook of Qualitative Research. London: Sage Publications.

Department of Children and Youth Affairs (2011). *Children First: National Guidance for the Protection and Welfare of Children,* Dublin: Government publications.

Department of Education and Skills (2018a). DEIS school list 2018 - 2019 school year. Retrieved from https://www.education.ie/en/Schools-Colleges/Services/DEIS-Delivering-Equality-of-Opportunity-in-Schools-/

Department of Education and Skills (2018b). 2017-2018 – Department of Education and Skills. Retrieved from https://www.education.ie/en/Publications/Statistics/Statistical-Reports/statistical-report-2017-2018.xlsx

Department of Education and Skills (2018c). Wellbeing Policy Statement and Framework for Practice 2018–2023. Retrieved from https://www.education.ie/en/Publications/Policy-Reports/wellbeing-policy-statement-and-framework-for-practice-2018%E2%80%932023.pdf

Department of Housing, Planning and Local Government (October, 2017). Ireland 2040 – our Plan, National Planning Framework. Retrieved from http://npf.ie/wp-content/uploads/2017/10/Ireland-2040-Our-Plan-Draft-NPF.pdf

DiCarlo, M.A., Gibbons, J.L., Kaminsky, D.C., Wright, J.D. & Stiles, D.A. (2000). Street children's drawings: Windows into their life circumstances and aspirations. International Social Work, 43, 107-120.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment, 49*, 71-75.

Dittmar, H., Bond, R., Hurst, M., & Kasser, T. (2014). The relationship between materialism and personal well-being: A meta-analysis. *Journal of personality and social psychology*, *107*(5), 879.

Donelly, E. (2006). Saint Lucian Youth in Focus: Aspirations of Saint Lucian Rural Primary School Students. *International Education*, *35*(2), 82-104.

Dorr, A., & Lesser, G. S. (1980). Career awareness in young children. *Communication Research & Broadcasting*.

Easterbrook, M. J., Wright, M. L., Dittmar, H., & Banerjee, R. (2014). Consumer culture ideals, extrinsic motivations, and well-being in children. *European journal of social psychology*, *44*(4), 349-359.

Eccles, J. S., Jacobs, J. E., & Harold, R. D. (1990). Gender role stereotypes, expectancy effects, and parents' socialization of gender differences. *Journal of social issues*, *46*(2), 183-201.

Emmons, R. A. (1986). Personal strivings: An approach to personality and subjective wellbeing. *Journal of Personality and Social Psychology, 5*1, 1058-1068.

Entwisle, D. R., Alexander, K. L., Olson, L. S., & Ross, K. (1999). Paid work in early adolescence: *Developmental and ethnic patterns. Journal of Early Adolescence*, 19(3), 363–388.

Erikson, E. H. (1980). *Identity and the life cycle*. New York: Norton.

Etaugh, C. A., & Bridges, J. S. (2015). *Women's Lives: A Psychological Exploration.* New York: Routledge.

Ferrari, L., Ginevra, M. C., Santilli, S., Nota, L., Sgaramella, T. M., & Soresi, S. (2015). Career exploration and occupational knowledge in Italian children. *International Journal for Educational and Vocational Guidance*, *15*(2), 113-130.

Field, A. (2018) *Discovering Statistics using IBM Statistics*. London: SAGE Publications Ltd.

Franken, M. W. (1983). Sex role expectations in children's vocational aspirations and perceptions of occupations. *Psychology of Women Quarterly*, *8*(1), 59-68.

Fryer, L. K., Ginns, P., & Walker, R. (2014). Between students' instrumental goals and how they learn: Goal content is the gap to mind. *British Journal of Educational Psychology*, *84*(4), 612-630.

Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational behavior*, *26*(4), 331-362.

Goldstein, B., & Oldham, J. (1979). Children and work: a study of socialization. New Brunswick, NJ: Transaction Books.

Gore, J., Holmes, K., Smith, M., Southgate, E., & Albright, J. (2015). Socioeconomic status and the career aspirations of Australian school students: Testing enduring assumptions. *The Australian educational researcher*, *42*(2), 155-177.

Gough, D. (2007). Weight of evidence: a framework for the appraisal of the quality and relevance of evidence. *Research papers in education*, *22*(2), 213-228.

Grouzet, F. M., Kasser, T., Ahuvia, A., Dols, J. M. F., Kim, Y., Lau, S., & Sheldon, K. M. (2005). The structure of goal contents across 15 cultures. *Journal of personality and social psychology*, *89*(5), 800.

Grover, S. (2004). Why won't they listen to us? On giving power and voice to children participating in social research. *Childhood*, *11*(1), 81-93.

Guay, F., Ratelle, C. F., & Chanal, J. (2008). Optimal learning in optimal contexts: The role of self-determination in education. *Canadian Psychology/Psychologie canadienne*, *49*(3), 233.

Haase, T., & Pratschke, J. (2017) The 2016 Pobal HP Deprivation Index. Retrieved from www.trutzhaase.eu

Hagstrom, R. P., Fry, M. K., Cramblet, L. D., & Tanner, K. (2007). Educational Psychologists as Scientist-Practitioners An Expansion of the Meaning of a Scientist-Practitioner. *American Behavioral Scientist, 50*(6), 797-807.

Hammond, D., & Dingley, J. (1989). Sex differences in career preferences of lower sixth formers in Belfast grammar schools. *Journal of Occupational Psychology*, *62*(3), 263-264.

Hannah, J. A. S., & Kahn, S. E. (1989). The relationship of socioeconomic status and gender to the occupational choices of grade 12 students. *Journal of Vocational Behavior*, *34*(2), 161-178.

Härtung, P. J., Porfeli, E. J. & Vondracek, FW (2005). Child vocational development: A review and reconsideration. *Journal of Vocational Behavior*, *66*, 385-419.

Harwell, M., & LeBeau, B. (2010). Student eligibility for a free lunch as an SES measure in education research. *Educational Researcher*, *39*(2), 120-131.

Haslam, A., & McGarty, C (2014). *Research Methods and Statistics in Psychology, 2nd Edition.* London: SAGE Publications.

Hauser, R. M. (1994). Measuring socioeconomic status in studies of child development. *Child development*, *65*(6), 1541-1545.

Healthy Ireland (2016). Healthy Ireland Survey 2016: Summary of Findings. Retrieved from https://health.gov.ie/wp-content/uploads/2016/10/Healthy-Ireland-Survey-2016-Summary-Findings.pdf

Helleiner, J. (2003). *Irish Travellers: Racism and the politics of culture*. London: University of Toronto Press.

Helwig, A. A. (1998). Occupational aspirations of a longitudinal sample from second to sixth grade. Journal of Career Development, 24(4), 247–265.

Helwig, A. A. (2001). A test of Gottfredson's theory using a ten-year longitudinal study. Journal of Career Development, 28(2), 77–95.

Helwig, A. A. (2004). A ten-year study of the career development of students: Summary findings. Journal of Counselling and Development, 82(1), 49–57.

Henderson, S., Hesketh, B., & Tuffin, K. (1988). A test of Gottfredson's theory of circumscription. *Journal of Vocational Behavior*, *32*(1), 37-48.

Hewitt, L. S. (1975). Age and sex differences in the vocational aspirations of elementary school children. *The Journal of social psychology*, *96*(2), 173-177.

Hill, J. M. M. (1969). *The transition from school to work: A study of the child's changing perception of work from the age of seven*. London: The Tavistock Institute of Human Relations.

Holliman, A. J. (2013). Introduction to Educational Psychology Practice. *Routledge*.

Hope, N. H., Holding, A. C., Verner-Filion, J., Sheldon, K. M., & Koestner, R. (2018). The path from intrinsic aspirations to subjective well-being is mediated by changes in basic psychological need satisfaction and autonomous motivation: A large prospective test. *Motivation and Emotion*, 1-10.

Hyvönen, K. k., Feldt, T., Salmela-Aro, K., Kinnunen, U., & Mäkikangas, A. (2009). Young managers' drive to thrive: A personal work goal approach to burnout and work engagement. Journal Of Vocational Behavior, 75(2), 183-196. doi:10.1016/j.jvb.2009.04.002

Hyvönen, K. k., Feldt, T., Tolvanen, A., & Kinnunen, U. (2010). The role of goal pursuit in the interaction between psychosocial work environment and occupational well-being. Journal Of Vocational Behavior, 76(3), 406-418. doi:10.1016/j.jvb.2009.10.002

Johnston, J., McKeown, E., & McEwen, A. (1999). Choosing primary teaching as a career: The perspectives of males and females in training. *Journal of Education for Teaching*, *25*(1), 55-64.

Jongho, S., Soowon, P., Jun-Young, L., & Ji Eun, K. (2016). Comparative study of goal contents and goal characteristics between medical and business students. Korean Journal Of Medical Education, 28(1), 17-24. doi:10.3946/kjme.2016.5

Kasser, T. (2018). Materialism and living well. *Handbook of well-being*. Salt Lake City, UT: DEF Publishers.

Kasser, T., & Ryan, R. M. (1993). A dark side of the American dream: Correlates of financial success as a central life aspiration. *Journal of personality and social psychology*, *65*(2), 410.

Kasser, T. & Ryan, R. M. (1996), Further Examining the American Dream: Differential Correlates of Intrinsic and Extrinsic Goals. Personality and Social Psychology Bulletin, 22 (3): 280-287. doi:10.1177/ 0146167296223006

Kasser, T., & Ryan, R. M. (2001). Be careful what you wish for: Optimal functioning and the relative attainment of intrinsic and extrinsic goals. *Life goals and well-being: Towards a positive psychology of human striving*, *1*, 116-131.

Kentli, F. D. (2014). Influential factors on students' vocational aspiration in Turkish elementary schools. *Educational Research and Reviews*, 9(1), 34–40.

Khalid, A., & Qadeer, F. (2017). *Rising Consumer Materialism: A Threat to Sustainable Happiness*. New York: Routledge.

King, M. M., & Multon, K. D. (1996). The effects of television role models on the career aspirations of African American junior high school students. *Journal of Career Development*, *23*(2), 111-125.

Kinnunen, U., Feldt, T., & Mäkikangas, A. (2008). Testing the effort–reward imbalance model among Finnish managers: The role of perceived organizational support. Journal of Occupational Health Psychology, 13, 114–127.

Kökönyei, G., Reinhardt, M., Pajkossy, P., Kiss, B., & Demetrovics, Z. (2008). Characteristics of personal strivings and their relationship with life satisfaction. Cognitie, Creier, Comportament/Cognition, Brain, Behavior, 12(4), 409-433.

Ku, L., Dittmar, H., & Banerjee, R. (2014). To have or to learn? The effects of materialism on British and Chinese children's learning. *Journal of Personality and Social Psychology*, *106*(5), 803.

Lee, H. C. (2012). " What do you want to do when you grow up?" Occupational aspirations of Taiwanese preschool children. *Social Behavior and Personality: an international journal*, *40*(1), 115-127.

Lines, G. (2001). Villains, fools or heroes? Sports stars as role models for young people. *Leisure studies*, *20*(4), 285-303.

Liu, J., McMahon, M., & Watson, M. (2015). Parental influence on mainland Chinese children's career aspirations: child and parental perspectives. *International journal for educational and vocational guidance*, *15*(2), 131-143.

MacKay, W. R., & Miller, C. A. (1982). Relations of socioeconomic status and sex variables to the complexity of worker functions in the occupational choices of elementary school children. *Journal of Vocational Behaviour*, 20, 31–39. doi:10.1016/0001-8791(82)90061-6.

Mackenzie, N., & Knipe, S. (2006). Research dilemmas: Paradigms, methods and methodology. *Issues in educational research*, *16*(2), 193-205.

MacPhail, A., & Kinchin, G. (2004). The use of drawings as an evaluative tool: students' experiences of sport education. *Physical education & sport pedagogy*, *9*(1), 87-108.

Martos, T., & Kopp, M. (2014). Life Goals and Well-Being in Hungary. In *Encyclopedia of Quality of Life and Well-Being Research* (pp. 3571-3576). Springer, Dordrecht.

Maslow, A. H. (1943). A theory of human motivation. *Psychological review*, *50*(4), 370.

Maxwell, S. E., Lau, M. Y., & Howard, G. S. (2015). Is psychology suffering from a replication crisis? What does "failure to replicate" really mean?. *American Psychologist*, *70*(6), 487.

Mazahir, S., Masood, A., & Musarrat, R. (2016). Increased materialistic trends among youth. *Journal of Educational, Health and Community Psychology*, *5*(3), 56-77.

McCoy, S., Banks, J., Frawley, D., Watson, D., Shevlin, M., & Smyth. F (2014) *Understanding Special Class Provision in Ireland: Findings from a National Survey of Schools*. Dublin/Trim: ESRI/NCSE.

McDevitt, T. M., Ormrod, J. E., Cupit, G., Chandler, M., & Aloa, V. (2012) *Child Development and Education*. Australia: Pearson Higher Education.

McDevitt, T. M., Hess, C. A., Leesatayakun, M., Sheehan, E. P., & Kaufeld, K. A. (2013). A cross-sectional study of career aspirations in Thai children in an international school in Bangkok. *Journal of Career Development*, *40*(6), 531-550.

McGee, J., & Stockard, J. (1991). From a child's view: Children's occupational knowledge and perceptions of occupational characteristics. *Sociological studies of child development*, *4*, 113-136.

McHugh, M. L. (2013). The chi-square test of independence. *Biochemia medica: Biochemia medica*, *23*(2), 143-149.

McMahon, M., Carroll, J., & Gillies, R. M. (2001). Occupational aspirations of sixth-grade children. *Australian Journal of Career Development*, 10, 25–31. doi:10.1177/103841620101000107

McMahon, M., & Patton, W. (1997). Gender differences in children and adolescents perceptions of influences on their career development. School Counselor, 44, 368–376.

