IMPACT OF CAREER COUNSELLING ON CAREER MATURITY OF HIGH SCHOOL STUDENTS

By

Zainab Alam

NUST201463497DC3A79114F

Supervisor

Dr. Aamna Saleem Khan

DEPARTMENT OF BEHAVIORAL SCIENCES (DBS)

SCHOOL OF SOCIAL SCIENCES & HUMANITIES (S3H)

NATIONAL UNIVERSITY OF SCIENCES AND TECHNOLOGY

ISLAMABAD

2018

IMPACT OF CAREER COUNSELLING ON CAREER MATURITY OF HIGH SCHOOL STUDENTS

Zainab Alam

NUST201463497DC3A79114F

A thesis submitted in partial fulfillment of the requirements for the degree of MS Career Counselling and Education

Thesis Supervisor:

Dr. Aamna Saleem Khan

Thesis Supervisor's Signature: _____

DEPARTMENT OF BEHAVIORAL SCIENCES (DBS)

SCHOOL OF SOCIAL SCIENCES & HUMANITIES (S3H)

NATIONAL UNIVERSITY OF SCIENCES AND TECHNOLOGY,

ISLAMABAD

2018

Approval Sheet

IMPACT OF CAREER COUNSELLING ON CAREER MATURITY OF HIGH SCHOOL STUDENTS

By

Zainab Alam

NUST201463497DC3A79114F

Accepted by the Department of Behavioral Sciences (DBS)
School of Social Sciences & Humanities (S3H), National University of Sciences and Technology, in partial fulfilment of the requirement for the award of degree of **MS Career Counselling & Education**.

Supervisor: _____
Dr. Aamna Saleem Khan

Committee Member: _____
Dr. Gulnaz Zahid

Committee Member: _____
Dr. Saeeda Khanum

Dated: _____

Head of Department
Department of Behavioral Sciences (DBS)
School of Social Sciences & Humanities (S3H)

Dean/Principal
Department of Behavioral Sciences (DBS)
School of Social Sciences & Humanities (S3H)

TABLE OF CONTENTS

DECLARATION

I certify that this research work titled "Impact of Career Counselling on Career Maturity of High School Students*"* is my own work. The work has not been presented elsewhere for assessment. The material that has been used from other sources it has been properly acknowledged/referred.

Zainab Alam

NUST201463497DC3A79114F

LANGUAGE CORRECTNESS CERTIFICATE

This thesis has been read by an English expert and is free of typing, syntax, semantic, grammatical and spelling mistakes. Thesis is also according to the format given by the university.

Zainab Alam

NUST201463497DC3A79114F

COPYRIGHT STATEMENT

- Copyright in text of this thesis rests with the student author. Copies (by any process) either in full, or of extracts, may be made only in accordance with instructions given by the author and lodged in the Library of NUST. Details may be obtained by the Librarian. This page must form part of any such copies made. Further copies (by any process) may not be made without the permission (in writing) of the author.
- The ownership of any intellectual property rights which may be described in this thesis is vested in NUST School of Social Sciences and Humanities (S3H), subject to any prior agreement to the contrary, and may not be made available for use by third parties without the written permission of the School of Social Sciences and Humanities (S3H) which will prescribe the terms and conditions of any such agreement.
- Further information on the conditions under which disclosures and exploitation may take place is available from the Library of NUST, Islamabad.

DEDICATION

Dedicated to my husband Amer; my children Hasina, Danish & Bilal; my parents Humaira & Mujahid; my siblings Ghazi, Taimoor & Mariam and my khala Tahira. Thank you for your tremendous support, encouragement and cooperation that led me to this accomplishment

ACKNOWLEDGEMENT

First and foremost, I would like to express my sincerest gratitude to my advisor Dr. Aamna Saleem for her continuous support and guidance of my MS research. Her door was always open, comments always insightful and questions always heard. It enabled me to navigate through the challenges faced through the research and writing of this thesis.

I would also like to thank Brig. Uubric Cornelius, Dr. Gulnaz Zahid, Dr. Saeeda Khanum and Mr. Hamid for their support and encouragement. A special thanks to Ms. Nadia Rizwan for inspiring me to understand the world of career counselling and use it for the betterment of others.

I also thank my fellow classmates, Qurat ul Ain (who introduced me to research), Noor, Kanwal, Tayyaba, Rashida, Atiya and Ahmer (who logically explained SPSS and formatting) and for the sleepless nights we all encouraged each other before deadlines and of course, for all the fun we had.

ABSTRACT

The purpose of the study was to assess the impact of career counselling on the career maturity of private high school A-level students. The study objectives were to investigate the relationship of career counselling and career maturity of high school students, to examine the impact of career counselling on career maturity of high school students, to compare career maturity across gender and to compare career maturity across academic achievement. Data was collected from 283 A-level students studying in four private schools with established counselling departments and trained career counsellors. Random sampling technique was used to determine the sample. The scale of measurement was the Career Development Inventory that measured career maturity levels of attitude and knowledge on eight subscales. Data for this study was coded numerically and analyzed using inferential statistical procedures of *t*-test, analysis of variance (ANOVA), Product-moment coefficient of correlation (*r*) and regression using the Statistical Package of Social Sciences (SPSS) version 21. Results indicated that there is a significant relationship between career counselling and career maturity, career counselling makes a significant impact on the career maturity of high school students, career maturity of girls was higher than boys and above average academic achievement students' career maturity increased after receiving career counselling.

Key Words: Career Counselling, Career Maturity, Individual Counselling, Group Counselling, Internships

LIST OF ABBREVIATIONS

Acd. Ach.	Academic Achievement
Adjusted R^2	Number of predictors in the model
ANOVA	Analysis of Variance
B	Unstandardized Coefficients
β	Standardized Coefficients
CD	Career Days
CF	College Fairs
CDA	Career Development Attitudes
CDK	Career Development Knowledges
CDI	Career Development Inventory
df	Degrees of freedom
GC	Group Counselling
I	Internships
IC	Individual Counselling
M	Mean
N	The number of participants in each group
p	Significance level
r	Correlation coefficient
R Square	Correlation coefficient squared
SE	Standard Error Sig. (2-tailed) Statistical Significance
SPSS	Statistical Package for the Social Sciences
t	Associated significance value

LIST OF TABLES

CHAPTER 1: INTRODUCTION

1.1 Introduction

Careers have always held immense relevance in the lives of human beings. Over the past few decades, there has been a reconceptualization of careers; a movement, a paradigm shift from the industrial to postindustrial era which comprises of the digital age or knowledge society (Watts, 2013) that has forced us to re-examine the ways that careers were viewed. Careers are now perceived as a continuous process of learning and development, where the only constant is change, with individuals facing the realities of a fluid and dynamic environment of not only one's own country but the globalized world of work at large.

There is a movement away from a career for life to a range of roles people will probably have throughout their lifetime. It is becoming increasingly important for people to be able to manage their own careers in this changing world of work and try and make meaning of how, why, when, where careers are chosen that are integral in forming and shaping part of their lives. It is not surprising that high school is deemed a crucial period and over the last century schools' role in career development has evolved from training for an industrialized society to preparing for a globalized economy. The role of secondary education regarding career development has emerged strongly (Schneck, Anctil, Smith & Dahir, 2012).

The suitable time for adolescents to start thinking about careers is high school (Torpey, 2015). The career development process is not simple and can often seem daunting to teenage students embarking on the path to understand the world of work. This is the time when students need to explore their interests, understand their aptitudes and values and cohesively work on framework that makes sense to them individually. Career counselling involves the facilitation of individuals in their career development with an emphasis on what the worker or job role could possibly be and it's relation to other life-long roles they may have (National Careers Development Association, 2015). Schools that have established career counselling programs have students that are better adjusted in their current school environment which they feel is more positive and have a stronger probability of reporting higher grades. They also believe that the education

they are receiving is preparing them for their future as they have access to substantial college and career information (Gysbers et al. 2011).

According to Perry and Wallace (2012), it would be misleading to suggest that career programming in the schools can function as a panacea given the magnitude of the complex challenges young people face in today's economy. The American School Counsellor Association (2014) mandates that counsellors should be focused on helping their students in the areas of career development so as to ensure that they become productive, well-adjusted adults of tomorrow.

Counsellors work one-on-one with students to plan courses and discuss career and/or college goals and preparation. School counselors are gatekeepers to information that helps students prepare for their postsecondary goals (Bridgeland & Bruce, 2011). Providing career orientation or career counselling to students aids in better decision making as it allows students to formulate college and career aspirations (Buckner, 2014). Counsellors have the responsibility to encourage students to start exploring their ambitions, talents and abilities particularly in high school. This exploration can vastly help them to prepare for college bound education and career (Levine & Sutherland, 2013).

If individuals are privy to professional career counselling in crucial transitions of their lives, then it can be argued that a positive impact can be made on the lives of young people. Gaiti and Amir (2010) stated that young adults mostly lack experience and knowledge to make plans and take informed career decisions. Career counselling can make a fundamental difference for young people in clarifying their own needs and responsibilities and acquiring skills for their long term career satisfaction and development which paves the way for them to be self- reliant, acquire self-awareness and have a positive attitude towards facing diversity and overcoming obstacles in their life span. High school students are at a crucial transitory stage to take important decisions that could have long term effects. They need to select subjects, prepare and plan for university life and explore what careers they might delve into. Choosing major subjects, universities, career after graduation and access to labor market requires comprehensive career planning and career maturity that will lead them to decision making.

School counsellors are strategically positioned to play an essential role in college preparation and selection of potential career paths for all their students regardless of their background (Bryan, Moore-Thomas, Day-Vines, & Holcomb-McCoy, 2011). They have the training and ability to cultivate an environment in a school where opportunity can be provided to all students at multiple levels and not just restricted to high school students. There is more responsibility for navigating career counselling to high school students throughout the academic year with an emphasis on the immediate college plans and exploring a variety of career paths. The expectation for career counsellors is to lead their students towards their career development which also requires developing their career maturity so that they are able to take those decisions in an informed manner. This expectation for counsellors is dominant in the developed countries particularly the United States (Hines & Lemons, 2011). This trend is slowly catching up in the developing countries as well.

The exploration of ambitions, talents and abilities can only be achieved through effective career guidance and counseling programs. The idea behind any comprehensive secondary school career guidance and counselling program is to help students to make informed career decisions and to assist them in following their career paths by providing them with necessary knowledge and skills (Career Guidance and Counseling Programs, 2014).

Career maturity reflects age-appropriate competencies interconnected with a student's ability to explore careers, plan for those careers, make decisions and comprehend and have substantial knowledge of the world of work. There are two domains of career maturity that can be broadly divided into career attitude and career knowledge (Crites & Savickas, 2011). Career development attitude is a conative factor that includes career exploration and planning whereas career knowledge is a cognitive factor and is a combination of decision making and possessing world of work information.

Career maturity is the willingness and capability of a student to be able to comprehend the necessary tasks of his/her relevant age group and is an important element of Super's (1990) life span-life space theory and Savickas's (2005, 2013) career construction theory. The research on career maturity is extensive as it is essential to gauge a better developmental understanding of career behavior, however the impact on high school students receiving counselling is limited.

Career counselling is a service that facilitates students in the exploration, commitment and reconsideration process of vocational identity. The students' environment must be taken into consideration when defining a vocational identity; such as, connecting strengths and weaknesses to job fields and involving community workforce development organizations (Porfeli & Lee, 2012). The career development process is broad and encompasses many constructs out of which career maturity is deemed crucial. Knowing the impact of career counselling in the construct of career development is vital in gauging students' knowledge and perceptions of the current stage they are in and how they can develop towards increasing their understanding and maturity towards their future careers.

1.2 Problem Statement and Justification

The aim of the study is to assess the impact of the professional career counselling that is offered in private high schools and its impact on the career maturity of students. The construct of career maturity is vital to explore and it is a prelude to an individual's awareness and ability to take career decisions. The concept of career maturity has been analyzed at the national and international level where research has indicated its relevance in the overall career development of individuals leading to better opportunities and higher employment levels, however there needs to be more in depth focus on its relevance in high school.