McNulty, W. B., & Borgen, W. A. (1988). Career expectations and aspirations of adolescents. *Journal of Vocational Behavior*, *33*(2), 217-224.

Merriman, B. (2004). Drawing ideals: The career aspirations of Kolkatan street children. Unpublished B.A. thesis, School of Psychology, University College Dublin.

Merriman, B., & Guerin, S. (2006). Using children's drawings as data in child-centred research. *The Irish journal of psychology*, *27*(1-2), 48-57.

Mertens, D. (2010). Research and Evaluation in Education and Psychology: Integrating Diversity With Quantitative, Qualitative, and Mixed Methods (3rd edition). UK, London: SAGE.

Miller, R. R. (1986). Reducing occupational circumscription. Elementary School Guidance and Counselling, 20(4), 250–254.

Miller, M. J., & Stanford, J. T. (1987). Early occupational restriction: An examination of elementary school children's expression of vocational preferences. Journal of Employment Counselling, 24, 115–121.

Moulton, V., Flouri, E., Joshi, H., & Sullivan, A. (2018). Individual-level predictors of young children's aspirations. *Research Papers in Education*, *33*(1), 24-41.

Näätänen, P., Aro, A., Matthiesen, S. B., & Salmela-Aro, K. (2003). Bergen burnout indicator 15. Helsinki: Edita.

National Educational Psychological Service (2007) SPECIAL EDUCATIONAL NEEDS A Continuum of Support: Guidelines for Teachers. Dublin: Brunswick Press Ltd.

National Institute for Health and Clinical Excellence (2012). *Sickle cell acute painful episode Management of an acute painful sickle cell episode in hospital*. Retrieved from: https://www.nice.org.uk/guidance/cg143/evidence/full-guideline-pdf-186634333

Nelson, R. C. (1963). Knowledge and interests concerning sixteen occupations among elementary and secondary school students. Educational and Psychological Measurement, 23, 741–754.

Niemiec, C. P., & Ryan, R. M. (2009). Autonomy, competence, and relatedness in the classroom: Applying self-determination theory to educational practice. *School Field*, *7*(2), 133-144.

Nishimura, T., & Suzuki, T. (2016). Aspirations and life satisfaction in Japan: The big five personality makes clear. *Personality and Individual Differences*, *97*, 300-305.

Pallant, J. (2010) *SPSS Survival Manual: Fourth Edition*. England: Open University Press.

Pellegrini, D. W. (2009). Applied systemic theory and educational psychology: Can the twain ever meet?. *Educational Psychology in Practice*, *25*(3), 271-286.

Phipps, B. J. (1995). Career dreams of preadolescent students. *Journal Of Career Development*, *22*(1), 19-32. doi:10.1007/BF02247893

Poulsen, A. A., Rodger, S., & Ziviani, J. M. (2006). Understanding children's motivation from a self-determination theoretical perspective: Implications for practice. *Australian Occupational Therapy Journal*, *53*(2), 78-86.

Pridmore, P., & Bendelow, G. (1995). Images of health: exploring beliefs of children using the 'draw-and-write' technique. *Health Education Journal*, *54*(4), 473-488.

Psychological Society of Ireland (2011). *Code of professional ethics.* Dublin: Author.

Punch, S. (2002). Research with children: the same or different from research with adults?. *Childhood*, *9*(3), 321-341.

Quality and Qualifications Ireland (2015, May 25). Qualifications Frameworks Making Connections for You. Retrieved from http://www.nfq-qqi.com/assets/qualifications_frameworks.pdf

Rainey, L. M., & Borders, L. D. (1997). Influential factors in career orientation and career aspiration of early adolescent girls. *Journal of Counselling Psychology*, 44, 160–172. doi:10.1037/0022-0167.44. 2.160.

Riegle-Crumb, C., Moore, C., & Ramos-Wada, A. (2011). Who wants to have a career in science or math? Exploring adolescents' future aspirations by gender and race/ethnicity. *Science Education*, *95*(3), 458-476.

Rijavec, M., Brdar, I. & Miljkovic, D. (2006), Extrinsic vs. Intrinsic Life Goals, Psychological Needs and Life Satisfaction. In: A. Delle Fave (Ed.), Dimensions of Well-Being. Research and Intervention (pp. 91-104), Milano, Franco Angeli.

Rijavec, M., Brdar, I., & Miljkovic, D. (2011). Aspirations and well-being: Extrinsic vs. intrinsic life goals. *Drustvena istrazivanja*, *20*(3), 693.

Roche, M., & Haar, J. M. (2013). Leaders life aspirations and job burnout: a self-determination theory approach. *Leadership & Organization Development Journal*, *34*(6), 515-531.

Rochford, S., Morgan, M., Quinn, D., & Farren, N. (2018, March). Youth Mental Health in Ireland and Northern Ireland: An AcCESs Evidence Report. Retrieved from https://www.effectiveservices.org/assets/Youth_Mental_Health_28.03.18.pdf

Roffey, S. (2015). Becoming an agent of change for school and student well-being. *Educational & Child Psychology*, *32*(1), 21-30.

Romero, E., Gómez-Fraguela, J. A., & Villar, P. (2012). Life aspirations, personality traits and subjective well-being in a Spanish sample. *European Journal of Personality*, *26*(1), 45-55.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, *55*(1), 68.

Ryan, R. M., & Deci, E. L. (2006). Self-regulation and the problem of human autonomy: Does psychology need choice, self-determination, and will? *Journal of personality*, *74*(6), 1557-1586.

Ryan, D. M., & Deci. E. L. (2017). Self-Determination Theory: Basic Psychological Needs in Motivation, Development and Wellness. New York, NY: The Guilford Press.

Ryan, R. M., Chirkov, V. I., Little, T. D., Sheldon, K. M., Timoshina, E., & Deci, E. L. (1999). The American dream in Russia: Extrinsic aspirations and well-being in two cultures. *Personality and social psychology bulletin*, *25*(12), 1509-1524.

Sadler, P. M., Sonnert, G., Hazari, Z., & Tai, R. (2012). Stability and volatility of STEM career interest in high school: A gender study. *Science education*, *96*(3), 411-427.

Salmela-Aro, K., & Nurmi, J. (1997). Goal Contents, Well-being, and Life Context During Transition to University: A Longitudinal Study. International Journal Of Behavioral Development, 20(3), 471-491. doi:10.1080/016502597385234

Sandberg, D. E., Ehrhardt, A. A., Ince, S. E., & Meyer-Bahlburg, H. F. (1991). Gender differences in children's and adolescents' career aspirations: A follow-up study. *Journal of Adolescent Research*, *6*(3), 371-386.

Saw, G., Chang, C. N., & Chan, H. Y. (2018). Cross-sectional and longitudinal disparities in STEM career aspirations at the intersection of gender, race/ethnicity, and socioeconomic status. *Educational Researcher*, *47*(8), 525-531.

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire. A cross-national study. Educational and Psychological Measurement, 66, 701–716.

Schmitt-Wilson, S., & Welsh, M. C. (2012). Vocational knowledge in rural children: A study of individual differences and predictors of occupational aspirations and expectations. *Learning and Individual Differences*, *22*(6), 862-867.

Schmuck, P., Kasser, T., & Ryan, R. M. (2000). Intrinsic and extrinsic goals: Their structure and relationship to well-being in German and US college students. *Social Indicators Research*, *50*(2), 225-241.

Sellers, N., Satcher, J., & Comas, R. (1999). Children's occupational aspirations: Comparisons by gender, gender role identity, and socioeconomic status. *Professional School Counseling*, *2*(4), 314.

Sheldon, K. M., & Kasser, T. (1995). Coherence and congruence: Two aspects of personality integration. *Journal of personality and social psychology*, *68*(3), 531.

Sheldon, K. M., & Kasser, T. (2001). Getting older, getting better? Personal strivings and psychological maturity across the life span. *Developmental Psychology*, *37*, 491-501.

Sheldon, K. M., Ryan, R. M., Deci, E. L., & Kasser, T. (2004). The independent effects of goal contents and motives on well-being: It's both what you pursue and why you pursue it. Personality And Social Psychology Bulletin, 30(4), 475-486. doi:10.1177/0146167203261883

Schuette, C. T., Ponton, M. K., & Charlton, M. L. (2012). Middle school children's career aspirations: Relationship to adult occupations and gender. *The Career Development Quarterly*, 60, 36–46. doi:10.1002/j.2161-0045.2012.00004.x

Sibley, B. A., & Bergman, S. M. (2018). What keeps athletes in the gym? Goals, psychological needs, and motivation of CrossFit™ participants. *International Journal of Sport and Exercise Psychology*, *16*(5), 555-574.

Sidhu, I. (2015). The Digital Revoultion: *How Connected Digital Innovations are Transforming your Industry*, New Jersey: Company & Career. FT Press.

Siegrist, J., Starke, D., Chandola, T., Godin, I., Marmot, M., Niedhammer, I., et al (2004). The measurement of effort–reward imbalance at work: European comparisons. Social Science and Medicine, 58, 1483–1499.

Smyth, E., McCoy, S., & Kingston, G. (2015). Learning from the Evaluation of DEIS: Research Series Number 39. Retrieved from https://www.esri.ie/system/files/media/file-uploads/2015-07/RS39.pdf

Strech, D., Persad, G., Marckmann, G., & Danis, M. (2009). Are physicians willing to ration health care? Conflicting findings in a systematic review of survey research. *Health Policy*, *90*(2-3), 113-124.

Syed, J., & Ali, F. (2019). A relational perspective on gender equality and mainstreaming. *Human Resource Development International*, *22*(1), 4-24.

Teigen, K. H., Normann, H. T. E., Bjorkheim, J. O., & Helland, S. (2000) Who Would You Most Like to Like? Adolescents' ideals at the beginning and the end of the century, *Scandinavian Journal of Educational Research, 44*:1, 5-26, DOI:10.1080/713696661

Teixeira, P. J., Carraça, E. V., Markland, D., Silva, M. N., & Ryan, R. M. (2012). Exercise, physical activity, and self-determination theory: a systematic review. *International journal of behavioural nutrition and physical activity*, *9*(1), 78.

Trice, A. D. (1991). Stability of children's career aspirations. Journal of Genetic Psychology, 152(1), 137–139.

Trice, A. D., Hughes, M. A., Odom, C., Woods, K., & McClellan, N. C. (1995). The origins of children's career aspirations: IV. Testing hypotheses from four theories. *The Career Development Quarterly*, *43*(4), 307-322.

Trice, A. D., & King, R. (1991). Stability of kindergarten children's career aspirations. Psychological Reports, 68(3, Pt. 2), 1378.

Trice, A. D., & Knapp, L. (1992). Relationship of children's career aspirations to parents' occupations. *The Journal of Genetic Psychology*, *153*(3), 355-357.

Utvær, B. K. S., Hammervold, R., & Haugan, G. (2014). Aspiration Index in Vocational Students–Dimensionality, Reliability, and Construct Validity. *Education Inquiry*, *5*(3), 24612.

Vallerand, R. J., Pelletier, L. G., & Koestner, R. (2008). Reflections on self-determination theory. *Canadian Psychology/Psychologie canadienne*, *49*(3), 257.

Van Der Heyden, A. M., & Burns, M. K. (2010) Essentials of Response to Intervention. New Jersey: John Wiley & Sons Ltd.

Vansteenkiste, M., Lens, W., & Deci, E. L. (2006). Intrinsic versus extrinsic goal contents in self-determination theory: Another look at the quality of academic motivation. *Educational psychologist*, *41*(1), 19-31.

Vansteenkiste, M., Simons, J., Lens, W., Sheldon, K. M., & Deci, E. L. (2004). Motivating learning, performance, and persistence: the synergistic effects of intrinsic goal contents and autonomy-supportive contexts. *Journal of personality and social psychology*, *87*(2), 246.

Vansteenkiste, M., Simons, J., Lens, W., Soenens, B., Matos, L., & Lacante, M. (2004). Less is sometimes more: Goal content matters. *Journal of Educational Psychology*, *96*(4), 755.

Vansteenkiste, M., Soenens, B., Verstuyf, J., & Lens, W. (2009). What is the usefulness of your schoolwork?' The differential effects of intrinsic and extrinsic goal framing on optimal learning. *School Field*, *7*(2), 155-163.

Vondracek, F. W. (2001). The childhood antecedents of adult careers: Theoretical and empirical considerations. In R. K. Silbereisen & M. Reitzle (Eds.), Bericht ueberden 42. Kongress der Deutschen Gesellschaft fuer Psychologie in Jena 2000 (pp. 265-276). Lengerich, Germany: Pabst Science Publishers.

Vondracek, S. I., & Kirchener, E. P. (1974). Vocational development in early childhood: An examination of young children's expressions of vocational aspirations. *Journal of Vocational Behaviour*, 5, 251–260. doi:10.1016/0001-8791(74)90038-4.

Watson, M., & McMahon, M. (2005). Children's career development: A research review from a learning perspective. *Journal of vocational behaviour*, *67*(2), 119-132.

Watson, M., & McMahon, M. (2016). Career Exploration and Development in Childhood: Perspectives from theory, practice and research. UK: Routledge.

Watson, C. M., Quatman, T., & Edler, E. (2002). Career aspirations of adolescent girls: Effects of achievement level, grade, and single-sex school environment. *Sex roles*, *46*(9-10), 323-335.

Watson, D., Tellegen, A., & Clark, L. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*, 1063-1070.

Weinger, S. (2000). Opportunities for career success: Views of poor and middle-class children. *Children and Youth Services Review,* 22, 13–35. doi:10.1016/S0190-7409(99)00071-7.

Williams, G. C., Cox, E. M., Hedberg, V., & Deci, E. L. (2000). Extrinsic life goals and health risk behaviors in adolescents. Journal of Applied Social Psychology, 30, 1756-1771.

Wong, N. & Ahuvia, A. C. (1998), Personal Taste and Family Face: Luxury Consumption in Confucian and Western Societies. *Psychology and Marketing*, 15 (5): 423-441.

Zinnecker, J. (1995). The cultural modernisation of childhood. In L. Chisholm, P. Büchner, H.H. Krüger, M. du Bois-Reymond (Eds.), Growing up in Europe: Contemporary horizons in childhood and youth studies, Walter de Gruyter, New York (1995), pp. 85-94.

Appendices

Appendix A

Weight of Evidence for Career Aspirations

Weight of Evidence A: Methodological quality

All of the reviewed relating to career aspirations employed a survey design, with Donelly (2006) and Schmitt-Wilson and Welsh (2012) using a questionnaire and Auger et al. (2005), Blackhurst and Auger (2008) and Phipps (1995) using structured interviews. Currently there is no single recognised quality criteria for evaluating survey research (Strech, Persad, Marckmann, & Danis, 2009). However, for the purpose of this review, an adapted version of the 'critical appraisal checklist for a questionnaire study' was utilised (NICE, 2012). Each study was rated, and Gough's weighting of evidence applied (Gough, 2007). Table 19 provides information on the criteria required for different Weight of Evidence (WoE) A, according to NICE (2012) quality criteria.

The scoring criteria for Gough's Weight of Evidence A is detailed below:

High = 2.4 – 3.0

Medium = 1.7 – 2.3

Low = 1.0 – 1.6

Table 18

Weight of Evidence A: Methodological quality for studies about career aspirations. Adapted from NICE (2012).

Weight of evidence	Criteria
	(Strong=3, Promising =

2, Weak = 1, limited/no)

	Strong	A rating of **3** requires that, a study must obtain between 12 to 17 of the 17 quality criteria.
NICE (2012)	Promising	A rating of **2** requires that, the study met between 6 and 11 of the quality criteria.
	Weak	A rating of **1** requires that, the study met between 0 to 5 of the quality criteria.

Critical appraisal checklist for a questionnaire study

Donelly, E. (2006). Saint Lucian Youth in Focus: Aspirations of Saint Lucian Rural

Primary School Students. *International Education*, *35*(2), 82-104.

Research question and study design

1. Was a questionnaire/structured interview the most appropriate method?

■ **Yes**

☐ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

Validity and reliability

2. Have claims for validity been made, and are they justified? (Is there evidence that the instrument measures what it sets out to measure?)

■ **Yes**

☐ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

3. Have claims for reliability been made, and are they justified? (Is there evidence that the questionnaire provides stable responses over time and between researchers?)

■ **Yes**

☐ No

☐ N/A
☐ Unknown/Unable to code

Format

4. Are example questions provided?

☐ Yes

■ No

☐ N/A
☐ Unknown/Unable to code

5. Did the questions make sense, and could the participants in the sample understand them? Were any questions ambiguous or overly complicated?

☐ Yes

☐ No

☐ N/A
■ Unknown/Unable to code

Piloting

6. Are details given about the piloting undertaken?

■ Yes

☐ No

☐ N/A
☐ Unknown/Unable to code

7. Was the questionnaire adequately piloted in terms of the method and means of administration, on people who were representative of the study population?

■ Yes

☐ No

☐ N/A
☐ Unknown/Unable to code

Sampling

8. Was the sampling frame for the definitive study sufficiently large and representative?

■ **Yes**

☐ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

Distribution, administration and response

9. Was the method of distribution and administration reported?

■ **Yes**

☐ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

10. Were the response rates reported, including details of participants who were unsuitable for the research or refused to take part?

■ **Yes**

☐ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

11. Have any potential response biases been discussed?

☐ **Yes**

■ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

Coding and analysis

12. What sort of analysis was carried out and was this appropriate? (e.g. correct statistical tests for quantitative answers, qualitative analysis for open ended questions)

■ **Yes**

☐ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

Results

13. Were all relevant data reported?

■ **Yes**

☐ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

14. Are quantitative results definitive (significant), and are relevant non-significant results also reported?

■ **Yes**

☐ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

15. Have qualitative results been adequately interpreted (e.g. using an explicit theoretical framework), and have any quotes been properly justified and contextualised?

☐ **Yes**

☐ **No**

■ **N/A**
☐ **Unknown/Unable to code**

Conclusions and discussion

16. Have the researchers drawn an appropriate link between the data and their conclusions?

■ **Yes**

☐ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

17. Have the findings been placed within the wider body of knowledge in the field (e.g. via a comprehensive literature review), and are any recommendations justified?

■ **Yes**

☐ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

Table 19

Weight of Evidence A: Methodological quality for studies about career aspirations.

Author	Survey studies	Overall WoE A
Auger, Blackhurst & Wahl (2005)	Medium (2.0)	Medium (2.0)
Blackhurst & Auger (2008)	High (3.0)	High (3.0)
Donelly (2006)	High (3.0)	High (3.0)
Phipps (1995)	High (3.0)	High (3.0)
Schmitt-Wilson & Welsh (2012)	High (3.0)	High (3.0)

Weight of Evidence B (WoE B)

Weight of Evidence B refers to the appropriateness of the type of evidence/design of the study in answering the review question.

The following was identified as an area to weight according to the review question:

Type of Study Design

The review question aims to explore children's career aspirations. As such there is no manipulation of variables and an experimental design is not required. Therefore, the most suitable types of designs are those that are non-experimental, such as a survey design.

Table 20

Weight of Evidence B: Criteria and rationale for studies about career aspirations.

Weighting	Descriptive
High (3)	Non-experimental design, surveys, qualitative research
Medium (2)	Quasi-experimental design

Low (1)	Experimental design

Overall WoE B scoring criteria:

High = 2.4 – 3.0

Medium = 1.7 – 2.3

Low = 1.0 – 1.6

Table 21

Weight of Evidence B: Methodological relevance for studies about career aspirations.

Author	Study design	Overall WoE B
Auger, Blackhurst & Wahl (2005)	3	High (3.0)
Blackhurst & Auger (2008)	3	High (3.0)
Donelly (2006)	3	High (3.0)
Phipps (1995)	3	High (3.0)
Schmitt-Wilson and Welsh (2012)	3	High (3.0)

Weight of Evidence C (WoE C)

Weight of Evidence C rates the relevance of the focus of the evidence to the review question. Some studies varied in their setting and sample. These alongside the measures used will be rated according to their relevance to the review question. A highly rated study will include only fifth class participants, explore students' career aspirations by asking them and will be implemented within a school setting.

Table 22

Weight of Evidence C for studies about career aspirations.

Criteria	Weighting	Rationale
	3 Only participants in fifth class are included in the study.	
A Sample	2 Participants include fifth class students and students from other classes.	The thesis only includes students in fifth class, denoting the importance of reviewing studies that focus on this specific age group.
	1 No participants are in fifth class.	
B Measurement of children's career aspirations	3 Assessment of the participant's views of their career aspirations.	
	2 Assessment of participants views of their career aspirations through assessment of another. For example, obtaining caregiver or teacher perceptions rather than the perception of the participant.	Assessment of career aspirations, according to participants as opposed to the perspective of others, allows for a somewhat more accurate account (Mertens, 2010).
	1 Participants career aspirations are not assessed at all.	
C Setting	3 The study is conducted in a school.	
	2 The study is conducted outside of a school.	This thesis will be conducted in a school setting with students and as such this has been selected as a relevant criterion.
	1 Information about the setting is not provided.	

Overall WoE C scoring criteria:

High = 2.4 – 3.0

Medium = 1.7 – 2.3

Low = 1.0 – 1.6

Table 23

Weight of Evidence C: Relevance of the study topic to the review question about students' career aspirations.

Author	Sample	Measure	Data Analysis	Overall WoE C
Auger, Blackhurst & Wahl (2005)	3	3	1	Medium (2.3)
Blackhurst & Auger (2008)	2	3	3	High (2.7)
Donelly (2006)	2	3	1	Medium (2.0)
Phipps (1995)	2	3	3	High (2.7)
Schmitt-Wilson and Welsh (2012)	2	3	3	High (2.7)

Weight of Evidence D

An overall weight of evidence D is provided below. Weight of evidence A, B and C are each scored from one to three and averaged, to calculate WoE D.

Overall WoE D scoring criteria:

High = 2.4 – 3.0

Medium = 1.7 – 2.3

Low = 1.0 – 1.6

Table 24

Weight of Evidence D: Overall Weight of Evidence for studies about career aspirations.

Author	WoE A	WoE B	WoE C	Overall WoE D
Auger, Blackhurst & Wahl (2005)	Medium (2.0)	High (3.0)	Medium (2.3)	High (2.4)
Blackhurst & Auger (2008)	High (3.0)	High (3.0)	High (2.7)	High (2.9)
Donelly (2006)	High (3.0)	High (3.0)	Medium (2.0)	High (2.7)
Phipps (1995)	High (3.0)	High (3.0)	High (2.7)	High (2.9)
Schmitt-Wilson & Welsh (2012)	High (3.0)	High (3.0)	High (2.7)	High (2.9)

Appendix B

Table 25

Summary of included studies related to career aspirations (mapping the field).

Study	Location	Sample	Design	Pilot Study	Relevant measures	Primary outcomes and findings
Auger, Blackhurst & Wahl (2005)	Two public elementary schools in a semi-rural community in the Midwestern United States.	123 students across three grades. In first grade there were 41 participants, 38 in third grade and 44 in fifth grade.	A survey design using structured interviews.	The structured interview was piloted with eight students across the three grades. Minor changes were subsequently made.	A demographic form was completed by caregivers. A structured interview form solicited information regarding career aspirations.	The majority of participants could name a career. Less than half of the participants listed their aspiration to be the same as their expectation. A large proportion of males aspired to become professional athletes. Sex-typed career preferences declined amongst females as they progressed through their schooling. Older students aspired to more prestigious careers. Few participants listed their caregiver's occupation as their career aspiration. Career aspirations and expectations did not differ according to social prestige. Career aspirations tended to be more sex-typed than

						their expectation.
Blackhurst & Auger (2008)	Two schools in southern Minnesota	Wave one included 40 first grade students, 38 in third grade and 44 in fifth grade. Wave two included 39 in third grade, 37 in fifth grade and 39 in seventh grade.	Survey design using structured interviews.	No information was provided regarding a pilot study.	Measures included a demographic information sheet for caregivers and 20-30-minute structured interviews with students.	Children's educational aspirations and expectations were not found to be linked to a gender gap in university enrolment. Gender differences in aspirations were tentatively linked to a gender gap in university enrolment. This gender difference was found to widen with age. Girls were more likely to aspire to careers that required higher level education. Girls were three times more likely than boys to aspire to careers that required a graduate degree. Girls aspired to less sex-typed careers than boys and these became less sex-typed with age.
Donelly (2006)	Rural primary school in Saint Lucia, a Caribbean	The study included 30 participants aged between 10 and 13.	Survey design using a questionnaire.	The questionnaire was piloted with a sample of students similar demographically	Questionnaire containing 18 items.	All participants aspired towards prestigious careers. These were more prestigious than the careers of their caregivers. Influencing factors regarding students' career aspirations

	island.			to those in the main study.		included: family, teachers, self-confidence and liking school.
Phipps (1995)	Midwestern urban school district.	80 students ranging from age 8 to age 11. Five were randomly selected from 16 classes (8 in third grade, 3 in fourth grade and 5 in fifth grade) accross 10 primary schools.	Survey design using a structured interview.	No information was provided regarding a pilot study.	Data sheet completed with the teacher. Structured 15-minute interviews conducted with students. The Comprehensive Test of Basic Skills measured achievement levels. The Cognitive Skills Index measured ability levels.	Participants were able to state their career aspirations and why they wished to be this. Gender, SES and ethnicity were related to occupational variables. Grade, ability and achievement levels did not significantly relate to occupational variables. The majority of students aspired towards social careers. More females than males aspired to investigative and artistic careers. Males aspired towards more realistic careers. The most popular careers were those which were prestigious, requiring post-graduate qualifications.
Schmitt-Wilson & Welsh (2012)	Two rural school districts in the mid-	132 students, 78 males and 54 females. 62 from 4th	Survey design using a questionna	No information was provided regarding a pilot study.	Measures included a demographic information sheet	No significant differences were found regarding career knowledge and gender and SES. Academic achievement significantly related to

| west of America. | grade, 25 from 5th grade and 19 from 7th grade. | ire. | for caregivers and an in-class group administered survey for students. | levels of career knowledge, aspirations and expectations, more so than other variables. |

Appendix C

Table 26

Summary of included studies relating to goal contents (mapping the field).