In many cases students chose careers due to lack of career guidance, counselling, advisory or information which further leads to underdevelopment of age appropriate career maturity. Careers are left to chance, circumstance, familial pressure and lack of opportunity. These contributing factors cannot be ignored and sometimes can be the dominating force leading to career decidedness. If career counselling can be administered at the appropriate time in a student's life, then career maturity has a better chance of developing and students could in turn take better decisions concerning their future (Ebberwein, Krieshok, Ulven & Prosser, 2004).

The unemployment rate in Pakistan is 5.9%. Youth unemployment (15 to 24 year olds) is 10.8% (ILO, 2017). One of the gravest challenges facing Pakistan is youth unemployment (PNHDR-UNDP, 2017) as nearly 64% of the country's population is under the age of 30. These alarming figures have been compared to a time ticking bomb

or if harnessed correctly; positive contributions if employed productively (Dawn, 2017).

Unemployment can have serious long term effects for a developing country. These increasingly high figures leads to a plethora of problems at both the macro and micro level. Macro problems involve economic and social well-being of country, burden on government and overall greater levels of crime. Micro problems include mental wellbeing, domestic violence and self-esteem issues of an individual. There are also some more youth specific challenges. It has been evaluated that the youth that graduate with higher education levels have a higher rate of unemployment and that their starting salaries are not significantly different from the starting salaries of the youth which is less educated than them (in comparison to salaries of adults which is higher for those that are better educated). Youth-specific interventions such as career counselling could be implemented that can mitigate these effects (World Bank, 2017).

The Pakistan National Youth Strategy (2008) have also highlighted these issues and recommended that career counselling and vocational guidance programs be implemented at the high school level and continue to the university level, however the process of institutionalizing has still not been implemented.

A resource handbook of career guidance for low and middle income countries (International Labour Organization, 2006) highlighted the contextual, societal and traditional impact on students' domain of study and their internship opportunities. It was evaluated that these two aspects are relatively overlooked by educational institutions and they have the potential of gaining a substantial deeper understanding of career counselling so as to better facilitate students' academic and future work prospects. This is a pressing matter as educational institutions are ideally positioned to be at the center of effective student career development.

Developed countries have lower levels of youth unemployment with lesser disparity between the sexes as career counselling has been institutionalized and constantly evaluated for improvement. The establishment of numerous professional counselling associations at the national level has steered the path towards a continuous refinement and fine tuning of the career counselling process which is grounded in career development theories and takes into account the variations in the complicated world of work environment. It is assumed that these associations have performed an integral part

towards higher levels of economic output and personal individual growth (NCDA, 2015).

Recommendations for human resource development in Pakistan state that it is imperative that education should provide the added stimulus for career guidance. The significance of establishing systematized career counselling facilities at high school levels is validated by another study conducted by ILO on career counselling for women in Pakistan to reduce the gender disparity that is so prevalent among the sexes (Choices, ILO Pakistan, 2011).

The National Education Policy (2017, p. 15, 59) has emphasized that guidance and counselling services need to be provided to students of secondary education and above through the formation of counselling centers. The policy also stipulates that the personnel hired should be professional and have the required qualifications. This will enable every student to graduate from high school equipped for applying to college or starting their career and is deemed a necessary youth outcome.

In an educational setting, it is vital to explore the professional career counselling being offered by the school, but it is more important to study it in relation to its impact towards growth and maturity of its participants. Educators face the difficult task and encounter concerns about what kind of career counselling to implement in meeting the aim and ambition for all their students graduating high school so that they are ready for college and career. This research is aimed at addressing and exploring the impact of the various aspects of counselling that includes individual counselling, group counselling, college fairs, career days and internships that can contribute towards achieving higher levels of career maturity which in turn can possibly contribute towards the goals outlined by the NEP (2017, p.15).

Issues such as career indecision, lack of information and lack of identity development are present in career research regarding high school students (Ali et al., 2011; Creager, 2011; Deemer & Ostrowski, 2010). This is compounded by the fact that the decisions students make when they are in their final two years of high school particularly in selecting a program of study impacts career trajectory for their college years. These decisions are often taken because students are lacking in age appropriate career maturity. High schools often lack counselling centers, assessment tools, career activities and job shadowing programs and internships which are essential for developing career maturity (Holland, 2011). In order to build provisions for freshmen,

educators and counsellors need an understanding of career development and the effectiveness of career counselling on student career maturity (Crews, 2006).

The central focus of the study is an assessment of the effectiveness of career counselling as a structured exercise for high school students and the influence of the counselling towards age appropriate career maturity. The significance of career maturity in the career planning of adolescents' is predominant. The international and national research shows the relationship between career counselling and its impact on the career maturity, self-awareness and decision making of students. This research will identify if career counselling impacts the career maturity attitudes and career maturity knowledge of high school students that can influence their career decisions.

1.3 Significance of the Study

Career counselling is a developing field in Pakistan and has only recently begun to gain momentum in the educational setting. There has been limited research carried out on its impact towards students' development regarding their career maturity and ability to take decisions that could have a direct effect on their future. A contribution can be made towards literature gaps that exist in Pakistani school's contextual setting regarding career counselling that can pave the way for further research to be carried out in this field.

The private school system in Pakistan comprises of 3,133 (61%) schools out of a total of 5130 higher secondary private school (39 % -1, 998 are public school). These private schools account for 12% (0.186 million) of the total enrollment of high school students (National Education Management Information Systems, 2017). These private schools, particularly the ones that offer international curriculum (O & A levels) have further accounted for an increase in demand of career counsellors to address the growing needs of their student population.

The demand in the market for trained career counsellors that conform to the educational standards of more developed countries is not at par as there is a dearth of higher educational institutions that offer a degree in career counselling. This is also compounded by the fact the schools often hire counsellors without the necessary degree qualifications that is mandatory in the developed countries. This is an interesting time as a few higher educational institutions in the country have started programs in the past

five years that is paving the way for trained career counsellors to enter into the job market. Research into this field could possibly be significant for new entrants in the field to better gauge the counselling domains that can have more impact on students in their contextual setting.

Career counselling empowers adolescents by informing/guiding them about options, choices and developing self-awareness to set more realistic career goals in their context (ASCA, 2014). A need analysis explored the kind of counselling being conducted out in the private English medium high schools. Although counselling is not limited to the five domains of individual counselling, group counselling, college fairs, career days and internships, it is the primary form of counselling being conducted in private high schools. If these career counselling domains that have more impact on career maturity than others can be identified, then it can significantly contribute towards all stakeholders (government, schools, students, parents) understanding of which career counselling activities should be given preference.

It can be beneficial for school principals and administrators to improve the policies that support career counselling activities to enhance career maturity and development of high school students. Those career counselling domains that are determined to have more impact (individual, group and internships) can be suggested to all private high schools for incorporation in their career counselling programs. The school governing bodies and private high schools associations may be convinced to enforce career counselling as a mandatory feature. Teachers may get more involved with high school students to identify their career paths and help arrange internships that can contribute towards students overall career maturity.

High school counsellors can bring a positive change by upgrading their career counselling programs if they are not covering all the domains of career counselling. The counsellors can also try to ensure that the program ensures enhanced awareness about career maturity among students so that they better understand the relevance of making more informed decisions after gaining the age appropriate level of maturity. High school students as major stakeholders can better evaluate the role of individual counselling, group counselling, attending college fairs, career days and building up experiences through internship programs.

The growing need for career counselling programs that include all the five domains of counselling at the high school level can be highlighted and shared for

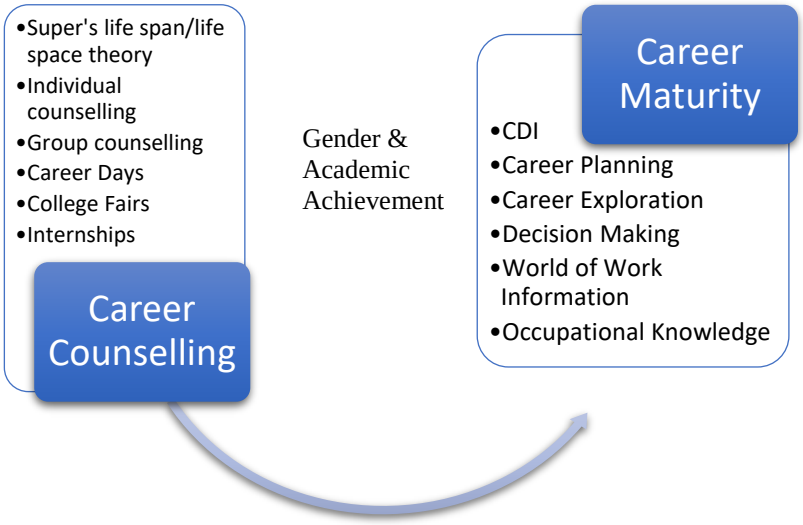
replication in schools that do not have counselling programs including public high schools. They can be used as a benchmark of best practices to be set up in educational institutions. The case for establishing professional associations like a 'National Career Development Association' can be strengthened as it could potentially promote and refine career counselling that may play an predominant role in attaining higher levels of economic productivity, lower unemployment levels as well as personal development in countries like Pakistan.

1.4 Theoretical Framework: Life Span–Life Space Theory

The theoretical framework is based on Super's life span–life space theory (1975). It is regarded as a developmental career theory (Scholl & Cascone, 2010) that postulates the different stages of an individual's development. Super developed stages of growth that take place over a lifetime/lifespan and that adapted based on what the individual was doing in his life space.

The career development inventory subscale definitions have been elaborated by Super. Career Planning is the level of involvement in contemplating the future and the potential of varying occupations being a good fit for an individual. It is the planning in which a person has engaged or the degree of engagement. Career Exploration signifies the usage of quality resources in career planning activities. Decision making is the ability to apply methodical principles of logical and realistic decision making to current educational and career choices that will impact and apply to future decisions as well. World of work information characterizes the collection of knowledge about the extensive world of work that encompasses all professions. Occupational knowledge is the degree of accurateness individuals have about the careers that would be more inclined to pursue

The theoretical framework provided the base of the study that focused on growth towards a career though career counselling rather than the acquisition of a single career path.



CHAPTER 2: REVIEW OF RELATED LITERATURE

Career development is a lifelong ongoing process with multiple contextual factors affecting the process. Interests, aptitudes, personalities, socioeconomic status, parental and societal influences all have a contributory role in determining future careers which can be a complicated process. The career counselling process aims to make sense of all these influences and focuses on developing a workable plan with clearly identified goals specific to an individual that allows for them to make sense of the world of work and take the necessary decisions at the key transitionary points in their lives (Career guidance & counselling programs, 2014).

It is imperative for high school students to receive career counselling for their career development and it is equally relevant that the process in which it is carried out is through a professional and trained counsellor. Counselling in its essence also requires a counsellor to have knowledge and awareness of the contributing factors pertaining to each individual seeking counselling. It involves the establishment of a professional relationship between counsellor and a counsellee or group of counsellees in which the counsellor facilitates the counsellee(s) to try and handle their career concerns more effectively (Niles & Harris-Bowlsbey, 2009).

If adolescents are not developing their career maturity they could possibly encounter difficulties in making career decisions that are appropriate for them. It is essential that they focus on cultivating positive attitudes towards their career planning and ability to acquire career information as well as grow to be self-sufficient so as to be able to learn to make the key career decisions. The promotion of career counselling and life design in the adolescent years was found to impact young people by motivating them to comprehend their specific goals while recognizing their unique purpose and meaning of their lives (Maree, 2018).