Study	Location	Sample	Design	Validity, reliability and piloting	Relevant measures	Primary outcomes and findings
Hyvönen et al. (2009)	Finland.	The study included 747 young Finnish managers from two Finnish national labour unions: the Union of Professional Engineers and the Union of Salaried	A survey design using a questionnaire.	The validity of the Effort, Reward, effort-reward Imbalance (ERI) scale is mentioned as previously reported by another study (Kinnunen, Feldt, & Mäkikangas, 2008). No other information is given about the	A survey questionnaire assessed personal work goals. The ERI and over commitment to work (OVC) were measured using a questionnaire developed by Siegrist et al. (2004). Burnout was measured using the Bergen Burnout Indicator 15 (Näätänen, Aro, Matthiesen, & Salmela-Aro, 2003). Work engagement	The goal contents categories included: competence, progression, well-being, job change, job security, organisational and financial. High levels of engagement with work and low burnout levels were found to be related to having organisational goals. High levels of burnout and low levels of work engagement were found to be related to having job change and

		Employees.		validity and reliability of this tool. Neither is information provided about the piloting of the questionnaire used.	was measured using the Utrecht Work Engagement Scale (Schaufeli, Bakker, & Salanova, 2006).	well-being goals.
Hyvönen et al. (2010)	Finland.	The study included 747 young Finnish managers from two Finnish national labour unions, the Union of Professional Engineers and the	A survey design using a questionnaire.	The validity of the ERI scale is mentioned as previously reported by another study (Kinnunen, Feldt, & Mäkikangas, 2008). No other information is given about the validity and reliability of this	A survey questionnaire assessed personal work goals. The ERI and OVC were measured using a questionnaire developed by Siegrist et al. (2004). Burnout was measured using the Bergen Burnout Indicator 15 (Näätänen, Aro, Matthiesen, & Salmela-Aro, 2003).	ERI were factors in the categorisation of goals (competence, career progression, well-being, stress management, job satisfaction, motivation, job change, job security, organisation and finance). The relationship between ERI and well-being in participant's current career was mediated by the goal categories. The

	Union of Salaried Employees.			tool. Neither is information provided about the piloting of the questionnaire used.	Work engagement was measured using the Utrecht Work Engagement Scale (Schaufeli, Bakker, & Salanova, 2006).	psychosocial occupational environment was a factor in the goal contents of participants. These goal contents were found to operate as mediatory factors between the environment and well-being at work.
Jongho et al. (2016)	Two universities in Seoul and Suwon, South Korea.	Participants included 193 undergraduate students, encompassing 97 medical students and 96 business students.	A survey design using a questionnaire.	There is no information provided regarding the piloting of the questionnaire used in this study. Goal autonomy showed high internal consistency while goal	A survey questionnaire included questions about demographics, satisfaction of major, what their life goal was, factors that affected their setting of this goal and goal characteristics (goal autonomy, goal attainability and the	The goal contents of participants differed according to their major. Medical students had more goals relating to social concerns while business students expressed more goals pertaining to the pursuit of wealth. Medical students showed higher levels of satisfaction with their major, compared to

			attainability and the social value of the goal showed acceptable internal consistency. Inter-rater reliability for goal contents categories was 0.92.	social value of goal).	business students. Results indicated that social values and goal attainability could be significant predictors of major satisfaction of medical students.
Kökönyei et al. (2008)	Hungary.	There were 48 participants. Half of these participants were university students while the other half	A qualitative quantitative mixed-methods survey design was used.	The internal consistency of the two measures of life satisfaction proved satisfactory. The stability of the Striving Assessment	Participants listed their goals and rated them according to the SAS (Emmons, 1986). Participants then had to compare their goals using the Striving Instrumentality Matrix. Two measures of life satisfaction were used: the	Significant differences were found between Eriksonian and non-Ericksonian goals, avoidant and approach goals and interpersonal and intrapersonal goals, according to some of the goals participants listed. Generativity goal contents were positively

		had either finished secondary school or university.		Scale (SAS) was measured at one-month, three-month, one year, one and a half year and two-year intervals.	Campbell Scale (Campbell et al., 1976) and the Satisfaction with Life Scale (SWLS) (Diener, Emmons, Larsen & Griffin, 1985).	associated with life satisfaction. Uncoded goal contents were negatively associated with life satisfaction.
Salmela-Aro, & Nurmi (1997)	University of Helsinki, Finland.	Participants included 256 undergraduate students attending the University of Helsinki.	A cross-lagged longitudinal survey design.	Satisfactory reliability figures were reported for the measurement tools.	At the start of the study a background questionnaire, the revised Beck's Depression Inventory (BDI), the Little's Personal Project Analysis (PPA) and Rosenberg's Self-esteem Scale (RSE) were used. At a one-year follow-up, a Life-Event Scale (LES) was administered. At	Earlier familial life situations were found to be associated with interest in familial goals. Goals relating to future life choices, such as having children predicted high levels of well-being. Possessing high levels of well-being predicted interest in these goals. Low levels of self-esteem predicted interest in goals about the self which was

					a two-year follow-up, participants completed the background questionnaire, the BDI, the PPA, the RSE and the LES.	associated with low levels of well-being.
Sheldon et al. (2004)	Study 1	Missouri university.	Participants included 221 freshmen students.	Cross-sectional within-person survey design.	Satisfactory reliability figures are reported for the measurement tools. No information is provided regarding the piloting of the questionnaire.	A questionnaire which used idiographic goal-assessment methodology where participants self-generated personal goals was used. A nomothetic rating method assessed goal contents and whether goals were autonomous or controlled. Other measures included a Positive Affect Negative Affect Schedule (PANAS)	Participants' goal contents and motivation produced independent variance regarding subjective well-being. Those who possessed intrinsic goals had higher well-being than those who had extrinsic goals. Also, those whose motivation was autonomous had higher well-being than those who had controlled motivation.

					(Watson, Tellegen, & Clark, 1988) and the SWLS (Diener et al. 1985).	
Study 2	The University of Rochester and Knox College.	Participants included 244 graduating seniors.	Between-person two-wave longitudinal survey design.	Satisfactory reliability figures were reported for the measurement tools. No information is provided regarding the piloting of the questionnaire.	At both time one and time two participants completed personality scales (details not provided), self-generated personal goals, rated each goal according to whether there were autonomous or controlled motives, possible connections to intrinsic or extrinsic futures, PANAS and the SWLS. Additionally at time two, participants rated their commitment to their previously listed	Goal contents and motivation produced independent effects on well-being, at a one-year follow-up.

goals.

Appendix D

Weight of Evidence for Goal Contents

Weight of Evidence A: Methodological quality

All the reviewed studies relating to goal contents employed a survey design, using different types of questionnaires and additional measurements to gauge several possible outcomes, relating to participants' goal contents. Currently there is no single recognised quality criteria for evaluating survey research (Strech, Persad, Marckmann, & Danis, 2009). However, for the purpose of this review, an adapted version of the 'critical appraisal checklist for a questionnaire study' was utilised (NICE, 2012). Each study was rated and Gough's weighting of evidence applied (Gough, 2007). Table 28 provides information on the criteria required for different Weight of Evidence (WoE) A, according to NICE (2012) quality criteria.

The scoring criteria for Gough's Weight of Evidence A is detailed below:

High = 2.40 – 3.00

Medium = 1.70 – 2.30

Low = 1.00 – 1.60

Table 27

Weight of Evidence A: Methodological quality for studies about goal contents.
Adapted from NICE (2012).

Weight of evidence	Criteria
	(Strong=3, Promising =

2, Weak = 1, limited/no)

	Strong	A rating of **3** requires that, a study must obtain between 12 to 17 of the 17 quality criteria.
NICE (2012)	Promising	A rating of **2** requires that the study met between 6 and 11 of the quality criteria.
	Weak	A rating of **1** requires that, the study met between 0 to 5 of the quality criteria.

Critical appraisal checklist for a questionnaire study

Hyvönen, K. k., Feldt, T., Salmela-Aro, K., Kinnunen, U., & Mäkikangas, A. (2009).

Young managers' drive to thrive: A personal work goal approach to burnout and

work engagement. Journal of Vocational Behaviour, 75(2), 183-196.

doi:10.1016/j.jvb.2009.04.002

Research question and study design

1. Was a questionnaire, including other assessment tools, the most appropriate method/s?

■ **Yes**

☐ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

Validity and reliability

2. Have claims for validity been made, and are they justified? (Is there evidence that the instrument measures what it sets out to measure?)

■ **Yes**

☐ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

3. Have claims for reliability been made, and are they justified? (Is there evidence that the questionnaire provided stable responses over time and between researchers?)

☐ **Yes**

■ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

Format

4. Are example questions provided?

■ **Yes**

☐ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

5. Did the questions make sense, and could the participants in the sample understand them? Were any questions ambiguous or overly complicated?

■ **Yes**

☐ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

Piloting

6. Are details given about the piloting undertaken?

☐ **Yes**

■ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

7. Was the questionnaire adequately piloted, in terms of the method and means of administration, with people who were representative of the study population?

☐ Yes

☐ No

■ N/A
☐ Unknown/Unable to code

Sampling

8. Was the sampling frame for the definitive study sufficiently large and representative?

☐ Yes

☐ No

■ N/A
☐ Unknown/Unable to code

Distribution, administration and response

9. Was the method of distribution and administration reported?

■ Yes

☐ No

☐ N/A
☐ Unknown/Unable to code

10. Were the response rates reported, including details of participants who were unsuitable for the research or refused to take part?

■ Yes

☐ No

☐ N/A
☐ Unknown/Unable to code

11. Have any potential response biases been discussed?

■ **Yes**

☐ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

Coding and analysis

12. What sort of analysis was carried out and was this appropriate? (e.g. correct statistical tests for quantitative answers, qualitative analysis for open ended questions)

■ **Yes**

☐ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

Results

13. Were all relevant data reported?

■ **Yes**

☐ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

14. Are quantitative results definitive (significant), and are relevant non-significant results also reported?

■ **Yes**

☐ **No**

☐ **N/A**
☐ **Unknown/Unable to code**

15. Have qualitative results been adequately interpreted (e.g. using an explicit theoretical framework), and have any quotes been properly justified and contextualised?

■ Yes

☐ No

☐ N/A
☐ Unknown/Unable to code

Conclusions and discussion

16. Have the researchers drawn an appropriate link between the data and their conclusions?

■ Yes

☐ No

☐ N/A
☐ Unknown/Unable to code

17. Have the findings been placed within the wider body of knowledge in the field (e.g. via a comprehensive literature review), and are any recommendations justified?

■ Yes

☐ No

☐ N/A
☐ Unknown/Unable to code

Table 28

Weight of Evidence A: Methodological quality for studies about goal contents.

Author	Survey studies	Overall WoE A
	High	High
Hyvönen et al. (2009)	(3.0)	(3.0)
	High	High
Hyvönen et al. (2010)	(3.0)	(3.0)

Jongho et al. (2016)	Medium (2.0)	Medium (2.0)
Kökönyei et al. (2008)	Medium (2.0)	Medium (2.0)
Salmela-Aro, & Nurmi (1997)	High (3.0)	High (3.0)
Sheldon et al. (2004)	High (3.0)	High (3.0)

Weight of Evidence B (WoE B)

Weight of Evidence B refers to the appropriateness of the type of evidence or design of the study to answering the review question.

The following was identified as an area to weight according to the review question:

Type of Study Design

The review question aims to explore factors associated with the goal contents of participants. As such, there is no manipulation of variables meaning an experimental design is not appropriate for answering this question. Therefore, the most suitable types of designs are those that are non-experimental, such as a survey design.

Table 29

Weight of Evidence B: Criteria and rationale for studies about goal contents.

Weighting	Descriptive
High (3)	Non-experimental design, surveys, qualitative

	research
Medium (2)	Quasi-experimental design
Low (1)	Experimental design

Overall WoE B scoring criteria:

High = 2.4 – 3.0

Medium = 1.7 – 2.3

Low = 1.0 – 1.6

Table 30

Weight of Evidence B: Methodological relevance for studies about goal contents.

Author	Study design	Overall WoE B
Hyvönen et al. (2009)	High (3.0)	High (3.0)
Hyvönen et al. (2010)	High (3.0)	High (3.0)
Jongho et al. (2016)	High (3.0)	High (3.0)

Kökönyei et al. (2008)	High (3.0)	High (3.0)
Salmela-Aro, & Nurmi (1997)	High (3.0)	High (3.0)
Sheldon et al. (2004)	High (3.0)	High (3.0)

Weight of Evidence C (WoE C)

Weight of Evidence C rates the relevance of the focus of the evidence of a reviewed

study to the review question. The three areas that were selected to rate the studies

include the sample, the measures used, and the type of data analysis employed.

Table 31

Weight of Evidence C for studies about goal contents.

Criteria	Weighting	Rationale
A Sample	3 All participants are in the primary education system.	The current study focuses on the goal contents of fifth class students. However, during the systematic review process, the author was unable to find studies that included participants at the primary level. Consequently, students above this level of education will receive a medium weighting while those who are not in education will receive a low rating.
	2 All Participants are students who are in another level of education, such as second or third level.	
	1 Participants whom are not students.	

B Measurement of goal contents	3 Assessment of participants' goal contents, according to GCT (Sheldon & Kasser, 1995, 2001) or through the use of an open-ended question.	The review question asks what outcomes are associated with different goal contents. In order to explore this, goal contents need to be assessed. As this review is framed using GCT, studies which use this framework will be awarded a high rating. Studies which use open-ended questions will receive same. A medium rating will be assigned, should a study use another framework to GCT. Other measurement tools have not been specified so as to leave this open to the exploration of all possible outcomes.
	2 Goal contents are assessed using pre-determined options that do not follow GCT (Sheldon & Kasser, 1995, 2001).	
	1 Goal contents are not assessed.	
C Data analysis	3 Participants' goal contents are coded using qualitative methods, according to whether they are intrinsic or extrinsic aspirations.	The review question aims to explore goal contents and possible associations with other factors. In order to achieve this, goal contents need to be coded according to GCT (Kasser & Ryan, 1993, 1996). According to GCT, goal contents can generally be categorised as either intrinsic or extrinsic aspirations. Both are differentially associated with well-being, amongst other outcomes (Kasser & Ryan, 1996).
	2 Goal contents are coded but are not categorised as either extrinsic or intrinsic aspirations.	
	1 Goal contents are not further coded.	

Overall WoE C scoring criteria:

High = 2.4 – 3.0

Medium = 1.7 – 2.3

Low = 1.0 – 1.6

Table 32

Weight of Evidence C: Relevance of the study topic to the review question on goal contents.

Author	Sample	Measure	Data Analysis	Overall WoE C
Hyvönen et al. (2009)	1	3	2	Medium (2.0)
Hyvönen et al. (2010)	1	3	2	Medium (2.0)
Jongho et al. (2016)	2	3	3	High (2.7)
Kökönyei et al. (2008)	1	3	2	Medium (2.0)
Salmela-Aro, & Nurmi (1997)	2	2	2	Medium (2.0)
Sheldon et al. (2004)	2	3	3	High (2.7)

Weight of Evidence D

An overall weight of evidence D is outlined in the table below. Weight of evidence A, B and C are each scored, ranging from one to three and then averaged to calculate WoE D.