Career counselling enables young people to explore opportunities and alternative paths they previously might not have considered, thereby focusing their attentio2n to more realistic career goals. The impact of career counselling is broad and can affect the self-awareness, motivation, ability to take decisions, and college and university readiness. Where career counselling has an influence on so many career development aspects, only one domain of career maturity (which interestingly is linked

to all of the above) has been taken into account for this study. The frame of literature review is given below:

1. Career counselling
2. Career maturity
3. Super's life span–life space theory
4. Impact of career counselling on career maturity
5. Latest research studies in the Area

2.1 Career Counselling

Career counselling in high schools includes various domains that are not restricted to just one type of counselling being administered to students. The domains of career counselling include students participating in individual counselling, group counselling, career days, college fairs and taking part in internships.

Career counselling can be provided through a combination of sources including comprehensive counselling; college and career centers, courses with a career focus, career days, career-related clubs, computerized career inventories, job-shadowing, internship programs and career portfolios. Students attending higher resource schools maintain a focus on attending college but have a higher percentage of students that are unsure of a career path. Students who reveal a career goal have a solid idea of the steps needed to obtain the career. There is a need for linking a career goal to educational planning in order to energize and engage students regarding subject areas of interest. State level policy and district level administrators should be initiating career interventions that reach all school levels and specifically be incorporated in all 4 years of high school (Rowan-Kenyon, et al., 2011).

Students engaged in career counselling in schools tend to score higher on development outcomes in comparison to students that do not participate in any career counselling. Their knowledge of careers and ability to problem solve is also significantly higher (Whiston & Quinby, 2009).

2.1.1 Individual Counselling

Individual career counselling focusing on the exploration of interests and skills can significantly mitigate career decision making barriers which can continue to further decrease over the years and have long term effects. Research can be carried out on the

impact other forms of career counselling have on students' career decisions making (Pedrix, Stauffer, Masdonati, Massoudi, & Rossier, 2012).

The effect of individual career counselling sessions using the career construction interview facilitated students' grappling with career decision making. Students' career maturity measured on the career maturity inventory exhibited low levels of career concern and career curiosity. Students found the counselling facilitative in their self-awareness and for the exploration of their careers (Rehfuss & Sickinger, 2015).

There are merits of individual career construction counselling for students unsure about their future careers. Counselling can generate an environment for clients to gain clarity on their careers and assist them in making decisions (Maree, 2016). Similarly, the impact of two career counselling sessions, namely the strength-centered counselling and the goal-oriented counselling indicates that the sessions are useful for clients' self-efficacy as well as personal advancement (Wang & Lee, 2017).

The impact of one time individual career counselling sessions with individual counselling sessions that spanned over six weeks on high school students gauged students' on their career adaptability. Outcomes indicated that both of the counselling sessions had an effect on the students. The one time sessions contributed to developing the career curiosity and confidence of a few of the high school students. The six week individual sessions resulted in a more significant effect in students, especially the ones that were unsure and somewhat negative towards their future (Janeiro, Mota & Ribas, 2014). Individual career counselling using the narrative approach was found to have a more significant impact in helping clarify the career goals of adolescents in comparison to a more directive career counselling approach (Human & Human, 2016).

Individual counselling session's impact on students' self-awareness, career doubts and ambiguities is viewed positively. Students' anxiety levels assessed after counselling sessions showed students' had developed self-efficacy and competencies at higher levels than before they received the counselling sessions (Rawatlal & Pillay, 2017).

An individual college career and counselling workshop can help students explore potential routes to take after completing high school. They can focus on developing understanding of how important it is to receive a high school diploma and

identify what careers students might be interested in. One of the most important aspects is to take into consideration if a career really is suitable for a student (Ngo, 2017).

2.1.2 Group Counselling

The group counselling of high schoolers assessed thoughts and circumstances hindering students from making career decisions. Results supported the group intervention, after pre and post career decision assessments were administered, that showed more positive thoughts among students (Datu, 2013). Similarly, high school students' participation in group counselling to address career choice preparedness reported that the group sessions helped students to narrow down influences and allowed for more concrete career decisions to be made. A positive impact can be made on student career decision making (Jokisaari & Vuori, 2011).

A group career counselling workshop assessing career choice readiness in adolescents maintained the effectiveness of the counselling, showing a difference in career choice readiness for participants attending the group sessions (Hirschi & Läge, 2008).

The administration of group counselling programs indicated a significant improvement in students' self-worth, ability to take career decisions and clarify career aspirations. A semester or yearlong program with group counselling would provide a more consistent experience for students (Ali, Yang, Button & McCoy, 2011). Group career counselling can contribute towards students' decision making, self –awareness and career certainty along with career adaptability (Cardoso, Janeiro, Duarte, 2018).

Students participating in group career counselling exhibit improved career adaptability and keenness to develop aspects of the career adaptability constructs of concern, control, curiosity and confidence regarding their careers (Maree & Symington, 2015).

Adolescent's self-efficacy in career decision making, career exploration abilities and anxiety levels related to career choice can be effected by group counselling. The element of career choice anxiety can have multiple reasons and group counselling, although effective, cannot always mitigate the anxiety of students whereas their decision making and exploration of careers is generally improved. It is necessary to highlight the establishment of a systematic guidance center that includes the component of group counselling sessions for students (Chiesa, Massei & Guglielmi, 2016).

Group counselling is a useful mechanism for increasing the ability of students' career decision making and career planning and should be integral component of the counselling program in high schools (Jordan, Gessnitzer & Kauffeld (2016).

2.1.3 Career Days

Career days refer to those days or events in the school year that allow for students to learn more about specific careers and can include professional guest speakers of various occupations visiting the schools or students visiting their preferred occupational organizations and obtaining first-hand information about a particular occupation. Career days are an integral part of vocational and career guidance for students that are organized throughout the school year (Gysbers, 2013).

It is important for students to gain first-hand experience from professionals already in the field. It allows them to develop their understanding and acquire information on the day to day functions and requirements that are mandatory for success in a career. Students also get an opportunity that provides stimulation and a break from the norms of classroom learning (Macera & Cohen, 2006).

The impact of students attending career days results in the gathering of information so that realistic decisions can be made by them. The mode of learning in career days incorporates multiple activities and presentations in a professional field with students voicing their opinion about the presentations they deem more helpful. Students feel a substantial difference in their knowledge about a specific occupation which in turn effects their decision about entering into an occupation (Kaskey, 2012).

The organization of career days by school counsellors and its effect on future career options of students can be significant. Students express a strong link with career seminars, conferences and careers days attended along with career interest inventories. The regular occurrence of such activities from school counselling departments can prompt positive career planning and informed decision making (Amoah, Kwofie, & Kwofie, 2015).

2.1.4 College Fairs

The career development of a student can be positively contributed by attending college fairs where they have a chance to interact with potential colleges and universities, explore programs, admission criteria, obtain information about scholarships and financial aid options. Schools often have few resources to commit to

preparing their students for college readiness that cultivate the necessary social networks their students need in order to access college.

Students can benefit from attending college fairs and indicate an increase in college exploration and career planning when schools implement such college readiness initiatives. College fairs facilitate individual connections and ensure that students have multiple opportunities to connect to college-linking programs. Schools can also recognize and leverage the college-going capital that students access outside of school (Leibrandt, 2016).

Attending college fairs can be one part of college access programs for students that can provide them with the resources they needed to matriculate and persist in college. Students can prepare themselves for and gain access to a selective postsecondary institution directly after high school. They can develop key skills and knowledge through attending and interacting with university and college representatives that can help navigate their college-going journeys (Weber, 2016)

Students tend to start thinking more seriously about where they will continue their education in their final year of high school. They are often not proactively searching for options but relying on what they think they know and what they think they will be good at. A lack of professional support in high schools where students do not have access to meeting with colleges and admission offices result in students making their decisions on limited understanding on options and possibilities available (Silic, 2016).

There are many factors that determine what students perceive to be the most stressful about the post-graduation decision making process and what they think schools are and aren't doing to aid in that process. Finding the right college, financial aid and choice of major are indicated as the most stressful. Students that have help from their school counsellors visit more colleges, attend college fairs resulting in low stress levels and improved decision making (Infantolino, 2017).

2.1.5 Internships

Internships can prove to be beneficial in gathering real world knowledge and gain experiential realization that is necessary for determining whether a particular career is desirable to pursue. This learning is under the supervision of professionals which facilitates students to employ their existing knowledge to acquire skills in a field of their choice.

Students' efficacy can be improved by engaging them in internships. Students hold their field experiences in high regard and feel that their knowledge is practically applied and they can be provided with ample opportunity to network with prospective employers (Aulenbacher, 2016).

A perceived advantage of internships is being able to provide accurate and realistic experiences of the job market. Students are put in an environment which forces them to face the true nature of a job and questions their own expectations. Students engaged in internship programs improved their professional development, career building skills and felt an increased sense of marketability (Hurst, Thye & Wise, 2014).

The commitment of a student to pursue a chosen field after interning in an organization can have positive effects. Students show increased motivation to stay on course in a field after graduating from school (Chen & Shen, 2012). Similarly, students participating in science internships swayed towards pursuing a job in the stem fields. Participating in experiential learning allowed for in depth understanding of the requirements of occupational fields along with gaining key skills required in the future (Sahin, Gulacar & Stuessy, 2015).

Internships in diverse settings can have varying effects on future career orientation of students. It is important for students to explore all options available to them and intern in an environment completely different from the current field they are pursuing. Science students interning in a different science field showed a strong impact on career orientation. Science students to non – science fields (small impact), non-science students to science fields (strong impact), static non-science students and static science students all felt the increased exposure was helpful and an impact was made from their internship experience (Papadimitriou, 2014).

There are long term influences of school internships in light of students transitioning into the world of college and work. Important aspects of college for students include smoother adjustment into professional life, increased understanding of communicating and working with adults, stronger work ethic and being provided with an overall career direction (Glading, 2007).

2.2 Career Maturity

Career maturity is the ability of an individual to make educated decisions and deal with tasks related to career development. The constructs within this domain include career planning, career exploration, decision making, world of work information and knowledge of occupations (Super, 1981).

2.2.1 Career Planning

Career planning is the level of involvement in contemplating the future and the potential of varying occupations being a good fit for an individual. It is the planning in which a person has engaged, e.g. in discussions with a grown up, pondering about part time work, utilizing summer vacations or getting a job after finishing education/training, all with an intent that it will help in choosing a field or occupation.

Students have to start developing a career plan as they can face problems in choosing between different possibilities. Gaining information related to interests, aptitudes, skills and passions facilitates the planning process. Increased exposure to career learning along with one on one guidance identifying abilities and interests could facilitate in selecting a career track (Dietsche, 2013)

Career planning can have a substantial impact on young adults' transition to college and predicting their chances of career success (Galligan, 2014). The possibility of changes occurring in an individual's career success is indirectly linked to a rise in career planning activities (Spurk, Kauffeld, Barthauer & Heinemann, 2015).

Longitudinal career planning courses can have an impact on high school students. These courses provide opportunities for students to develop their confidence and engage actively in planning for future career goals. Students appreciate the planning process and understand the benefits of such programs (Waddell, Spalding, Canizares, Navarro, Connell, Jancar, & Victor 2015). The relationship between career planning and management is significantly linked to job contentment and commitment (Ismail, Madrah, Aminudin, & Ismail, 2013).

The acquirement of student career success can be facilitated through effective counselling and career planning that gauge students' personality, interest and aptitudes. (Pascual, 2014). A career planning program designed for a young interns indicates that highlighting the lack of qualifications and low scores on performance indicators can

benefit students on areas that need to be improved. More effective and extensive career planning could be undertaken after such identification (Waheed & Zaim, 2015).

2.2.2 Career Exploration

Career exploration is the process of using the resources available to explore occupations and understand own personality and interests. The career exploration of students can be significantly affected by the quality of employment they are involved in (Gamboa, Paixão, & de Jesus, 2013).

Personalities of students can be a predictor in career exploration behavior. Students exhibiting open, agreeable, conscientious and extrovert personalities positively impact career exploration behavior. Students having neurotic personalities negatively impact career exploration behavior. The career adaptability of students also contribute as a mediator in predicting career exploration behavior (Li, Guan, Wang, Zhou, Guo, Jiang, & Fang, 2015).

Career exploration, factual knowledge and students' perception of the knowledge of occupations along with personality types can be significant in determining career paths. Students' actual knowledge was greater in the social type category than the conventional type job category (Ferrari, Ginevra, Santilli, Nota, Sgaramella, & Soresi, 2015).

Career and general anxiety traits of students can have a significant and positive effect on their career exploration and career indecision. The existence of counselling facilities in high schools can further facilitate career exploration and facilitate career indecisions (Vignoli, 2015).

Career exploration is often conducted in schools under the pretext of a career course in the curriculum. High schoolers participate in courses to enhance their career exploration, perceive it to be beneficial and view it as a solid part of their career development (Cheung, & Jin, 2016).

Participation in a career exploration seminars can enhance knowledge, skills, and abilities of students. Students believe participation gives them the opportunity to gain in depth knowledge about skills required in the workplace, enhance their people skills, comprehend diversity and fuel their ability to reach out towards helping other people. Usefulness of such programs are valued (Peterson, Wardwell, Will & Campana, 2014).

The effect on a student engaging in career exploration can also be impacted by the perceived social support around the student. This can come from perceived support from family, friends and other important people (Turan, Çelik & Turan, 2014).

2.2.3 Decision Making

Decision making is the ability to apply methodical principles of logical and realistic decision making to current educational and career choices that will impact and apply to future decisions as well (Super, 1981).

Making informed decisions and weighing out all career options is one of the most significant elements of a students' career maturity. The implications of career decision making difficulties can result in future employment discontentment, lost opportunities and negative attitudes towards college and selected professions (Feldman, 2003).

Career decision making self –efficacy of students can be impacted by academic support services including counselling. Students assessed on numerous decision making scales after receiving career and academic counselling showed a positive effect on decision making (Burns, Jasinski, Dunn & Fletcher, 2013).

The individuals' ability to make decisions can be a source of career optimism. The support of parents and teachers is positively related to career optimism and the role of positive relationships has a strong mediating effect on decision making (Garcia, Restubog, Bordia, Bordia & Roxas, 2015).

Career indecision is one of the main reasons individuals seek out career counselling. The decision making difficulties of students can be lowered through professional and effective one on one counselling and through the administration of questionnaires that allow for a deeper understanding to the barriers and difficulties that students face (Gati & Levin, 2014).

The adaptability of students can have an impact on their decision making. Counsellors can effectively help them by assessing their decision making profile along with their decision making difficulties as they are shown to have a strong association with one another. Stronger career adaptability on a student's profile shows more informed decision making ability by the student (Willner, Gati, & Guan, 2015).

2.2.4 World of World Knowledge/Occupational Knowledge

World of work information characterizes the collection of knowledge about the extensive world of work that encompasses all professions. Occupational knowledge is the degree of accurateness individuals have about the careers that would be more inclined to pursue (Schmitt-Wilson & Welsh, 2012).

Occupational knowledge is an essential component of the career decision making process. It is necessary to have a deeper understanding of the job role, skills required and activities involved in an occupation (Hirschi & Lage, 2007).

Students attending comprehensive occupational knowledge centers can have a causal link to educational and job selections. Students have smoother transitions into the job market and score higher on academic achievement in comparison to students that do not participate in the occupational centers (Saniter & Siedler, 2013).

The occupational knowledge of students can have an impact towards selection of career fields. Adolescents are significantly affected by the degree of knowledge they possess about occupations and there is a positive correlation between the two variables (Amani, 2013).

The consideration of specific careers by students is related to their world of work information. Students' interest congruence is positively linked to their occupational knowledge. The self- efficacy of students is also a contributing factor that encourages them to increase occupational knowledge and contributed towards overall career certainty in students (Pesch, 2014).

2.3 Super's Life Span-Life Space Theory

Super's life span-life space theory (1975) approach has been at the center of career developmental theories in the industrialized world. The comprehensiveness of this theory in describing career behavior, conceptualizing career approaches and constructing assessment instruments highlights its relevance in the present world of work. Career development is a unique process for every individual with multiple personal and contextual factors that contribute towards one's career path. The theory has been revisited and evaluated numerous times over the past few decades and still holds immense relevance. The central theme of this theory revolves around life stages, vocational tasks and self-concept.

The life span-life space theory viewpoint understands that career development is not limited to a particular timeframe but rather continues throughout a person's life resulting in a heightened sense of career maturity and is seen as an evolving process. Super (1990) recognized that social learning experiences, character, personality disposition, morals and abilities all contributed to an individual's career development. According to Super et. al (1996), the combination of stage development and social role theory postulates individuals passing through five key stages in a lifetime.

2.3.1 Stages of Life Span–Life Space Theory

The five stages include growth, exploration, establishment, maintenance and disengagement. These stages are not a rigid process that is dictated by age, rather is a flexible progression of people recycling stages through various times in their life, a process referred to as minicycling. There is an emphasis on vocational self-concept and career maturity in Super's theory which serve as fundamental constructs in explaining the five stages.

Growth Stage: This stage is initiated when children are introduced to an array of occupations and they begin developing their vocational self-concept. The exposure to these occupations comes from numerous sources including friends, parents, relatives, school, teachers, community and media. Young people start to evaluate their own interests and abilities while developing a sense of autonomy.

Exploration Stage: This stage spans adolescence through young adulthood (age 14-24), individuals cultivate interests about a course of study and pursue training so that they can gain future employment. An individual's ability to progress through the exploration phase and fulfill each of the identified tasks augment the development of the career maturity construct. Adolescents try to apply what they are learning or have learnt through matching their interests and skills to various occupations.

Establishment Stage: It is the time in which a person works towards a stable work setting and potential advancement. The emphasis is towards steadying the worker role in a unique career context.

Maintenance Stage: It is primarily concerned with job status and retaining self-concept. This is a time when individuals are also looking at making some changes in their careers i.e. transitioning to other organizations or changing profession altogether.

This can potentially result in a minicycle of a person recycling through the exploration and establishment stage.

Disengagement Stage: The final stage usually denotes the process of separating from the world of work usually in the form of retirement. The work pressure and load is reduced that eventually results in formally leaving the work environment.

The commonality in all the stages is an individual's self-concept that is formed and solidified through unique experiences. Career maturity is also developed as individuals' age and progress through the stages and is coupled with their readiness to cope with developmental activities that include biological, social and societal expectations.

The application of this theory provides a basis for working with adolescents in their unique career development. Super's research advocated for career education in the school system because adolescence is the phase that is open to more exploration than the other phases (Super & Hall, 1978). Career counselling with adolescents was advocated as part of education as it was deemed to be useful during this stage of clarifying ambiguities and mitigating barriers. It has been applied in multiple school settings (Greer, 2011; McInnes & Chen, 2011; Sterner, 2012).

2.4 Impact of Career Counselling on Career Maturity

Career maturity of students can be effected by the counselling received from the start of school life all the way to high school. Students with a higher degree of career maturity can also achieve designated career competencies at a higher degree. The academic achievement of students can also play a significant role in determining career maturity. There is a need for comprehensive career counselling programs at higher level and the importance of other methods outside of school for helping students to achieve a high degree of career maturity (Crews, 2006).

Career maturity differs across gender in students following career counselling and exploration courses (Cassie and Chen, 2012). Career decision making and maturity of girls towards career choices can be lower than boys (Patton and Creed, 2001).

Students are worried about future career paths when they feel they have limited career information. Although the information for traditional careers as medical, engineering and business is available, students feel that these markets are saturated

and they are lost in regard to other career paths and feel restricted to follow traditional paths due to lack of better or well informed alternatives. Career counselling enables students to explore other options and develop students' maturity which also reaffirms the need and requirement of career counselling in all educational institutions. (Dogar, Azeem, Majoka, Mehmood & Latif, 2011).

Career counselling can be multi-faceted process allowing for student development. There are significant correlations between receiving a talk from a career counsellor, receiving written material and having individual and group counselling sessions on career development. Students are generally positive about the usefulness of the career advice they receive with individual counselling sessions perceived as providing more benefit than group counselling. Gender and socioeconomic status do not have a significant impact on the career maturity whereas teachers and career advisors hold value. The number of sessions and career activities that students participate in also increase the maturity of students (Rothman & Hillman, 2008).

The need for assisting all students in reaching a high level of career maturity is indicated as being essential. Career maturity of dropouts were lower than those students who for not thought of as at risk for failure (Fouad & Keeley, 1992; McLaughlin & Vacha, 1992; Rojewski, Wicklein, & Schell, 1995).

Students having strong relationships with their teachers and counsellors have higher career maturity. This is partly because the stronger relationship increases students' self-efficacy that leads to higher maturity. Better relationships with parents and friends also have a positive effect on career maturity (Lee, Lee, Song & Kim, 2012)

The opportunities for adolescents are created through counselling programs that are innovative and cater to student transitions. The absence of established careers counselling programs can multiple the barriers that some students experience. It is vital for schools to support counselling programs that enable young people to make informed decisions about their career pathways (Broadbent, Cacciattolo & Papadopoulos, 2012).

Teachers providing educational and career counseling to secondary school students find career guidance and counseling as a major issue hindering students in making right choices for their future careers (Khan, Murtaza & Shafa, 2012).

Career decisions of adolescents are primarily made with the influence of fathers within families. Other contextual factors that influence career decisions of students are conditional family support, lack of career counselling, lack of knowledge about the

labor market and emerging career trends. Students often change their decisions about career choice depending on the stage of life they are in, with men growing more than women in their confidence and independence levels as they start earning more while females depend on family opinion and pressure regarding their careers (Zubair, 2012)

Students of private or English medium schools have some better idea about career choices than students in public sectors as there is more importance placed on ICT curriculum and career counselling in these schools (Khan, Khan, Siraj and Hijazi, 2011)

Students strongly feel the need for proper career counselling. The dearth of career counselling creates an environment where friends and family members often offer career options unsuited to the interests and aptitudes of the students (Kamran & Khalidi, 2011).

The impact of career counselling has effects on the level of students' career maturity, academic achievement and self-esteem. Students participating in counselling score higher on achieved grades and career maturity. The career awareness and competency levels also increase. Career guidance and counselling at the school level may increase the level of students' career maturity (Legum and Hoare, 2004).

2.5 Latest Research Studies in the Area

2.5.1 Latest Research Studies at International Level

Ismail, Abdullah, Mohamad and Khairuldin (2018) explored student's career maturity: implications on career counselling. The level of career maturity and its implications on career counselling programs determined whether the variables were related to other variables such as gender, race, stream of study, academic achievement and family's socio-economic status. Career maturity among students ranked from low to medium level. Students' career maturity was significantly different based on gender, stream of study, academic achievement and family's socio-economic status. Career guidance and counselling play an important role in the development of career maturity among students.

Maree (2018) studied the impact of innovative career construction counselling for creative adolescents. Counselling aims to make meaning on all fronts including designing a successful life and finding purpose. Young people are searching for career-

life identity and gain maturity through innovative counselling practices that allow for exploration through sessions that are conducted regularly. Sessions provide the opportunity for assessments to be carried with the student that can facilitate career adaptability and maturity.

Hiling (2017) studied the importance of career counselling and post-secondary readiness for high school students. It was suggested that post-secondary planning is important for students to understand and discuss as it prepares them for life after they finish high school. Students focus should be on better understanding themselves, regarding their interests, personal characteristics and qualities along with educating, researching and discussing the various options available after high school. An increase in perceived readiness for post-secondary plans can further emphasize actual post-secondary planning that can have a positive impact on students. Career planning is an important component of the career maturity construct and students who engage in the planning process embark on the path towards utilizing the resources around them and understanding their interests and aptitudes which can lead to more informed decision making regarding their careers.

Lam and Santos (2017) explored the impact of a college career intervention program on career decision self-efficacy, career indecision and decision making difficulties. It is necessary to incorporate students' cultural context particularly the influence from their parents when assisting students in their career development. Career intervention in terms of one on one individual sessions and career courses have a positive effect on student's career decision making.