Overall WoE D scoring criteria:

High = 2.4 – 3.0

Medium = 1.7 – 2.3

Low = 1.0 – 1.6

Table 33

Weight of Evidence D: Overall Weight of Evidence for studies about goal contents.

Author	WoE A	WoE B	WoE C	Overall WoE D
Hyvönen et al. (2009)	High (3.0)	High (3.0)	Medium (2.0)	High (2.7)
Hyvönen et al. (2010)	High (3.0)	High (3.0)	Medium (2.0)	High (2.7)
Jongho et al. (2016)	Medium (2.0)	High (3.0)	High (2.7)	High (2.6)
Kökönyei et al. (2008)	Medium (2.0)	High (3.0)	Medium (2.0)	Medium (2.3)
Salmela-Aro, & Nurmi (1997)	High (3.0)	High (3.0)	Medium (2.0)	High (2.7)
Sheldon et al. (2004)	High (3.0)	High (3.0)	High (2.7)	High (2.9)

Appendix E

Information Script for Students

An examination of the career aspirations of Irish children within the framework of goal contents theory.

Information Script for Students and Assent Form

The researcher will tell the students that she would like to talk to them about what they want to be when they are older. The researcher will tell the students that this is called 'research' and that she is talking to everyone and that she will write what they say in a book.

Students will be told that they do not have to take part in the research if they do not want to. They will be told that if they do take part, they can stop doing this at any time and that it is okay for them to do this.

Prior to commencing the survey, student's assent will also be elicited. Assent is conceived as a child's affirmative agreement to participate in the research provided s/he understands to some degree the purpose of the research and the consequences of participating in it (Alderson & Goodwin, 1993).

When assent is received from each student, the survey will be administered. If assent is not given by any student, they will not be asked to complete the survey.

The following are the proposed script and survey:

Hello – my name is Aoife.

I am visiting your school today because I would like to find out about what you want to be when you are older. I would like you to draw a picture of what you want to be. When you are finished drawing, I would like you to put up your hand up and either me or the teacher will ask each of you what you want to be and why you want to be this.

If you change your mind and want to start a new sheet, put up your hand and we will give you one. If you want more time, you can have until ____ o'clock You will be completing your drawing in pencil, you don't need to colour it in. If you crumple up your sheet, that means you don't want to do this. Spelling does not matter.

I am doing this because I am doing 'research'. 'Research' is where you find out about lots of things and then write them in a book. I will be writing what you write and say to me in a book and I will also be putting some of your pictures in the book. Your name or school will not be written in the book, only what you say and draw.

However, you don't have to talk with me if you don't want to. If you want to stop answering questions all you have to do is say 'I'd like to stop'. If you do not want to draw a picture that is alright too. You can stop doing this at any time and go back to your other work.

Before we start, I would like to be sure that all of you are happy to start so I brought along a sheet for each one of you to sign for me. I will read the writing and you can put a mark on the green hand if you are happy to talk to me and a mark on the red hand if you are not happy to. Remember you don't have to talk to me if you don't want to so it is alright to put a mark on the red hand.

Thank you all very much for helping me with my work and telling me all about what you want to be when you are older. Thank you too for drawing all of those lovely pictures, which I will keep and put some of them in the book that I was telling you about earlier.

Appendix F

Empirical Article for the British Journal of Educational Psychology

Title: An examination of the career aspirations of Irish children within the framework of goal contents theory

Short title: Students' career aspirations and goal contents

Aoife Olsthoorn

Mary Immaculate College

*Corresponding author information: Aoife Olsthoorn, aoifeolsthoorn@gmail.com.

Abstract

Background: Students' aspirations were examined within the framework of Goal Contents Theory (GCT). According to GCT, goal contents can be extrinsic (fame, wealth and attractiveness) or intrinsic (community contribution, personal development and relationships).

Aims: This study explored students' career aspirations, their goal contents and predictive factors of each. Their aspirations were compared with the findings of historical studies. Implications of students' goal contents for well-being were explored.

Sample: Nine schools with 209 fifth class students were included in this study.

Method: A qualitative survey which included two-questions and a drawing activity was administered. Students' goal contents were coded thematically.

Results: Students' expressed 92 different career aspirations. The majority of students expressed intrinsic goal contents while a minority expressed extrinsic goal contents. Gender significantly predicted students' career aspirations with males being more likely to pick a career in sports over other careers. Females were as likely as males to aspire to a non-professional career as a professional career. Students attending a DEIS school were more likely to aspire to a non-professional career than a professional career. Gender significantly predicted students' goal contents while SES did not. Location and school-gender did not correlate with students' career aspirations.

Conclusions: GCT seems to be a useful framework for exploring students' career aspirations. GCT possesses implications for well-being depending upon the type of goal contents. Although careers that would generally be associated with extrinsic aspirations, such as youtuber have grown in popularity, the majority of students expressed intrinsic goal contents.

Introduction

The area of study is fifth class students' career aspirations and goal contents. Much of the international research has focused on possible predictors of students' career aspirations, which the current study aims to contribute to. Predictors of career aspirations may include; Socioeconomic Status (SES), gender, gender make-up of the school and school location. Auger et al. (2005) discovered that gender influenced career aspirations, but the effect of this influence decreased amongst females as they progressed through their schooling. Phipps (1995) found that more females than males aspired to investigative and artistic careers while males tended to aspire towards more realistic careers. Auger et al. (2005) found that a large proportion of males aspired to become professional athletes. In relation to SES, Phipps (1995) discovered that SES was related to occupational variables (career aspiration, required level of education and goal content). Children from a lower SES, were more likely to be motivated by role models or financial goal contents (Phipps, 1995).

Regarding school location, Härtung, Porfeli and Vondracek (2005) discovered that there may be a potential differential impact of attending an urban or rural school. Children attending rural schools may aspire to their parents' occupations, more so than those attending urban schools (Härtung et al. 2005). This may be because children in rural areas have a finite number of occupations available to them (Härtung et al. 2005). Regarding the gender make-up of the school (co-educational or same-sex), Watson, Quatman and Edler (2002) found that girls from a single-sex school, reported more prestigious realistic career aspirations. The aspiration scores (measured in terms of prestige) of girls in a single-sex school remained static but the scores of boys and girls in a co-educational school decreased as they progressed. Understanding the influence that factors, such as gender and SES play on students' aspirations allows for insight on the part of the Educational Psychologist (EP) into how they may best support students, parents and other professionals (Brich, Frederickson, & Miller, 2015; Hagstrom, Fry, Cramblet & Tanner, 2007; Holliman, 2013).

It has been anecdotally noted in the practice of EPs that the aspirations of Children and Young People (CYP) are changing. This appears to be in line with the

advancement of new communication methods, the large gaming market and new media occupations, such as coders and youtubers (Bobo, Hildreth & Durodye, 1998; Chambers, Kashefpakdel, Rehill & Percy, 2018; McDevitt, Hess, Leesatayakun, Sheehan & Kaufeld, 2013). One of the most recent and largest surveys of its kind has demonstrated a shift in the career aspirations of children, aged 7 to 11, to reflect these changes in the career options available (Chambers et al. 2018). The current study attempts to ascertain whether children's career aspirations are indeed adapting in response to various cultural changes and in what way.

Complementary of the current research, the second strand seeks to explore children's goal contents. Goal contents can be framed using GCT. GCT is a mini-theory of Self-Determination Theory (SDT), which addresses different facets of behaviour, motivation and/or personality functioning (Deci & Ryan, 2008a). Basic needs theory and organismic dialectic theory underlie SDT and all its' mini-theories (see figure 1) (Ryan & Deci, 2017). Organismic dialectic theory assumes that human beings have inherent tendencies towards proactively interacting with their environment, mastering challenges and integrating new experiences into a coherent sense of self (Deci & Ryan, 2000). These inherent tendencies do not necessarily operate automatically, rather they require support from the social context (Deci & Vansteenkiste, 2004). Equally, the social context can thwart these tendencies, inhibiting psychological development (Deci & Vansteenkiste, 2004).

According to basic needs theory, people share the basic needs for autonomy, competence and relatedness (Ryan & Deci, 2017) (see figure 1). The type of support that is required for healthy development and functioning is the fulfilment of all three of the basic psychological needs (Ryan & Deci, 2017). If or when each of these needs are satisfied, outcomes, such as psychological well-being and optimal functioning are expected (Ryan & Deci, 2000). When one or more of these needs are thwarted, psychological ill-being and non-optimal functioning are to be expected (Deci & Vansteenkiste, 2004).

Research has indicated that the type of goal content a person has can either fulfil or thwart basic need satisfaction (Deci & Vansteenkiste, 2004; Hope, Holding, Verner-Filion, Sheldon & Koestner, 2018; Ryan & Deci, 2000). The goal content

refers to what type of goals students pursue, whether they be extrinsic or intrinsic (Kasser & Ryan, 1993, 1996; Sheldon et al. 2004). Extrinsic goals may include fame, wealth and personal appearance (Grouzet et al. 2005; Kasser & Ryan, 1996). Intrinsic goals may include contributing to the community, personal growth and building close relationships (Grouzet et al. 2005; Kasser & Ryan, 1996). The type of goal content is differentially associated well-being, depending upon whether it satisfies or thwarts the basic needs for autonomy, competence and relatedness (Deci & Vansteenkiste, 2004; Hope et al. 2018; Kasser & Ryan, 1996; Ryan & Deci, 2000). As an EP supports the well-being of the CYP, such outcomes and theoretical understandings are of particular relevance (Brich et al. 2015; DES, 2018a; Hagstrom et al. 2007; Holliman, 2013; Roffey, 2015). Understanding students' goal contents can be achieved by using the framework of GCT (Härtung et al. 2005). No previous published studies, to the researcher's knowledge, have combined these two strands. They appear to complement each other as GCT can provide a deeper understanding of students' career aspirations, with possible implications for well-being.

Fifth class students' goal contents were explored within the framework of Goal Contents Theory (GCT). The research questions of the current study are: (a) what are students' career aspirations and goal contents? (b) are there predictive factors of students' career aspirations and goal contents? (c) how do students' career aspirations compare with those found in historical studies, within the framework of GCT?

Method

Participants

This study underwent an ethical review process and received approval from the appropriate body. There were 209 fifth class students (M = 95, F = 114), ranging in age from 10 to 12 years old (mean = 10.45). Fifth class students were selected because their knowledge of careers, realistic understanding of them and ability to envision themselves in a career are generally developed by this age (Hartung et al. 2005; McGee & Stockard, 1991). These participants were recruited from nine schools across Ireland using purposeful convenient sampling. Schools were selected according to whether they fulfilled certain subgroup criteria, ranging from

geographical location (urban or rural), the gender make-up of the school (male, female or co-educational) and DEIS status (DEIS or non-DEIS) (see table 1). For the purpose of this study, SES was approximated according to whether the school was designated DEIS or non-DEIS under the Delivering Equality of Opportunity in Schools program (Department of Education and Skills (DES), 2018b).

Procedure, Design and Measures

This study employed a mixed methods design. A survey was first piloted with a school. Recruitment emails were sent, followed by phone calls. The researcher visited the schools who agreed to participate prior to conducting the survey to garner consent (DCYA, 2011; PSI, 2011). While garnering consent, there was an opportunity for the researcher to briefly meet with fifth class to introduce the study, in five out of the ten schools. In the remaining five schools, the students were informed about the study by their teacher and met the researcher on the day the survey was administered.

In each school, the survey was administered over a period of 40 minutes by the researcher, using the following procedure. The researcher provided each student with an information sheet and an assent sheet. An information script was read aloud to the class which used clear and simple language. The assent sheet was also read aloud and the students were asked to fill this in. The survey was administered to those who had parental consent and whom had given their assent. Regarding response rate, nine parents of the total number, did not return consent forms and seven students did not give their assent to participate. The front page of the survey was read aloud: 'I am ___ years old', please tick either 'I am a boy' or 'I am a girl' and 'draw a picture of what you would like to be'. Students were asked to raise their hands once they had completed this section and the researcher or teacher would approach them. The back of the survey was not addressed until they were approached.

When the teacher or researcher approached each student, they asked the following questions which were on the back of the survey: 'what would you like to be when you are older?' and 'why would you like to be this?' Students were then asked whether they would like their answers transcribed or whether they would like

to write. Answers were scribed verbatim on the back of the survey. Each survey was checked to ensure that the writing was legible, thereby limiting misinterpretation.

Results

Data Analysis

Data were analysed quantitatively to investigate possible relationships between gender, career aspirations, type of school (DEIS or non-DEIS status, location and gender make-up of the school) and goal contents. Frequency descriptive statistics were used to explore the frequency of different career aspirations amongst the sample. A chi-square analysis was conducted to explore whether there was a relationship between school location and students' career aspirations. Several multinomial logistic regression analyses were run to explore possible predictive factors of students' career aspirations and goal contents. Goal contents were thematically coded.

Descriptive Statistics

The frequency of students' career aspirations was analysed using descriptive statistics. Students reported 92 different career aspirations. Some of the most popular careers included: soccer player (n = 28), teacher (n = 10), beautician (n = 10), youtuber (n = 9), doctor (n = 8), architect (n = 7), hairstylist (n = 7), makeup artist (n = 7) and garda (police officer) (n = 6). Three students indicated that they did not know what career they aspired to. Within the sample, 65 reported professional careers (requiring a bachelor's degree or above), 58 students reported non-professional careers (requiring less than a bachelor's degree), 48 reported careers in sports and 34 reported creative careers (see table 2).