Harlow and Bowman (2016) worked on career decision self-efficacy and career maturity of community college and first-generation students. Career maturity of students who are first in their family to go to college tends to be lower than students whose family members have been to college. The contextual environment of a student effects development and maturity and is more the reason that students need to have exposure to occupational information and increased self-awareness through career counselling and courses interventions.

Papakota (2016) conducted a research on the career counselling development: a case study of an innovative career counselling tool in students. The digital environment of the world of work requires counsellors to also use modern methodologies in their counselling which can be applied in combination to individual

and group counselling. The element of career planning and exploration of students can derive benefit from written and/or visual forms; success stories of fellow students and graduates; videos with advice and tips from people employed in the job market. The expanded functionality could enhance the process of career counselling and maturity of students.

Roach (2015) worked on the effectiveness of a career course on program of study selection and career maturity of high school freshmen. Career counselling and a career exploration course impacted the career maturity of high school students. It was ascertained that students developed career maturity at a higher average than the norms that were set on the career maturity inventory and gained in career maturity knowledge and attitudes, however the career intervention did not significantly increase students' career maturity in comparison to the control group.

Yun and Min (2015) conducted an analysis on occupational preference, career aspiration and career attitude maturity of middle and high school students. The compared results among the two groups concluded that occupational preference and career aspiration has no difference among the two groups but high school students develop higher career attitude maturity.

Cheung and Jin (2015) studied the impact of a career exploration course on career decision making, adaptability and relational support. Career course and counselling can lead to an increased level of career exploration and motivation in students in a collectivist culture and should be an accessible vehicle for students to understand the world of work.

Talib, Mohamad and Wahab (2015) studied the effects of career exploration module on career planning, career self-efficacy and career maturity among community college students. The impact of career exploration and counselling assessed students' capabilities and showed a significant difference among the students. The relevance of organized career guidance and counselling services is highlighted as it can improve the career planning, self-efficacy and career maturity of students.

Allen and Bradley (2015) explored career counseling with juvenile offenders: effects on self-efficacy and career maturity. It was found that career counselling adolescent troubled teenage students had a positive effect and career maturity and self-efficacy increased after receiving the counselling.

2.5.2 Latest Research Studies at National Level

Yaqoob, Arif, Samad, and Iqbal, A. (2017) studied career counselling and its knowledge among high school students in Pakistan. Students believe career counselling to be integral to development and seriously consider the pool of resources around them, yet structured services are not available to them in school. The school administrations need to focus more on providing counselling services to their students.

Ali and Waheed (2017) explored consequences of the lack of interest-based educational choice among Pakistani students and the career guidance and counselling services being offered in schools. The study indicated 34 % of Pakistani students studying in private schools were privy to some kind of career counselling in schools whereas 71% did not receive proper career guidance and counselling regarding career choice. The result of the study also indicated that there were discrepancies between selected career and interests of students. Participants were unsatisfied with career choice and 26% shifted their career path. Students realize career guidance and counselling services to be helpful in their career and vocational choice. The statistics suggest that students need career guidance and counselling services during their high school years so as to be better prepared for their futures.

Jafrani et al (2017) analyzed personality types amongst students using the Myers-Brigg Type Indicator tool and emphasized that selection of the right career was dependent on numerous factors like personal interest, academic achievement, intellect, financial deliberations, personality, opportunities, family and guidance. Career choices are too often made according to parents' wishes and there is a need to develop a platform for career counselling where students can exchange ideas, explore interests and get proper guidance from mentors regarding suitable career choices that relate to their personality type.

Kanwal and Naqvi (2016) investigated self-regulation and career decision making among students and noted the positive relationship between low self-regulation and career indecisiveness. Girls have high self-regulation as compared to boys, however there are no gender differences on career decision making. Also, an increase in age did not lead to better career decision making.

Hasan (2014) studied the parental guidance for career choice of secondary school students in the opinion of educational counselor and found lack of support,

guidance and counselling is the cause of students being less confident to explore their individual, academic and career interests.

Bilal and Malik (2014) explored career counselling in Pakistan and found that proper career counselling systems were not available at any level of education with majority of the students not receiving any sort of counselling about their academic options or future careers. Private schools have ventured into the forte on their own initiative, with limited emphasis on assessing the outcomes of counselling.

It is apparent that career counselling plays a focal role in contributing towards career maturity and the overall career development of high school students. It can play a pivotal role in influencing students' aspirations and decisions about careers. It also has a notable effect on what adolescents think, say and perceive about various careers. There is indeed a need to analyze career maturity of high school students that occurs through career counselling. This study recorded the career maturity of high school students using an inventory to better understand the impact of professional career counselling on career maturity.

CHAPTER 3: METHODOLOGY

The methodology of the study involved a quantitative research method to obtain understanding of career counselling in high school students and its impact on their overall career maturity.

3.1 Objectives

The objectives of the proposed research were as following:

i. To investigate the relationship of career counselling and career maturity of high school students.
ii. To examine the impact of career counselling on the career maturity of high school students.
iii. To compare career maturity across gender in high school students.
iv. To compare career maturity across academic achievement in high school students.

3.2 Research Question

How does career counselling impact the career maturity of high school students?

3.3 Hypotheses

The following hypotheses were established for the research study:

H1: There is a significant relationship between career counselling and career maturity of high school students.
H2: There is a significant impact of career counselling on high school students' career maturity.
H3: There is a significant difference in the mean scores of students' career maturity across gender.
H4: There is a significant difference in the mean scores of students' career maturity across academic achievement.

3.4 Population

The population of the study consisted of four private high school with an approximation of 2480 enrolled A-level students who had access to career counselling and had been receiving career counselling.

3.5 Sample

A sample of the total population 333 A level high school students was obtained by using an online sample size calculator (Survey Monkey, Raosoft). Simple random sampling using the lottery technique was used by assigning every student in the A-level class with a number and then randomly selecting numbers. The student's age range was 17 – 19. The number of students enrolled were confirmed after obtaining the list of the private high schools from the Private Educational Institutions Regulatory Authority (PEIRA). Only those schools were then included that had an established career counselling department on campus which was confirmed after obtaining the list from the United States Educational Foundation Pakistan (USEFP). High schools were then called individually to confirm if the counselling department was operated by trained and experienced career counsellors (Master's degree or Post graduation diploma in career counselling with minimum two years of experience).

The data was collected and 28 inventories were not received back. Once data was entered it was determined that some responses by students indicated that they had not received any career counselling. A total of 22 cases responded to not receiving any form of career counselling. These 22 responses were taken out and not used in the data analysis. The data was analyzed with the responses from 283 students.

3.6 Design

A correlational and comparative research design was used to describe the relationship between or among variables and to draw comparisons. In this study, the use of a correlational research design helped to comprehend the relationship between career counselling and career maturity of high school students. The comparative research design helped to compare and analyze the similarities and differences across

the responses of gender (boys and girls) and academic achievement levels (below average, average, above average).

3.7 Conceptual Definitions of the Variables

3.7.1 Career Counselling

Career counseling is a process that helps individuals to identify the factors influencing their career development. It helps them to know and understand themselves and the world of work in order to make educational, career and life decisions (NCDA, 2015). Career counselling will be measured through students' sessions of individual counselling, group counselling, career days, college fairs and internships

3.7.2 Career Maturity

Career maturity is the ability of an individual to make informed decisions and cope with tasks related to career development. The constructs within this domain include career planning, career exploration, decision making, world of work information and knowledge of occupations (Super, 1981). The two components of career maturity; Career development attitude and career development knowledge will also be measured.

3.8 Research Instrument

The Career Development Inventory (App – D) developed by Super (1981) was used to obtain the responses of students receiving career counselling. It informs on how well an individual is engaging in the process of constructing their career and in the process of building a career an individual is making choices in a mature and wise manner. Permission was taken for research use from 'Vocopher' which is a repository of career instruments (App – C).

3.8.1 Validity of the Instrument

The Career Development Inventory's validity and approximation of all the items relevance was checked by approaching expert career counsellors working in private schools (App – A). To validate the contents of the inventory and check relevance, CDI was sent to four career counsellors. The views of the expert career

counsellors were taken into consideration. The high schools were selected for inventory validation based on reputation and provision of career counselling services offered to high school students and also on the qualification and training of the counsellors. The counsellors provided feedback regarding the appropriateness of the inventory. No items were eliminated from the inventory and were retained on the basis of the face validity.

3.8.2 Pilot -Testing

A pilot study was conducted on the population sample i.e. 43 students. The respondents of the pilot study were not part of the main study.

3.8.3 Reliability of the Instrument

Cronbach alpha reliability coefficient was used to assess the correlation items of the inventory. The data analysis of the pilot test involved item-total correlation of all scales, skewness and kurtosis and reliability of scale. The Cronbach alpha reliability for the inventory was $\alpha = .777$ (App – B).

3.8.4 Research Instrument

The CDI has 120 items with eight subscales i.e. Career Planning (CP) – 20 items, Career Exploration (CE) – 20 items, Decision Making (DM) – 20 items, World of Work Information (WW) – 20 items, Knowledge of Preferred Occupation (KPO) – 40 items, Career Development Attitude (CDA = CP + CE) – 40 items, Career Development Knowledge and Skills (CDK = DM + WW) – 40 items and Career Maturity (CP + CE + DM + WW) – 80 items.

The CDI is divided into two parts. Part 1 comprises of career planning, career exploration, decision making and world of work information scales and part 2 comprises of knowledge of preferred occupations scale.

Career planning represents the degree of involvement in thinking about the future and how well various occupations fit. Career planning includes 20 items in which one reports the career planning in which he or she has engaged and the degree of engagement.

Career exploration represents how well an individual has used quality resources in their planning activities. Career exploration includes 20 items. The first 10 questions are related to relatives, friends, people in the college or occupation being considered, other adults, printed materials, and the media as sources of career information. The

remaining 10 questions are related to usefulness of the information received from each of those sources.

Decision making represents an individual's skill at systematically applying principles of rational decision making to the educational and vocational choices that they will face in the future and to the types of career decisions they are now making. Decision making is made up of 20 brief sketches of people making career decisions. Initials are used instead of names. The sketches cover a range of grade and occupational levels and both traditionally male and traditionally female occupations.

World of work information represents the fund of knowledge an individual has about occupations and the world of work. It has 20 items which assess knowledge of career development tasks and test knowledge of the occupational structure and of sample occupations ranging from semiskilled to professional and executive along with techniques for getting a job and holding a job.

Knowledge of preferred occupations has 40 questions that pertain to all occupations and are categorized into 20 groups.

Career Development Attitudes (CDA) as a 'conative' measure combines career planning and career exploration scales that are highly inter correlated and they share factor loadings. This sub-scale has 40 items. The combination has increased reliability as a measure of attitude, but is less specific because it combines planning and exploration.

Career Development Knowledge and Skills (CDK) as a 'cognitive' measure combines decision making and world of work information. CDK assesses the highly inter correlated knowledge of how to make career decisions with knowledge of the world of work. The sub-scale has 40 items.

Career Maturity/Career Orientation Total (COT) combines career planning, career exploration, decision making and world of work information. COT is a measure of career or vocational maturity and comprises of 80 items.

3.9 Procedure

The procedure entailed approaching four private A-level English medium high schools. The private high school list was provided by the Private Educational Institutions Regulatory Authority (PEIRA). The inclusion criteria for selecting the high

schools was an established career counselling department on campus which was confirmed after obtaining the list from the United States Educational Foundation Pakistan (USEFP). High schools were then called individually to confirm if the counselling department was operated by trained and experienced career counsellors (Master's degree or Post graduation diploma in career counselling with minimum two years of experience). A formal, official letter and email outlining the details, purpose and aim along with the advantages of the research was sent to the director/owners of the schools and the school's principal. A similar official information sheet outlining the purpose and significance of the study (App – E) along with the career development inventory and consent forms (App – F) were given to the students. The responses from the students were obtained for analysis. The levels of academic achievement were indicated by the students on the demographic sheet. The students scoring A or B were considered above average, C scoring students were considered average and students scoring D, E or lower were considered below average. The academic achievement levels were confirmed by the school's counsellor based on the students recent report cards.

3.10 Data Analysis

The statistical processing of the data was carried out using the SPSS-XXIII. For the verification of formulated hypotheses *t*-test, product-moment correlation coefficient and regression analysis was employed. The *t*-test is a statistical test that measures the significance of the difference between the means in two sets of data in relation to the variance of the data. The product-moment correlation coefficient (*r*) is used to measure and describe the strength and direction of the relationship between variables. Regression is a statistical measure that attempts to determine the strength of the relationship between one dependent variable and a series of other changing independent variables (Field, 2013).

3.11 Delimitation

The delimitation of the study was:

i. Four urban private A-level high schools from Islamabad that provide career

counselling.

ii. A trained career counsellor having master's degree or one year postgraduate diploma in career counselling with minimum 2 year experience.

iii. A-level students enrolled in the fall of 2016/2017

iv. Super's life span-life space theory (1975)

v. Career Development Inventory developed by Super in 1981.

CHAPTER 4: RESULTS AND INTERPRETATION

This chapter contains statistical details of data analysis, interpretation and results to assess the impact of career counselling on career maturity of high school students. The results were analyzed using SPSS-XXI. This chapter is divided into five parts.

Part I: It includes descriptive statistics i.e. skewness and kurtosis of the subscales. Table 1 displays these statistics.

Part II: It includes *t*-test describing the difference between the mean scores of boys and girls on significance career maturity. Table 2-4 display these statistics.

Part III: It includes one-way analysis of variance (ANOVA) which is used to compare the mean scores of three groups of students on Career Maturity across academic achievement. The academic achievement is measured at three levels: Below Average, Average and Above Average and also includes the Post-Hoc Tukey HSD test to compare the maturity levels among the three levels. Table 5-6 display these statistics.

Part IV: It includes product-moment coefficient of correlation (*r*). It was calculated to analyze the relationship between career counselling and career maturity. Table 7-8 display these statistics.

Part V: It includes multiple linear regression analysis for career counselling i.e. individual counselling, group counselling, college fairs, career days and internship in predicting career maturity i.e. career planning, career exploration, decision making, world of work information and knowledge of preferred occupations. It also includes career development attitudes and career development knowledge analysis. Table 9-17 display these statistics.

Part I: It includes descriptive statistics i.e. skewness and kurtosis of the subscales. Table 1 displays these statistics.

Table 1 *Descriptive Statistics of Data from Students*

	N	Min	Max	*M*	*SD*	Skewness		Kurtosis	
						Statistic	SE	Statistic	SE
CP	283	1.78	4.70	3.43	0.53	-.46	.14	.11	.29
CE	283	1.20	3.99	3.22	0.48	-.69	.14	.97	.29
DM	283	1.78	3.98	3.20	0.44	-.24	.14	-.43	.29
WW	283	1.00	3.99	3.42	0.50	-1.20	.14	2.65	.29
KPO	283	1.83	4.00	3.27	0.44	-.36	.14	-.21	.29
CDA	283	1.68	3.98	3.11	0.44	-.24	.14	.14	.29
CDK	283	1.65	4.15	3.00	0.41	.01	.14	.23	.29
CM/COT	283	2.32	3.34	2.80	0.19	-.04	.14	-.11	.29

The above table shows the descriptive statistics and normality of the data. It includes central tendency, standard deviation, skewness and kurtosis. Data skewness and kurtosis explains the normality of the data (Pallant 2011). Skewness measures the distribution curve balance and data distributions peak is measured through kurtosis. Recommended values of skewness is between ± 2 and for kurtosis it is ± 3 (Field, 2013).

Responses of all variables from two hundred and eighty three respondents are within a range with a min 1 to max 5. Skewness value of all variables responses are skewed within the range from ± 2 and kurtosis value of all variables responses are within the range from ± 3. This shows the data is normally distributed.

Part II: It includes *t*-test describing the difference between the mean scores of boys and girls on significance in career maturity. Table 2-4 display these statistics.

H3: There is a significant difference in the mean scores of students' career maturity across gender.

Table 2 *Independent Samples t-test of students (boys and girls) on career maturity*

	Descriptive Statistics			*t*-test for equality of means		
	Gender	*M*	*SD*	*t*	*df*	*p*
Career Maturity	Boys	2.76	.20	-5.09	280.99	.000
	Girls	2.88	.15			

The independent-samples test was applied to compare the difference between career maturity across gender. The value of Levene's Test of Equality (.001) shows the assumption of equal variance has been violated, therefore we will use *t*-value of equal variance not assumed. Boys ($M = 2.76$, $SD = .20$) have lower career maturity than Girls ($M = 2.88$, $SD = .15$). The results show a significant difference between the career maturity across gender $t\ (283) = -5.09$, $p < .001$, therefore hypothesis is accepted.

Table 3 *Independent Samples t-test of students (boys and girls) on career development attitude*

	Descriptive Statistics			*t*-test for equality of means		
	Gender	*M*	*SD*	*t*	*df*	*p*
Attitude	Boys	3.11	.45	-1.419	281.00	.157
	Girls	3.18	.43			

The independent-sample test was applied to compare the difference between career development attitudes across gender. The value of Levene's test of Equality (0.001) shows the assumption of equal variance has been violated, therefore we will use t- value of variance not assumed. Boys ($M = 3.11$, $SD = .45$) Girls ($M = 3.18$, $SD = .43$). The result does not show a significant difference between career development attitude across gender $t\ (283) = -1.419$, $p = .157$, therefore hypothesis is not accepted.

Table 4 *Independent Samples t-test of students (boys and girls) on career development knowledge*

	Descriptive Statistics			*t*-test for equality of means		
	Gender	*M*	*SD*	*t*	*df*	*p*
Knowledge	Boys	2.94	.41	-2.506	281.00	.013
	Girls	3.06	.39			

The independent-sample test was applied to compare the difference between career development knowledge across gender. The value of Levene's test of Equality (0.001) shows the assumption of equal variance has been violated, therefore we will use t- value of variance not assumed. Boys (M = 2.94, SD = .41) have lower career development knowledge than Girls (M =3.06, SD = .39). The results show a significant difference between the career development knowledge across gender t (283) = -2.506, p = .013, therefore hypothesis is accepted.

Part III: It includes the analysis of quantitative data through one-way analysis of variance (ANOVA) test which is used to compare the mean scores of three groups of students across academic achievement. The academic achievement is measured at three levels: below average, average and above average. Tables 5-6 displays these statistics.

H4: There is a significant difference in the mean scores of students' career maturity across academic achievement.

Table 5 *Mean difference of scores of student's career maturity across academic achievement*

	Sum of Squares	*df*	Mean Square	*F*	*p*
Between Groups	.814	2	.41	11.870	.000
Within Groups	9.59	280	.03		
Total	10.41	282			

To know the difference of scores between career maturity of students across academic achievement, one way ANOVA was conducted. The academic achievement is measured at three levels: below average, average and above average. The results show that there is a significant difference between the career maturity of students across academic achievement F (2,280) = 11.87, $p < .001$, therefore hypothesis is accepted.

Table 6 *One-way ANOVA with post-hoc Tukey HSD of student's career maturity across academic achievement*

(I) Acd. Ach.	(J) Acd. Ach.	Mean Difference (I-J)	Std. Error	*p*
Below Average	Average	.081	.061	.378
	Above Average	.179*	.060	.009
Average	Below Average	-.0816	.061	.378
	Above Average	.097*	.023	.000
Above Average	Below Average	-.179*	.060	.009
	Average	-.097*	.023	.000

*. The mean difference is significant at the 0.05 level.

The post hoc analysis was used to see whether there is a significant main effect or interaction effect in the overall analysis of variance test. The results show that above average academic achievement group differs significantly from below average p =.009 and average p = .000 students in career maturity. Below average students do not differ significantly from average students p = .378 and average students also do not differ significantly from below average students p = .378 in career maturity, therefore hypothesis is accepted.

Part IV: It includes product-moment coefficient of correlation (*r*). It was calculated to analyze the relationship between career counselling and career maturity. Table 7-8 display these statistics.

H1: There is a significant relationship between career counselling and career maturity of high school students.

Table 7 *Correlations between career counselling and career maturity of students*

	1	2	3	4
Career Counselling	1			
Career Attitude	.307**	1		
Career Knowledge	.320**	.743**	1	
Career Maturity	.330**	.367**	.372**	1

**. Correlation is significant at the 0.01 level (2-tailed).

The product-moment coefficient of correlations were carried out to assess the relationship between career counselling and career maturity of students. According to Field (2013) if r = .1 weak (small effect), .3 moderate (medium effect), .5 strong (large effect). The results show the relationship between career counselling and career development attitude $r = 0.307$, $p < 0.01$, career counselling and career development knowledge $r = 0.320$, $p < 0.01$ indicates a moderate, positive and significant relationship between the variables. The relationship between career counselling and career maturity $r = 0.330$, $p < 0$ .01 indicates a moderate, positive and significant relationship, therefore hypothesis is accepted.

Table 8 *Correlations between career counselling and career maturity of students*

	1	2	3	4	5	6
Career Maturity	1					
Individual Counselling	.365**	1				
Group Counselling	.334**	.699**	1			
Career Days	.410**	.382*	.311**	1		
College Fairs	.207**	.287**	.226**	.267**	1	
Internships	.395**	.593**	.284**	.602**	.459**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The product-moment coefficient of correlations were carried out to assess the relationship between career maturity and individual counselling, group counselling, college fairs, career days and internships of students. The results between individual counselling and career maturity $r = 0.365$, $p < 0.01$ indicates a moderate, positive and significant relationship. The results between group counselling and career maturity $r = 0.334$, $p < 0.01$ indicates moderate, positive and significant relationship. The results between career days and career maturity $r = 0.410$, $p < 0.01$ indicates a moderate, positive and significant relationship. The results between college fairs and career maturity $r = 0.207$, $p < 0.01$ indicates weak, positive and significant relationship. The results between internships and career maturity $r = 0.395$, $p < 0.01$ indicates a moderate, positive and significant relationship, therefore hypothesis is accepted.

Part V: It includes multiple regression analysis for career counselling i.e. individual counselling, group counselling, college fairs, career days and internship in predicting career maturity i.e. career planning, career exploration, decision making, world of work information and knowledge of preferred occupations. It also includes predicting career development attitudes and career development knowledge regression analysis. Table 9-17 display these statistics.

H2: There is a significant impact of career counselling on high school students' career maturity.

Table 9 *Multiple linear regression for individual counselling(IC), group counselling (GC), career days (CD), college fairs (CF) and internships (I) in predicting Career Planning*

Model		B	SE	*β*	*t*	*p*
1	(Constant)	2.997	.081		36.948	.000
	IC	.022	.037	.076	.608	.544
	GC	.100	.046	.297	2.200	.029
	CD	.006	.030	.014	.210	.834
	CF	.121	.048	.386	2.497	.013
	I	.114	.038	.326	3.018	.003

R^2= 0.109; F= 6.782; p<0.05

The above table shows that IC, GC, CD, CF, and I explain 10.9% of the variance in Career Planning scores R^2=0.109. The Adjusted R-square value explains variance percent in the dependent variable that is accounted for by variations in the independent variables. F value in model is greater than 4 and significant value is less than 0.05, representing fitness of the model. Results show that individual counselling (β = 0.076, p = 0.544) and career days (β = 0.014, p = 0.834) are not significant predictors in career planning. Group counselling (β = 0.29, p = 0.029), college fairs (β = 0.386, p = 0.013) and internships (β = 0.326, p = 0.003) are significant predictors of career planning, therefore hypothesis is accepted.