Career Aspirations by Gender

Several differences were observed in career aspirations according to gender. Table 2 details the frequency of career categories (professional, non-professional, sports and creative), according to gender. Sports represented the most frequently reported career category amongst males at 39% (n = 37). In contrast, this career category was cited by only 8% of females. The most common career category reported females was professional (37%). Males selected this category (24%) with

somewhat less frequency. A similar disparity in preference was seen between the percentage of males (20%) who selected a non-professional career, in contrast to females (34%). Creative careers were reported by 16% of males and 20% of females. Approximately 1% of males and 2% of females did not know what they aspired to be.

Within these collapsed categories, there were careers which differed in frequency according to gender (see table 3). Quite a large percentage of males (26%) reported soccer player as their career aspiration. Following this, the most frequently occurring careers were youtuber (5%), garda (5%), architect (5%) and rugby player (4%). In contrast to males, there was no single career that occurred with a much larger frequency than others amongst females. Beautician (9%) was the most frequently cited career, followed closely by teacher (8%), doctor (7%), makeup artist (6%) and singer (4%). None of the top five careers were shared across males and females. The closest overlap in career aspirations was youtuber, which was selected by five males and four females.

Correlational Statistical Analyses

A chi-square test for independence did not indicate a significant relationship between the location of the school (urban or rural) and career aspirations, χ^2 (3, n = 206) = 1.93, p = .587, cramer's V = .097. Multinomial logistic regression analyses were conducted to provide further insight into the predictive power of different factors (Field, 2018).

The first question asked whether there was a gender and/or SES (DEIS and non-DEIS school) difference in choosing sports versus other careers. The final model included only the main effect of gender as the other factors were found to be non-significant (see table 4). Gender was found to be statistically significant, χ^2 (3, N = 206) = 30.73, p < .001. The effect size explained between 13.9% (Cox and Snell R-square) and 14.8% (Nagelkerke) of the variance in students' career aspirations.

Gender significantly predicted whether a male student selected a non-professional career or a sports career, b = -2.13, Wald χ^2 (1) = 21.02, p < .001. There was an odds ratio of .12, indicating that males were more likely to aspire to a

career in sports than a non-professional career. Gender also significantly predicted whether a male student selected a professional career or a sports career, $b = -2.02$, Wald $\chi^2 (1) = 19.78$, $p < .001$. There was an odds ratio of .13, indicating that males were more likely to aspire to a career in sports than a professional career. Finally, gender significantly predicted whether a male student selected a creative career or a sports career, $b = -1.80$, Wald $\chi^2 (1) = 12.90$, $p < .001$. There was an odds ratio of .17 indicating that males were more likely to aspire to a career in sports than a creative career.

The second question asked whether there was a gender and/or gender make-up of the school (all-boys, all-girls and co-educational) difference in choosing professional versus other types of careers? Neither gender make-up of the school or an interaction between school gender and gender were correlated with students' career aspirations (see table 5). Gender significantly predicted students' career aspirations. Gender did not significantly predict whether a student aspired to a non-professional career versus a professional career, $b = -.117$, Wald $\chi^2 (1) = .09$, $p = .76$. There was an odds ratio of .89. Gender significantly predicted whether a male student aspired to a professional career or a sports career, $b = 2.012$, Wald $\chi^2 (1) = 19.78$, $p < .001$. There was an odds ratio of 7.51, indicating that males were more likely to aspire to a career in sports than a professional career.

The third question asked whether there was an SES difference in aspiring to a non-professional career versus others? It was hypothesised that students attending a DEIS school would be more likely to aspire to a non-professional career than a professional career. SES (as measured by school's DEIS status) was not found to explain variability in outcome better than the original model, $\chi^2 (3, N = 206) = 7.72$, $p = .052$. Although it was not significant overall, there was a significant finding within the model, whereby students from a DEIS school were more likely than students from a non-DEIS school to aspire to a non-professional career versus a professional career, $b = -1.05$, Wald $\chi^2 (1) = 7.26$, $p = .007$ (see table 6). This produced an odds ratio of .35.

The fourth question asked whether there was a gender and/or SES difference in choosing extrinsic goal contents versus other types of goal contents? The final

model showed that only gender served as a significant predictive factor for goal contents, χ^2 (4, N = 206) = 10.62, p = .031. The effect size explained between 5.1% (Cox and Snell R-square) and 5.6% (Nagelkerke) of the variance in students' goal contents. Gender did not significantly predict whether a student had an intrinsic goal content or an extrinsic goal content, b = -1.04, Wald χ^2 (1) = 3.58, p = .058 (see table 7). However, the p value is nearing significance. As such, it may be useful to consider the odds ratio which produced a value of .35, indicating that males may have been more likely to have an extrinsic goal content than an intrinsic one. Gender did not result in significant comparisons between extrinsic aspirations and other types of aspirations.

Qualitative Analysis

The qualitative data garnered from the survey question: 'why would you like to be this?' were coded thematically into 19 sub-themes, such as financial success, interests and self-perceived aptitude. To allow for more manageable analysis and interpretation, these sub-themes were collapsed into main themes, according to whether they were extrinsic, intrinsic, extrinsic and intrinsic, 'other', and intrinsic and 'other'. Goal contents were coded as extrinsic or intrinsic, in line with GCT (Kasser & Ryan, 1993, 1996). However, some sub-themes did not fit appropriately into these themes and were subsequently coded as 'other'. Four of the 209 responses were classified as extrinsic and other (n = 2), and extrinsic, intrinsic and other (n = 2). As these numbers are quite small relative to the sample, they were removed to create a more manageable data set and as such are not outlined in this section.

Theme one: intrinsic goal contents.

Responses coded as community contribution, health, personal growth, relationships, interests, express creativity and fun were collapsed into the theme of intrinsic goal contents. There were 124 students who reported solely intrinsic goal contents. This number is significantly higher than the other themes and represents a large proportion of the overall sample (59%).

The following three quotations are from students who expressed intrinsic goal framing and whose responses were coded as 'community contribution'. The first student aspired to be a biologist, the second an early intervention teacher and the

third a soccer player. "To help all the animals and save the Amazon Rainforest and protect all of the animals from pouchors." "My mams best friends daughter has autism and she was upset and I made her happy." "To take care of the poor. Like it's sad for people to see." Altruistic responses appeared frequently within the theme of intrinsic goal framing, alongside sub-themes relating to students' interests and that students thought that the career was fun.

Theme two: extrinsic goal contents.

Responses which were coded as relating to financial success, fame, physical appearance and making another person proud were collapsed into the theme of extrinsic goal contents. There were 16 students (8%) who reported solely extrinsic goal contents. Financial success was the most popularly cited sub-theme within the theme of extrinsic goal contents. The following quotes are examples of students whose goal contents were coded as extrinsic. "I would like to be this because I will earn a lot of money, and I like MONEY!" "To get a lot of money and get a lot of supporters/subscribors." The first aspired to be a special effects makeup artist and the second student aspired to be a youtuber.

Theme three: extrinsic and intrinsic goal contents.

Students' responses which contained both extrinsic and intrinsic goal contents were dual-coded in an attempt to retain and respect the level of complexity within answers. There were 19 students (9%) whose responses contained extrinsic and intrinsic goal contents. The following quote is from a student who aspired to be a doctor. "So if I was a doctor then I could go around the world and help the poor just like mother teresa. And I want to be a famous doctor just like mother teresa." The first sentence was coded as 'community contribution', which is intrinsic goal framing. The second sentence was coded as 'fame', which is extrinsic goal framing. As the response contained both intrinsic and extrinsic components, it was thematically coded as an extrinsic and intrinsic goal content.

Theme four: 'other' goal contents.

Responses initially coded as aptitude, as another person saying that they have an aptitude, simple or easy job, worked hard at it, unknown, doing it since young, influential person/s and the implications of having the job are of interest to them

were collapsed into the theme of 'other'. There were 29 students (14%) who reported goal contents coded solely as 'other'. The following quote is from a student whose answer was coded as 'another person who said that they have an aptitude'. "I would like to be an artist because my mum said you are really good at art." Their mother has said that they are good at art and this appears to be the reason that the student has selected this career. As this is not clearly extrinsically or intrinsically framed, it is coded as 'other'.

Theme five: intrinsic and 'other' goal contents.

Responses which contained both intrinsic goal contents and those coded as 'other', were collapsed into a dual-theme. There were 14 students (7%) in this category. Responses which were coded as both intrinsic and 'other' demonstrated a mix of variability amongst sub-themes. Some students mentioned altruistic intrinsic goal contents, such as helping others, combined with the influence of another person, as can be seen in the following example. "I would like to be camming and to help them and because when I saw my mam thought it was so camming and niece." This student aspired to become a nurse to help others. It may be inferred that their mother is a nurse and that seeing her working has had an influence (influential person).

Discussion

The high number of reported career aspirations (N = 92) is similar to that found in previous studies (Bobo et al. 1998; Chambers et al. 2018). This may demonstrate the awareness that fifth class students have of a diverse range of career options. It appears to reflect the developmental career progression of children, from the practicalities of finding a job to a more dynamic exploration (Goldstein & Oldham, 1979; Hartung et al. 2005).

Within this breadth of career aspirations, there were observed gender differences. Contrary to previous research, females (n = 60) reported more careers than males (n = 46) (McMahon & Patton, 1997). Gender was a significant predictor of students' career aspirations, specific to sports careers. Males were significantly more likely to pick a career in sports than females. It was consistently predicted that males would choose a career in sports over other career types (non-professional, professional and creative). The popularity of sports amongst males is mirrored in the

findings of previous studies (Auger et al. 2005; Bobo et al. 1998; Chambers et al. 2018; Hewitt, 1975). Females were as equally likely to pick a professional career as a non-professional career. Within the career categories, there was evidence of certain gendered roles, such as teacher and beautician.

According to the findings of the current study, there appears to be a move towards gender equalisation of careers, although gendered roles still exist (Hammond & Dingley, 1989; Sellers, Satcher & Comas, 1999). At a societal level, this gradual move may reflect an increasing awareness of the still present single-gender dominated careers. For example, there is currently a lot of focus on the lack of females enrolling in science, technology, engineering and mathematics (STEM) degrees (Riegle-Crumb, Moore & Ramos-Wada, 2011; Sadler, Sonnert, Hazari & Tai, 2012). This growing awareness and societal drive to value gender equality, may be one of the reasons for the gender effect only being evident in sports as well as females reporting more careers than males. However, further research is needed to unravel gender effects.

Students from a DEIS school were more likely than those from a non-DEIS school to aspire to a non-professional career versus a professional career. According to the literature, this may be because students from a low SES background are exposed to fewer career choices, and careers that are modelled at home may be less prestigious (Moulton, Flouri, Joshi & Sullivan, 2018; Nelson, 1963). They may also be becoming aware of their own SES and matching their aspirations to what they believe is in line with this (Miller, 1986). Due to conflictual findings in the literature and the limitations of measuring SES by DEIS status, further research may be warranted (Gore, Holmes, Smith, Southgate & Albright, 2015 Hannah & Kahn, 1989; Moulton et al. 2018; Saw, Chang & Chan, 2018).

The gender make-up of the school did not predict students' career aspirations. This is contrary to Watson et al.'s (2002) finding that girls from a single-sex school, reported higher realistic career aspirations. While the aspiration scores (measured in terms of prestige) of girls in a single-sex school remained static, the scores of boys and girls in a co-educational school decreased as they progressed (Watson et al. 2002). Further research is required, in light of these contradictory findings. School

location was not found to significantly predict students' career aspirations, contrary to the findings of Härtung et al. (2005), indicating a need for further research.

Students' goal contents were explored within the framework of GCT. There were 124 students (59%) with intrinsic goal contents, 29 students (14%) whose responses were coded as 'other', 19 students (9%) whose responses were dual-coded as extrinsic and intrinsic, 16 students (8%) whose answers were coded as extrinsic and 14 students (7%) with goal contents coded as intrinsic and 'other'. The majority of students expressed intrinsic goal contents with far fewer reporting extrinsic goal contents. According to previous research, extrinsic and intrinsic goal contents produce differential effects on well-being (Kasser & Ryan, 1996). Although well-being was not assessed in the current study, possible implications will be discussed later. Firstly, certain factors will be examined to determine their predictive power in relation to goal contents.

Gender was found to significantly account for variability in students' goal contents. One interaction that was nearing significance (p = .058), indicated that males were .35 times more likely than females to have an extrinsic goal content than an intrinsic goal content. When this finding is placed within the context of the large percentage of males who aspired to a career in sports, it could be queried whether such careers are linked to extrinsic goal contents. It was not possible to explore whether there was a relationship between goal contents and career aspirations as there were not enough cases in some of the cells, violating an assumption of the test (Pallant, 2010; McHugh, 2013). This may be an area for future research. Previous studies have found that females may report higher intrinsic aspirations, in contrast to males (Kasser & Ryan, 1996; Rijavec, Brdar & Miljkovic, 2006). As the finding of the current study approached significance, further research may be warranted.

SES (DEIS or non-DEIS school) and goal contents were analysed to determine whether SES predicted a student's goal content. The result was non-significant. The hypothesis that students attending a DEIS school may strive for extrinsic aspirations was not accepted. This was hypothesised according to previous research which indicated that people from a low SES may possess more extrinsic aspirations, perhaps due to a drive to fulfil the basic psychological need for safety

(financial stability) (Brdar et al. 2011; Brdar et al. 2009; Grouzet et al. 2005; Maslow, 1943; Wong & Ahuvia, 1998).

In recent years, occupations, such as youtuber have joined the ranks of popular careers, as evidenced by the findings of this study and by Chambers et al. (2018). The world has entered a digital age where certain media outlets espouse materialism (Khalid & Qadeer, 2017; Sidhu, 2015). These types of careers are generally associated with fame, financial success and physical appearance. It can then become a common assumption that those who aspire towards these careers are doing so because they have extrinsic goal contents. However, this assumption does not appear to be validated by the research (Teigen, Normann, Bjorkheim & Helland, 2000).