Table 10 *Multiple linear regression for individual counselling(IC), group counselling (GC), career days (CD), college fairs (CF) and internships (I) in predicting Career Exploration*

Model		B	SE	*β*	*t*	*p*
1	(Constant)	2.929	.094		31.130	.000
	IC	.120	.043	.351	2.803	.005
	GC	.085	.053	.217	1.600	.111
	CD	.003	.035	.006	.094	.925
	CF	.081	.056	.222	1.432	.153
	I	.138	.044	.341	3.156	.002

$R^2 = 0.107$; F= 6.651; $p<0.05$

The above table shows IC, GC, CD, CF and I explain 10.7% of the variance in career exploration scores ($R^2 = 0.107$). F value in the model is greater than 4 and significant value is less than 0.05, representing fitness of the model. Results show that individual counselling ($\beta = 0.351$, $p = 0.005$) and internships ($\beta = 0.341$, $p = 0.002$) are a significant predictor of career exploration. Group counselling ($\beta = 0.217$, $p = 0.111$), career days ($\beta = 0.006$, $p = 0.925$) and college fairs ($\beta = 0.222$, $p = 0.153$) are not significant predicators of career exploration, therefore hypothesis is accepted.

Table 11 *Multiple Linear regression for individual counselling(IC), group counselling (GC), career days (CD), college fairs (CF) and internships (I) in predicting Decision Making*

Model		B	SE	*β*	*t*	*p*
1	(Constant)	2.905	.078		37.011	.000
	IC	.117	.036	.400	3.271	.001
	GC	.107	.044	.319	2.419	.016
	CD	.024	.029	.054	.824	.411
	CF	.038	.047	.124	.820	.413
	I	.117	.036	.337	3.196	.002

$R^2 = 0.151$; F= 9.828; $p<0.05$

The above table shows that IC Sessions, GC Sessions, Career Days Sessions, College Fairs Sessions, and Internship Sessions explain 15.1% of the variance in Decision Making scores ($R^2 = 0.151$). F value in model is greater than 4 and significant value is less than 0.05, representing fitness of the model. Results show that individual counselling ($\beta = 0.400$, $p = 0.001$), group counselling ($\beta = 0.319$, $p = 0.016$) and internships ($\beta = 0.337$, $p = 0.002$) are statistically significant predictors of decision making. However, career days ($\beta = 0.054$, $p = 0.411$) and college fairs ($\beta = 0.124$, $p = 0.413$) are not significant predicators in decision making, therefore hypothesis is accepted.

Table 12 *Multiple Linear regression for individual counselling(IC), group counselling (GC), career days (CD), college fairs (CF) and internships (I) in predicting World of Work Information*

Model		B	SE	*β*	*t*	*p*
1	(Constant)	3.115	.090		34.696	.000
	IC	.077	.041	.233	1.871	.062
	GC	.159	.050	.424	3.152	.002
	CD	.000	.033	.000	.007	.994
	CF	.067	.054	.191	1.242	.215
	I	.114	.042	.294	2.732	.007

$R^2 = 0.119$; F= 7.492; $p<0.05$

The table shows that IC, GC, CD, CF, and I explain 11.9% of the variance in World of Work Information scores ($R^2 = 0.119$). F value in model is greater than 4 and significant value is less than 0.05, representing fitness of the model. Results show that individual counselling ($\beta = 0.233$, $p = 0.062$), career days ($\beta = 0.000$, $p = 0.994$) and college fairs ($\beta = 0.191$, $p = 0.215$) have insignificant impact on world of work information however, group counselling ($\beta = 0.424$, $p = 0.002$) and internships ($\beta = 0.294$, $p = 0.007$) are significant predictors of world of work information, therefore hypothesis is accepted.

Table 13 *Multiple Linear regression for individual counselling(IC), group counselling (GC), career days (CD), college fairs (CF) and internship (I) in predicting Knowledge of Preferred Occupations*

Model		B	SE	*β*	*t*	*p*
1	(Constant)	2.986	.079		37.697	.000
	IC	.132	.036	.446	3.650	.000
	GC	.099	.045	.292	2.216	.027
	CD	.025	.029	.055	.838	.403
	CF	.059	.047	.187	1.241	.216
	I	.111	.037	.319	3.020	.003

$R^2 = 0.151$; F= 9.859; $p<0.05$

The table shows that IC Sessions, GC Sessions, Career Days Sessions, College Fairs Sessions, and Internship Sessions explain 15.1% of the variance in Knowledge of Preferred Occupation scores ($R^2 = 0.151$). F value in model is greater than 4 and significant value is less than 0.05, representing fitness of the model. Results show that individual counselling ($\beta = 0.446$, $p = 0.000$), group counselling ($\beta = 0.292$, $p = 0.027$) and internships ($\beta = 0.319$, $p = 0.003$) are significant predictors of knowledge of preferred occupation, however career days ($\beta = 0.055$, $p = 0.403$) and college fairs ($\beta = 0.187$, $p = 0.216$) are not significant predictors on knowledge of preferred occupations, therefore hypothesis is accepted.

Table 14 *Multiple Linear regression for individual counselling(IC), group counselling (GC), career days (CD), college fairs (CF) and internship (I) in predicting Career Development Attitude*

Model		B	SE	*β*	*t*	*p*
1	(Constant)	2.970	.080		37.210	.000
	IC	.103	.036	.352	2.843	.005
	GC	.133	.045	.397	2.962	.003
	CD	.017	.030	.039	.577	.564
	CF	.027	.048	.088	.573	.567
	I	.143	.037	.412	3.844	.000

$R^2 = 0.126$; F= 7.955; $p<0.05$

The table shows that IC, GC, CD, CF and I explain 12.6% of the variance in CDA scores ($R^2 = 0.126$). F value in model is greater than 4 and significant value is less than 0.05, representing fitness of the model. Results show that individual counselling (β = 0.352, p =0.005), group counselling (β =0.397, p =0.003) and internships (β = 0.412, p = 0.000) are significant predictors of CDA. Career days (β = 0.039, p = 0.564) and college fairs (β = 0.088, p = 0.567) are not significant predictors of CDA, therefore hypothesis is accepted.

Table 15 *Multiple Linear regression for individual counselling(IC), group counselling (GC), career days (CD), college fairs (CF) and internship (I) in predicting Career Development Knowledge*

Model		B	SE	*β*	*t*	*p*
1	(Constant)	2.735	.074		37.188	.000
	IC	.087	.034	.320	2.584	.010
	GC	.086	.041	.278	2.075	.039
	CD	.043	.027	.105	1.572	.117
	CF	.045	.044	.156	1.021	.308
	I	.104	.034	.324	3.029	.003

$R^2 = 0.127$; F= 8.085; $p<0.05$

The table shows that IC, GC, CD, CF, and I explain 12.7% of the variance in Career Development Knowledge scores ($R^2 = 0.127$). F value in model is greater than 4 and significant value is less than 0.05, representing fitness of the model. Results show that individual counselling ($\beta = 0.320$, $p = 0.010$), group counselling ($\beta = 0.278$, $p = 0.039$) and internships ($\beta = 0.324$, $p = 0.003$) are significant predictors of CDK. However, career days ($\beta = 0.105$, $p = 0.117$) and college fairs ($\beta = 0.156$, $p = 0.308$) are not significant predictors of CDK, therefore hypothesis is accepted.

Table 16 *Multiple Linear regression for individual counselling(IC), group counselling (GC), career days (CD), college fairs (CF) and internship (I) in predicting Career Maturity*

Model		B	SE	*β*	*t*	*p*
1	(Constant)	1.550	.128		12.079	.000
	IC	.130	.058	.281	2.227	.027
	GC	.153	.072	.290	2.122	.035
	CD	.022	.047	.032	.469	.639
	CF	.033	.077	.067	.431	.667
	I	.126	.060	.230	2.105	.036

$R^2 = 0.091$; F= 5.572; p<0.05

The table shows that IC, GC, CD, CF and I explain 9.1% of the variance in Career Maturity scores ($R^2 = 0.091$). F value in model is greater than 4 and significant value is less than 0.05, representing fitness of the model. Results show that individual counselling ($\beta = 0.281$, $p = 0.027$), group counselling ($\beta = 0.290$, $p = 0.035$) and internships ($\beta = 0.230$, $p = 0.036$) are significant predictors of career maturity. However, career days ($\beta = 0.032$, $p = 0.639$) and college fairs ($\beta = 0.067$, $p = 0.667$) are not significant predictors of career maturity, therefore hypothesis is accepted.

Table 17 *Simple Linear regression for career counselling in predicting Career Maturity*

Model		B	SE	*β*	*t*	*p*
1	(Constant)	1.446	.111		13.032	.000
	Career Maturity	.149	.038	.230	3.958	.000

$R^2 = 0.353$; F= 15.667; p<0.001

The table shows that career maturity explain 35.3% of the variance in career maturity scores ($R^2 = 0.353$). Results show that career counselling is a statistically significant predictor of career maturity ($\beta = 0.230$, $p < 0.001$), therefore hypothesis is accepted.

CHAPTER 5: DISCUSSION AND RECOMMENDATIONS

5.1 Discussion

The aim of this research was to study the impact of career counselling on the overall career maturity of high school students and ascertain whether the five domains of counselling i.e. individual counselling, group counselling, career days, college fairs and internships had an effect on the five domains of the career maturity construct i.e. career planning, career exploration, decision making, word of work information and knowledge of preferred occupations. The conative (career development attitudes) and cognitive (career development knowledge) elements of career maturity were also analyzed.

The current study was supported by the findings of Ismail, Abdullah, Mohamad, & Khairuldin (2018) as it was ascertained in both that gender and academic achievement impacts career maturity. Career maturity among students ranked from low to medium and was significantly different based on gender and academic achievement. This study also concluded that career maturity was positively and significantly affected by counselling and girls' career maturity was more developed. The maturity of above average academic achievement students was higher than average and below average students, both of whom had the same level of career maturity. The relevance of career counselling contributing towards students' development is highlighted in both studies.

The findings of the present study were in line with Maree (2018) as counselling aims to make meaning on all fronts including exploration and decision making. Individual and group counselling sessions that are conducted regularly provide the opportunity for students' facilitation in career adaptability and maturity.

The findings of this study corroborate with Hiling (2017) in highlighting the importance of career counselling and post-secondary readiness for high school students. Career planning is a vital component of the career maturity construct and students who engage in the planning process embark on the path towards utilizing the resources around them and understanding their interests and aptitudes. This study also focused on student understanding themselves, regarding their interests, personal characteristics and qualities along with educating, researching, and discussing the various options available to them after high school.

In this study the role of career counselling is highlighted as it develops students' career maturity and in the process facilitates their clarity towards careers. Ali and Waheed (2017) indicated that there were discrepancies between selected career and interests of students and there is a need for career guidance and counselling services during high school years so as to be better prepare students for their futures.

The results of the study is supported by the findings of Yaqoob, Arif, Samad, and Iqbal (2017). Students benefit through structured career counselling and the usage of multiple resources adds to the overall effect on career development. High schools' administration need to focus on providing counselling in a diverse mode of individual, group, career day, college fairs and internships.

The current study is supported by the study of Jafrani et al (2017) who concluded that there is a need to develop a platform for career counselling where students can exchange ideas, explore interests and get proper guidance from mentors regarding suitable career choices which is in accordance with this study's findings. Student gain maturity towards careers through sessions where they try to understand the world of work comprehensively keeping in mind their own interest and aptitudes. Experiential learning through internships allows for them to gauge whether a career is a good fit.

The current study support the findings of Lam and Santos (2017) that one on one individual sessions had a positive effect on increasing students' career decision making. Similarly the findings of and Harlow and Bowman (2016) supported this study where the effect on student development and maturity is a strong reason that students need to have exposure to occupational information and increased self-awareness through career counselling and courses interventions.

The findings of this study validate the findings of Papakota (2016) where interventions were in combination to individual and group counselling. The focus on providing information to students using multiple sources allows for exploration through interaction with people employed in the job market.