The findings from the current study indicated that 59% of children expressed intrinsic aspirations and 8% expressed extrinsic aspirations. This indicates that although societal values appear to be becoming more extrinsic, the findings of this study, alongside others, do not support this assumption, at least not for children at the age level assessed in the current study. (Teigen et al. 2000). However, further research is needed to fully explore current CYPs' goal contents and associated outcomes as well as possible associations between certain careers and goal contents. Considering the negative outcomes associated with extrinsic aspirations, it may be important to consider what values people in these careers promote as well as broader societal values, specifically, the values which place importance upon extrinsic goals (fame, wealth and attractiveness) (Grouzet et a. 2005; Kasser & Ryan, 1996).

GCT possesses implications for the well-being of students according to their career aspirations. In the current study, the majority of students expressed solely intrinsic goal contents (59%). Research has indicated that intrinsic goal contents may be associated with increased life satisfaction, learning, performance, persistence, participation, school success, greater spirituality and subjective well-being, and lower levels of greed (Cozzolino et al. 2004; Fryer et al. 2014; Ku et al. 2014; Nishimura & Suzuki, 2016; Romero et al. 2012; Sibley & Bergman, 2018; Teixeira et al. 2012; Vanteenkiste et al. 2004; Vansteenkiste et al. 2006). People with intrinsic aspirations have been found to have higher quality relationships than those with

extrinsic aspirations and engage in more give and take, possibly fuelled by generativity goals (Kasser & Ryan, 2001; Sheldon & Kasser, 1995).

In the current study, a minority of students reported solely extrinsic aspirations (8%). Extrinsic goal contents may be negatively associated with life satisfaction, subjective well-being, learning, performance, persistence, participation and school success (Fryer et al. 2014; Ku et al. 2014; Nishimura & Suzuki, 2016; Romero et al. 2012; Sibley & Bergman, 2018; Vanteenkiste et al. 2004; Vansteenkiste et al. 2006). Other research has found that extrinsic goal contents can increase high risk behaviours, drug and television usage and job burnout (Schmuck et al. 2000; Roche & Haar, 2013; Williams, et al. 2000). People with extrinsic goal contents have been found to have more conflictual relationships, can be less empathic and may use relationships to further their own aspirations (Kasser & Ryan, 2001; Khana & Kasser, 1999; Sheldon & Kasser, 1995).

The current study was limited to measuring students' goal contents and did not explore any of the outcomes that are listed above. However, the research to date appears to repeatedly demonstrate the link between type of goal contents and differentially associated outcomes. This may pose implications for the goal contents students expressed in this study but it cannot be definitively stated.

Limitations

How goal contents and career aspirations were coded may be a limitation. There are numerous limitations regarding the interpretation of peoples' goal contents. They could hold multiple meanings, including different cultural meanings or serve as a means to achieving another goal. Extraneous variables may not have been accounted for, such as whether the environment was autonomy-supportive or controlling, each being differentially associated with basic needs satisfaction (Black & Deci, 2000; Chantara et al. 2011; Deci & Ryan, 2008a).

This study approximated SES to whether the school participants attended was DEIS or non-DEIS (DES, 2018b). However, this possesses limitations as this measure does not equate to students' SES. This is because students from a variety of

backgrounds may attend a school that is designated disadvantage. Rather it is the school that is designated disadvantaged than the student population.

There may have been methodological limitations as students' responses may have been impacted by hearing the responses of those around them. The qualitative data are somewhat limited in its richness. Future research may wish to conduct interviews.

Implications for Educational Psychology

Through anecdotal reports over the past several years, EPs often hear of students who aspire to become youtubers or gamers. It is an important area for EPs to keep abreast of, in order to be in tune with the aspirations and interests of those they are working with. One of the roles of the EP is to support professionals working with the student, which may include teachers and guidance counsellors (Brich, Frederickson, & Miller, 2015; Hagstrom, Fry, Cramblet & Tanner, 2007; Holliman, 2013). Therefore, it is necessary for EPs to have an evidence-base and relevant research to inform their practice (Hagstrom et al. 2007).

As EPs work with a range of clients, it is necessary to know, for example, if a student with a low SES may be more likely to aspire to a non-professional career than a professional career. This finding may indicate work for EPs at the systemic level, to attempt to equalise what may be an SES imbalance. Research has indicated that low SES students may be matching their SES to their career aspiration (Miller, 1986). In response, EPs could take a universal and systemic approach. A universal intervention could target those attending a DEIS school and attempt to expose students to a wider variety of careers, regardless of prestige level and support them in aspiring to these, regardless of SES (Moulton, Flouri, Joshi & Sullivan, 2018; Nelson, 1963). EPs could address a wider societal imbalance in the opportunities available to those with a low SES. This could begin with equalising access to qualifications, regardless of finances. The role for the EP here may be at the level for policy change (Brich et al. 2015; Pellegrini, 2009).

The link between goal contents and these outcomes has implications for the practice of EPs. One of the roles of an EP is to support the well-being of the CYP

(Brich et al. 2015; DES, 2018a, Roffey, 2015). To this end, the implications of students' goal contents are particularly relevant. There may be a role for the EP to provide psychoeducation to the CYP, parents, teachers and other professionals, about the implications of GCT for career aspirations but also for any goal that a CYP may have. If the CYP and those supporting them are aware of their goal contents and associated outcomes, intrinsic goal contents could be emphasised and positive outcomes may be experienced (Sibley & Bergman, 2018). If an intervention focuses on encouraging intrinsic aspirations, by instilling values, such as generativity, well-being may be supported (Kasser, 2018). This could be done through reflection and by encouraging students to be critical of materialistic messages that certain media outlets may be trying to broadcast (Kasser, 2018). As autonomy, competence and relatedness predict intrinsic goal contents, parents, professionals and systems, such as the education system, could work to promote and support these basic psychological needs.

Areas for future research

This study may present an opportunity to further our understanding of Irish students' career aspirations and goal contents, and how these change over time (Hartung et al. 2005). This could be done by continuing this study with the same participants and employing a longitudinal design. Their career aspirations and goal contents could be reassessed after the junior certificate and the year of the leaving certificate, culminating in three time points overall. This would add to the dearth in longitudinal research on whether career aspirations and goal contents change over time (Hartung et al. 2005). These two components have not been researched together to date and therefore have not been longitudinally assessed. To the researcher's knowledge, this is the first study that includes measures of both children's career aspirations and goal contents. It is hoped that the findings of this study will lay a foundation for future research.

References

Auger, R. W., Blackhurst, A. E., & Wahl, K. H. (2005). The development of elementary-aged children's career aspirations and expectations. *Professional School Counseling*, 322-329.

Black, A. E., & Deci, E. L. (2000). The effects of instructors' autonomy support and students' autonomous motivation on learning organic chemistry: A self-determination theory perspective. *Science education*, *84*(6), 740-756.

Bobo, M., Hildreth, B. L., & Durodoye, B. (1998). Changing patterns in career choices among African-American, Hispanic, and Anglo children. *Professional School Counselling*, *1*(4), 37-42.

Brdar, I., Miljković, D., & Rijavec, M. (2011). Aspirations and well-being: Extrinsic vs. intrinsic life goals. *Društvena Istraživanja - Časopis Za Opća Društvena Pitanja, 20*(3), 693-710. doi:10.5559/di.20.3.05

Brdar, I., Rijavec, M., & Miljković, D. (2009). Life goals and well-being: Are extrinsic aspirations always detrimental to well-being?. *Psihologijske teme*, *18*(2), 317-334.

Brich, S., Frederickson, N., & Miller., A. (2015). What do educational psychologists do? In Cline, T., Gulliford, A., & Birch, S. (Eds.) *Educational Psychology: Topics in applied Psychology* (2nd ed.) (pp. 3-21). London and New York: Routledge.

Chambers, N., Kashefpakdel, E. T., Rehill, J., & Percy, C. (2018). Exploring the career aspirations of primary school children from around the world. Retrieved from https://www.educationandemployers.org/wp-content/uploads/2018/01/Drawing-the-Future-FINAL-REPORT.pdf

Cozzolino, P. J., Staples, A. D., Meyers, L. S., & Samboceti, J. (2004). Greed, death, and values: From terror management to transcendence management theory. *Personality and Social Psychology Bulletin*, *30*(3), 278-292.

Deci, E. L., & Ryan, R. M. (2000). The" what" and" why" of goal pursuits: Human
    needs and the self-determination of behavior. *Psychological inquiry*, *11*(4),
    227-268.

Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of
    human motivation, development, and health. *Canadian
    psychology/Psychologie canadienne*, *49*(3), 182

Deci, E. L., & Vansteenkiste, M. (2004). Self-determination theory and basic need
    satisfaction: Understanding human development in positive
    psychology. *Ricerche di psicologia*. *27*(1), 23-40.

Department of Children and Youth Affairs (2011). *Children First: National
    Guidance for the Protection and Welfare of Children,* Dublin: Government
    publications.

Department of Education and Skills (2018a). Wellbeing Policy Statement and
    Framework for Practice 2018–2023. Retrieved from
    https://www.education.ie/en/Publications/Policy-Reports/wellbeing-policy-
    statement-and-framework-for-practice-2018%E2%80%932023.pdf

Department of Education and Skills (2018b) DEIS school list 2018 - 2019 school
    year. Retrieved from https://www.education.ie/en/Schools-
    Colleges/Services/DEIS-Delivering-Equality-of-Opportunity-in-Schools-/

Fryer, L. K., Ginns, P., & Walker, R. (2014). Between students' instrumental goals
    and how they learn: Goal content is the gap to mind. *British Journal of
    Educational Psychology*, *84*(4), 612-630.

Goldstein, B., & Oldham, J. (1979). Children and work: a study of socialization.
    New Brunswick, NJ: Transaction Books.

Gore, J., Holmes, K., Smith, M., Southgate, E., & Albright, J. (2015).
    Socioeconomic status and the career aspirations of Australian school
    students: Testing enduring assumptions. *The Australian educational
    researcher*, *42*(2), 155-177.

Grouzet, F. M., Kasser, T., Ahuvia, A., Dols, J. M. F., Kim, Y., Lau, S., & Sheldon, K. M. (2005). The structure of goal contents across 15 cultures. *Journal of personality and social psychology*, *89*(5), 800.

Hagstrom, R. P., Fry, M. K., Cramblet, L. D., & Tanner, K. (2007). Educational Psychologists as Scientist-Practitioners An Expansion of the Meaning of a Scientist-Practitioner. *American Behavioral Scientist, 50*(6), 797-807.

Hammond, D., & Dingley, J. (1989). Sex differences in career preferences of lower sixth formers in Belfast grammar schools. *Journal of Occupational Psychology*, *62*(3), 263-264.

Hannah, J. A. S., & Kahn, S. E. (1989). The relationship of socioeconomic status and gender to the occupational choices of grade 12 students. *Journal of Vocational Behavior*, *34*(2), 161-178.

Härtung, P. J., & Porfeli, E. J. 8c Vondracek, FW (2005). Child vocational development: A review and reconsideration. *Journal of Vocational Behavior*, *66*, 385-419.

Hewitt, L. S. (1975). Age and sex differences in the vocational aspirations of elementary school children. *The Journal of social psychology*, *96*(2), 173-177.

Holliman, A. J. (2013). Introduction to Educational Psychology Practice. *Routledge*.

Holliman, A. J. (2013). Introduction to Educational Psychology Practice. *Routledge*.

Hope, N. H., Holding, A. C., Verner-Filion, J., Sheldon, K. M., & Koestner, R. (2018). The path from intrinsic aspirations to subjective well-being is mediated by changes in basic psychological need satisfaction and autonomous motivation: A large prospective test. *Motivation and Emotion*, 1-10

Kasser, T. (2018). Materialism and living well. *Handbook of well-being*. Salt Lake City, UT: DEF Publishers.

Kasser, T., & Ryan, R. M. (1993). A dark side of the American dream: Correlates of financial success as a central life aspiration. *Journal of personality and social psychology*, *65*(2), 410.

Kasser, T., & Ryan, R. M. (1996). Further examining the American dream: Differential correlates of intrinsic and extrinsic goals. *Personality and social psychology bulletin*, *22*(3), 280-287.

Kasser, T., & Ryan, R. M. (2001). Be careful what you wish for: Optimal functioning and the relative attainment of intrinsic and extrinsic goals. *Life goals and well-being: Towards a positive psychology of human striving*, *1*, 116-131.

Khalid, A., & Qadeer, F. (2017). *Rising Consumer Materialism: A Threat to Sustainable Happiness*. New York: Routledge.

Maslow, A. H. (1943). A theory of human motivation. *Psychological review*, *50*(4), 370.

McDevitt, T. M., Hess, C. A., Leesatayakun, M., Sheehan, E. P., & Kaufeld, K. A. (2013). A cross-sectional study of career aspirations in Thai children in an international school in Bangkok. *Journal of Career Development*, *40*(6), 531-550.

McGee, J., & Stockard, J. (1991). From a child's view: Children's occupational knowledge and perceptions of occupational characteristics. *Sociological studies of child development*, *4*, 113-136.

McHugh, M. L. (2013). The chi-square test of independence. *Biochemia medica: Biochemia medica*, *23*(2), 143-149.

McMahon, M., & Patton, W. (1997). Gender differences in children and adolescents perceptions of influences on their career development. School Counselor, 44, 368–376.

Moulton, V., Flouri, E., Joshi, H., & Sullivan, A. (2018). Individual-level predictors of young children's aspirations. *Research Papers in Education*, *33*(1), 24-41.

Pallant, J. (2010) *SPSS Survival Manual: Fourth Edition*. England: Open University Press.

Pellegrini, D. W. (2009). Applied systemic theory and educational psychology: Can the twain ever meet?. *Educational Psychology in Practice*, *25*(3), 271-286.

Psychological Society of Ireland (2011). *Code of professional ethics.* Dublin: Author.

Riegle-Crumb, C., Moore, C., & Ramos-Wada, A. (2011). Who wants to have a career in science or math? Exploring adolescents' future aspirations by gender and race/ethnicity. *Science Education*, *95*(3), 458-476.

Rijavec, M., Brdar, I. & Miljkovic, D. (2006), Extrinsic vs. Intrinsic Life Goals, Psychological Needs and Life Satisfaction. In: A. Delle Fave (Ed.), Dimensions of Well-Being. Research and Intervention (pp. 91-104), Milano, Franco Angeli.

Roche, M., & Haar, J. M. (2013). Leaders life aspirations and job burnout: a self-determination theory approach. *Leadership & Organization Development Journal*, *34*(6), 515-531.

Roffey, S. (2015). Becoming an agent of change for school and student well-being. *Educational & Child Psychology*, *32*(1), 21-30.

Romero, E., Gómez-Fraguela, J. A., & Villar, P. (2012). Life aspirations, personality traits and subjective well-being in a Spanish sample. *European Journal of Personality*, *26*(1), 45-55.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, *55*(1), 68.

Ryan, D. M., & Deci. E. L. (2017). Self-Determination Theory: Basic Psychological Needs in Motivation, Development and Wellness. New York, NY: The Guilford Press.

Sadler, P. M., Sonnert, G., Hazari, Z., & Tai, R. (2012). Stability and volatility of
    STEM career interest in high school: A gender study. *Science
    education*, *96*(3), 411-427.

Saw, G., Chang, C. N., & Chan, H. Y. (2018). Cross-sectional and longitudinal
    disparities in STEM career aspirations at the intersection of gender,
    race/ethnicity, and socioeconomic status. *Educational Researcher*, *47*(8),
    525-531.

Schmuck, P., Kasser, T., & Ryan, R. M. (2000). Intrinsic and extrinsic goals: Their
    structure and relationship to well-being in German and US college
    students. *Social Indicators Research*, *50*(2), 225-241.

Sellers, N., Satcher, J., & Comas, R. (1999). Children's occupational aspirations:
    Comparisons by gender, gender role identity, and socioeconomic
    status. *Professional School Counseling*, *2*(4), 314.

Sheldon, K. M., & Kasser, T. (1995). Coherence and congruence: Two aspects of
    personality integration. *Journal of personality and social psychology*, *68*(3),
    531.

Sheldon, K. M., Ryan, R. M., Deci, E. L., & Kasser, T. (2004). The independent
    effects of goal contents and motives on well-being: It's both what you pursue
    and why you pursue it. Personality And Social Psychology Bulletin, 30(4),
    475-486. doi:10.1177/0146167203261883

Sibley, B. A., & Bergman, S. M. (2018). What keeps athletes in the gym? Goals,
    psychological needs, and motivation of CrossFit™ participants. *International
    Journal of Sport and Exercise Psychology*, *16*(5), 555-574.

Sidhu, I. (2015). The Digital Revoultion: *How Connected Digital Innovations are
    Transforming your Industry*, New Jersey: Company & Career. FT Press.

Teigen, K. H., Normann, H. T. E., Bjorkheim, J. O., & Helland, S. (2000) Who
    Would You Most Like to Like? Adolescents' ideals at the beginning and the
    end of the century, *Scandinavian Journal of Educational Research, 44*:1, 5-
    26, DOI:10.1080/713696661

Teixeira, P. J., Carraça, E. V., Markland, D., Silva, M. N., & Ryan, R. M. (2012). Exercise, physical activity, and self-determination theory: a systematic review. *International journal of behavioural nutrition and physical activity*, *9*(1), 78.

Vansteenkiste, M., Lens, W., & Deci, E. L. (2006). Intrinsic versus extrinsic goal contents in self-determination theory: Another look at the quality of academic motivation. *Educational psychologist*, *41*(1), 19-31.

Vansteenkiste, M., Simons, J., Lens, W., Soenens, B., Matos, L., & Lacante, M. (2004). Less is sometimes more: Goal content matters. *Journal of Educational Psychology*, *96*(4), 755.

Watson, C. M., Quatman, T., & Edler, E. (2002). Career aspirations of adolescent girls: Effects of achievement level, grade, and single-sex school environment. *Sex roles*, *46*(9-10), 323-335.

Williams, G. C., Cox, E. M., Hedberg, V., & Deci, E. L. (2000). Extrinsic life goals and health risk behaviors in adolescents. Journal of Applied Social Psychology, 30, 1756-1771.

Wong, N. & Ahuvia, A. C. (1998), Personal Taste and Family Face: Luxury Consumption in Confucian and Western Societies. *Psychology and Marketing*, 15 (5): 423-441.
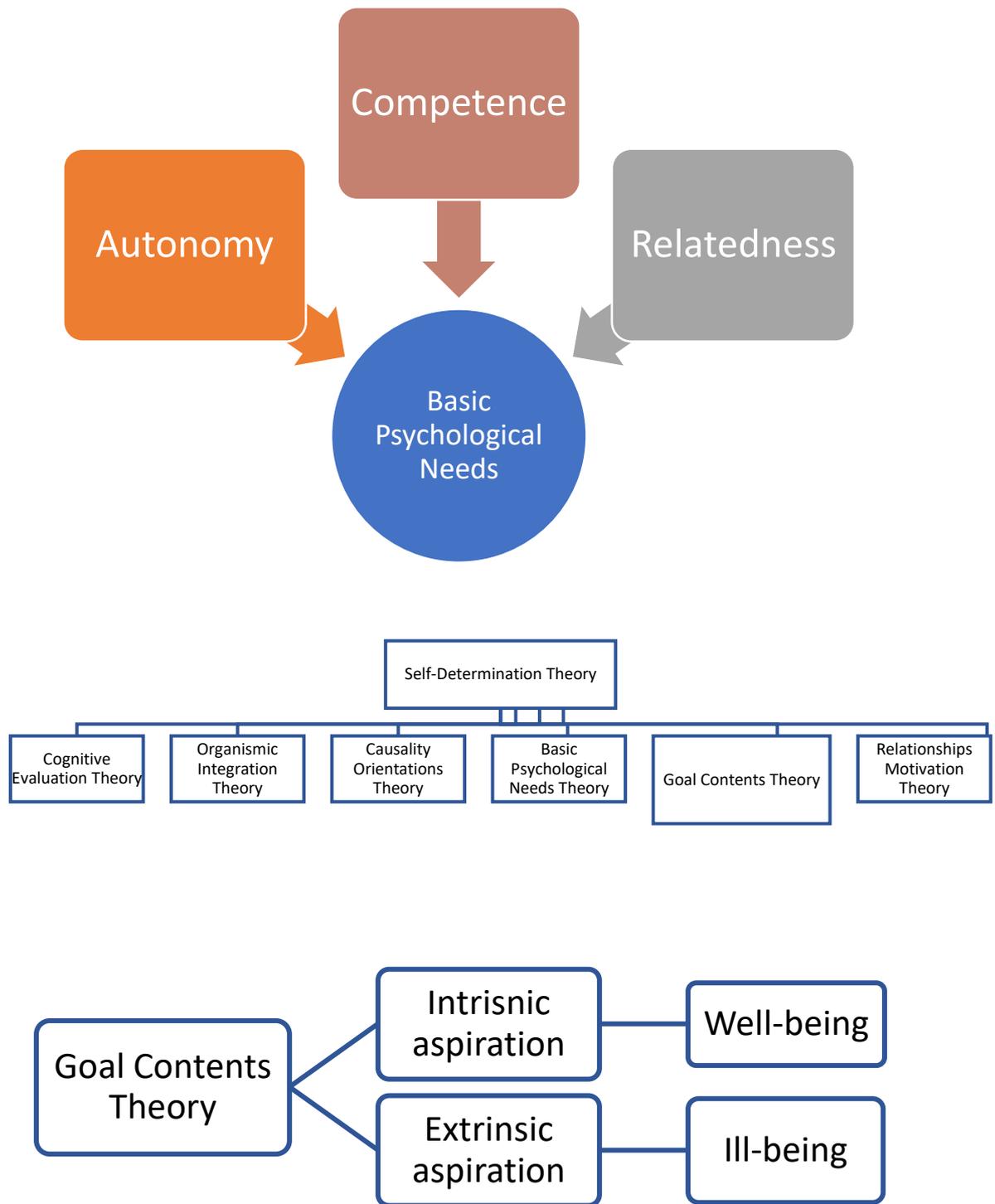
Figure 1. *SDT and its' mini-theories are founded on the assumption of basic need fulfilment. GCT is one of these mini-theories. Goals can be extrinsic or intrinsic, each differentially associated with well-being.*

Table 1

Each school is coded according to whether it has DEIS status, the gender make-up of the school and its geographical location, with each school fulfilling different subgroup criteria.

School Number	DEIS Status*	Non-DEIS Status	Single-Sex School (male)	Single-Sex School (female)	Co-Educational School	Urban School	Rural School
Pilot (0) (n = 22)		✓			✓	✓	
1 (n = 16)	✓		✓			✓	
2 (n = 22)	✓			✓		✓	
3 (n = 34)		✓		✓		✓	
4 (n = 20)		✓			✓		✓
5 (n = 39)	✓				✓	✓	
6 (n = 18)		✓	✓				✓
7 (n = 16)		✓			✓	✓	
8 (n = 24)		✓	✓			✓	
9 (n = 20)		✓		✓			✓

Please note, all schools were DEIS band one. Band one signifies the highest level of need.

Table 2

Career category differences for gender.

	Male	Female	Total
Professional	23 (24.2%)	42 (36.8%)	65 (31.1%)
Non-professional	19 (20%)	39 (34.2%)	58 (27.8%)
Sports	37 (39%)	9 (7.9%)	48 (23%)
Creative	15 (15.8%)	22 (19.3%)	35 (16.8%)
Do not know	1 (1.1%)	2 (1.8%)	3 (1.4%)
Total	95 (100%)	114 (100%)	209 (100%)

Table 3

Career aspiration frequencies by gender.

Male		Female	
Soccer player (n = 25)	26.3%	Beautician (n = 10)	8.8%
Youtuber (n = 5)	5.3%	Teacher (n = 9)	7.9%
Garda (n = 5)	5.3%	Doctor (n = 8)	7%
Architect (n = 5)	5.3%	Makeup artist (n = 7)	6.1%
Rugby player (n = 4)	4.2%	Singer (n = 5)	4.4%

*Please note, these percentages have been rounded up and represent these career aspirations as a percentage of either the total number of careers selected by males or females.

Table 4

Significant correlations between gender and career aspirations in sports, non-professional, professional and creative careers.

	b (SE)	95% CI for Odds Ratio		
		Lower	Odds Ratio	Upper
Non-Professional vs. Sports				
Intercept	1.47 (.37)***			
Gender	-2.13 (.47)***	.05	.12	.30
Professional vs. Sports				
Intercept	1.54 (.37)***			
Gender	-2.02 (.45)***	.06	.13	.32
Creative vs. Sports				
Intercept	.89 (.39)*			
Gender	-1.80 (.50)***	.06	.17	.44

Note. R^2 = .14 (Cox-Snell), .15 (Nagelkerke). Model $\chi^2 (3)$ = 30.73, p < .001. *p < .05, **p < .01, ***p < .001.

Table 5

Significant relationships in students' career aspirations by gender.

	b (SE)	95% CI for Odds Ratio		
		Lower	Odds Ratio	Upper
Non-Professional vs. Professional				
Intercept	-.07 (.22)			
Gender	-.12 (.38)	.42	.89	1.88
Creative vs. Professional				
Intercept	-.65 (.26)**			
Gender	.22 (.42)	.54	1.25	2.86
Sports vs. Professional				
Intercept	-1.54 (.37)***			
Gender	2.02 (.45)***	3.01	7.51	18.25

Note. $R^2 = .14$ (Cox-Snell), .15 (Nagelkerke). Model $\chi^2 (3) = 30.73$, $p < .001$. *$p <$ .05, **$p < .01$, ***$p < .001$.

Table 6

Significant correlations between SES and career aspirations in non-professional, professional, creative and sports careers.

	b (SE)	95% CI for Odds Ratio		
		Lower	Odds Ratio	Upper
Professional vs. Non-Professional				
Intercept	.49 (.23)*			
SES	-1.05 (.39)**	.16	.35	.75
Creative vs. Non-Professional				
Intercept	-.22 (.27)			
SES	-.54 (.43)	.25	.58	1.36
Sports vs. Non-Professional				
Intercept	-.07 (.26)			
SES	-.37 (.40)	.31	.69	1.51

Note. $R^2 = .04$ (Cox-Snell), .04 (Nagelkerke). Model $\chi^2(3) = 7.72$, p = .052. *p < .05, **p < .01, ***p < .001.

Table 7

Significant correlations between gender and the goal contents of extrinsic, intrinsic, 'other', extrinsic and intrinsic, and intrinsic and 'other'.

	b (SE)	95% CI for Odds Ratio		
		Lower	Odds Ratio	Upper
Intrinsic vs. Extrinsic				
Intercept	2.57 (.42)			
Gender	-1.04 (.55)	.12	.35	1.04
Other vs. Extrinsic				
Intercept	.77 (.49)			
Gender	-.30 (.64)	.21	.74	2.58
Extrinsic and Intrinsic vs. Extrinsic				
Intercept	.00 (.58)			
Gender	.26 (.71)	.32	1.30	5.27
Intrinsic and Other vs. Extrinsic				
Intercept	.29 (.54)			
Gender	-.80 (.75)	.10	.45	1.95

Note. $R^2 = .05$ (Cox-Snell), .06 (Nagelkerke). Model $\chi^2 (4) = 10.62$, $p < .001$. *$p < .05$, **$p < .01$, ***$p < .001$.