This study's findings differentiated from Kanwal and Naqvi (2016) where no gender differences were found on career decision making whereas the current study found that girls developed more career maturity than boys. The gain resulted from individual and group counselling as well as internships.

The findings of current study were partially consistent with Roach (2015) findings where it was illustrated that high school students gained the knowledge to select a future career and program of study and had on average developed career maturity. The career intervention did not significantly impact student career maturity whereas this study concluded that career maturity was increased after students receiving counselling.

The impact of career counselling on students career maturity was found to be consistent with study findings of Yun and Min (2015) who concluded that occupational preference and career aspiration had no difference but high school students had higher career attitude maturity after receiving counselling.

The current study supported the findings of Cheung and Jin (2015) as it was ascertained that career counselling can lead to an increased level of career exploration and decision making in students particularly in a collectivist culture and allows for students to understand the world of work.

The study results were also consistent with the findings of Talib, Mohamad and Wahab (2015) and Allen and Bradley (2015) where it was indicated that there was a significant difference in the career maturity of students who had received counselling. It reiterates the emphasis on improvement of career maturity if students follow a systematic career counselling program.

This study supports the findings of Hasan (2014) where students are not confident of taking decisions as they haven't explored their individual, academic and career interests. The career exploration element is developed through individual counselling and internships which can contribute towards career maturity. This study emphasized decision making in students which could develop with individual counselling, group counselling and internships.

The current study support the findings of Bilal and Malik (2014) that a handful of private schools have ventured into the forte of career counselling. The need for proper career counselling facilities is elaborated as is the requirement for counselling in Pakistan to be empirically evaluated. The present study also concluded that the world of work information and maturity is increased when students participate in counselling and internships which strengthens the case for career counselling in high schools.

These findings add to the rich body of literature. The results have relevance particularly for those professionals, schools, students and counselors who work directly with high school students and school counsellors.

5.2 Findings

1. The difference between career maturity across gender was calculated using independent samples test. It was found that the value of *t* for career maturity (*t* = -5.09) was greater than the critical value (1.984) at .05 level of significance and shows a significant difference, hence hypothesis is accepted.
2. The difference between career development attitudes (CDA) across gender was calculated using the independent samples test. It was found that the value of *t* for CDA (*t* = -1.419) across gender was less than the critical value (1.984) at .05 level of significance and does not show a significant difference, hence hypothesis is not accepted.
3. The difference between career development knowledge (CDK) across gender was calculated using the independent samples test. It was found that the value of *t* for CDK (*t* = -2.506) across gender was greater than the critical value (1.984) at .05 level of significance and shows a significant difference, hence hypothesis is accepted.
4. The difference of scores between the career maturity of students across academic achievement was calculated by applying one-way ANOVA. It was found that the calculated value of *F* for the difference of career maturity (*F* = 11.87) across academic achievement was greater than the critical value (3.028) at .05 level of significance and shows a significant difference, hence hypothesis is accepted.
5. The difference of scores within the groups of students' career maturity was calculated using the post-hoc analysis. The results show that above average academic achievement value of *p* for below average (.009) and average (.000) shows a significant difference. Below average students do not differ from average students in career maturity *p* (0.378) and average students also do not differ from below average in career maturity *p* (0.378), hence hypothesis is accepted.

6. The relationship between career counselling and career maturity of students was assessed using product–moment coefficient of correlation. The results found a moderate, positive and significant relationship between career counselling and career development attitude r = 0.307, career counselling and career development knowledge r = 0.320 and career counselling and career maturity r = 0.330. All calculated values of r were greater than the critical value (0.116) at .05 level of significance, hence hypothesis is accepted.
7. The relationship between career counselling and career maturity of students was assessed using product–moment coefficient of correlation. The results between individual counselling and career maturity r = 0.365, group counselling and career maturity r = 0.334, career days and career maturity r = 0.410 indicates a moderate, positive and significant relationship. The results between college fairs and career maturity r = 0.207 indicates weak, positive and significant relationship. The results between internships and career maturity r = 0.395 indicates a moderate positive and significant relationship. All calculated values of r were greater than the critical value (0.116) at .05 level of significance, hence hypothesis is accepted.
8. Multiple regression was applied to study the impact of career counselling (individual counselling, group counselling, career days, career fairs and internships) on career maturity (career planning) of students. IC, GC, CD, CF, I explain 10.9% of the variance in CP scores (R^2 = 0.109). IC (β = 0.076, p = 0.544), CD (β = 0.014, p = 0.834) are statistically insignificant in impacting Career Planning. GC (β = 0.297, p = 0.029), CF (β = 0.386, p = 0.013) and I (β = 0.326, p = 0.003) are statistically significant predictors of career planning, hence hypothesis is accepted.
9. Multiple regression was applied to study the impact of career counselling (individual counselling, group counselling, college fairs, career days and internships) on career maturity (career exploration) of students. IC, GC, CD, CF and I explain 10.7% of the variance in CE scores (R^2 = 0.107). IC (β = 0.351, p = 0.005) and I (β = 0.341, p = 0.002) are statistically significant predictors of Career Exploration. GC (β = 0.217, p = 0.111), CD (β = 0.006, p = 0.925) and CF (β = 0.222, p = 0.153) have an insignificant impact on career exploration, hence hypothesis is accepted.

10. Multiple regression was applied to study the impact of career counselling (individual counselling, group counselling, college fairs, career days and internships) on career maturity (decision making) of students. IC, GC, CD, CF, and explain 15.1% of the variance in DM scores (R^2= 0.151). IC (β = 0.400, p = 0.001), GC (β = 0.319, p = 0.016) and I (β = 0.337, p = 0.002) are statistically significant predictors of decision making. CD (β = 0.054, p = 0.411) and CF (β = 0.124, p = 0.413) have an insignificant impact on decision making, hence hypothesis is accepted.
11. Multiple regression was applied to study the impact of career counselling (individual counselling, group counselling, college fairs, career days and internships) on career maturity (world of work information) of students. IC, GC, CF, CD and I explain 11.9% of the variance in WW scores (R^2= 0.119). IC (β = 0.233, p = 0.062), CD (β = 0.000, p = 0.994) and CF (β = 0.191, p = 0.215) have an insignificant impact on world of work information. GC (β = 0.424, p = 0.002) and I (β = 0.294, p = 0.007) are statistically significant predictors of world of work information, hence hypothesis is accepted.
12. Multiple regression was applied to study the impact of career counselling (individual counselling, group counselling, college fairs, career days and internships) on career maturity (knowledge of preferred occupations) of students. IC, GC, CD, CF and I explain 15.1% of the variance in knowledge of preferred occupation scores (R^2= 0.151). IC (β = 0.446, p = 0.000), GC (β = 0.292, p = 0.027) and I (β = 0.319, p = 0.003) are statistically significant predictors of KPO. CD (β = 0.055, p = 0.403) and CF (β = 0.187, p = 0.216) have insignificant impact on KPO, hence hypothesis is accepted.
13. Multiple regression was applied to study the impact of career counselling (individual counselling, group counselling, college fairs, career days and internships) on career maturity (Career Development Attitudes) of students. IC, GC, CD, CF and I explain 12.6% of the variance in CDA scores (R^2= 0.126). IC (β = 0.352, p = 0.005), GC (β = 0.397, p = 0.003) and I (β = 0.412, p = 0.000) are statistically significant predictors. CD (β = 0.039, p = 0.564) and CF (β = 0.088, p = 0.567) have insignificant impact on CDA, hence hypothesis is accepted.

14. Multiple regression was applied to study the impact of career counselling (individual counselling, group counselling, college fairs, career days and internships) on career maturity (Career Development Knowledge) of students. IC, GC, CD, CF and I explain 12.7% of the variance in CDK scores (R^2= 0.127). IC (β = 0.320, p = 0.010), GC (β = 0.278, p = 0.039) and I (β = 0.324, p = 0.003) are statistically significant predictors of CDK. CD (β = 0.105, p = 0.117) and CF (β = 0.156, p = 0.308) have insignificant impact on CDK, hence hypothesis is accepted.
15. Multiple regression was applied to study the impact of career counselling (individual counselling, group counselling, college fairs, career days and internships) on career maturity of students. IC, GC, CD, CF and I explain 9.1% of the variance in career maturity scores R^2= 0.091. IC (β = 0.281, p = 0.027), GC (β = 0.290, p = 0.035) and I (β = 0.230, p = 0.036) are statistically significant predictors of CM. CD (β = 0.032, p = 0.639) and CF Sessions (β = 0.067, p = 0.667) have insignificant impact on career maturity, hence hypothesis is accepted.
16. Simple linear regression was applied to study the impact of career counselling on career maturity of students. Career counselling explains 35.3% of the variance in career maturity scores (R^2= 0.353). Career counselling is a statistically significant predictor of career maturity (β = 0.230, $p < 0.001$), hence hypothesis is accepted.

5.3 Conclusion

The following conclusions are derived on the basis of findings:

1. Career counselling impacts the career maturity of girls and boys differently. The effect of career counselling is more on high school girls than high school boys.
2. The career development attitudes of high school girls and boys receiving career counselling was not significantly different.
3. The career development knowledge of high school girls developed more after receiving career counselling as compared to boys.
4. High school students' career maturity was effected by their academic achievement. Students that were above average in academic achievement

developed more career maturity than students that were average and below average in academic achievement.

5. The relationship between career counselling and career maturity is moderate, positive and significant.
6. The relationship between career counselling and career development attitudes and career development knowledge is moderate, positive and significant.
7. The relationship between individual counselling, group counselling, career days and internships with career maturity is moderate, positive and significant. The relationship between college fairs with career maturity is weak, positive and significant.
8. Group counselling, college fairs and internships have an impact on the career planning of high school students.
9. Individual counselling and internships have an impact on the career exploration of high school students.
10. Individual counselling, group counselling and internships have an impact on the decision making of high school students.
11. Group counselling and internships have an impact on the world of work information of high school students.
12. Individual counselling, group counselling and internships have an impact on knowledge of preferred occupations of high school students.
13. Individual counselling, group counselling and internships have an impact on the career development attitudes of high school students.
14. Individual counselling, group counselling and internships have an impact on the career development knowledge of high school students.
15. Individual counselling, group counselling and internships have an impact on the career maturity of high school students.
16. Career counselling in high schools has an impact on the career maturity of high school students.

5.4 Recommendations

The following recommendations are made based on the conclusions:

1. School management may launch career counselling programs to enhance career maturity by allotting mandatory counselling sessions for high school students throughout the academic year.
2. School management can focus on equal development of boys and girls for their career maturity. Boys can be encouraged to attend more individual counselling, group counselling and participate in internships by giving them incentive of increased self-awareness about their interests, aptitudes, world of work information and ability to make more informed decisions.
3. Career counsellors in high school may hold interactive group counselling sessions separately for boys to increase their career development knowledge and discuss careers of particular interest within the groups.
4. High school career counsellors can collaborate with the teachers to earlier identify students of average and below average academic achievement so that they can be encouraged to attend more counselling sessions. Need analysis can be conducted to understand the concerns of average and below average students for more effective engagement.
5. Career counselling programs within high schools can focus on a balanced combination of individual counselling, group counselling, career days, college fairs and internships for increasing career maturity of their students.
6. The more effective career counselling activities, i.e. individual counselling, group counselling and internships can be given preference over career days and college fairs for high school's incorporation in the career counselling programs throughout the academic year to develop career maturity, career development attitudes and career development knowledge of students.
7. Career counsellors can focus on individualized career counselling for students based on their commonly identified need. Students that need to focus on career planning can be advised to have more group counselling sessions, attend college fairs and participate in more internships. Students that need to focus on career exploration can be advised to have more individual counselling sessions and participate in internships. Students that need to make specific decisions regarding careers can focus on individual counselling, group counselling and internships. Students that want to acquire more world of work information can focus more on group counselling sessions and internships. Students that want to

acquire more knowledge of their preferred occupations can focus more on individual counselling, group counselling and internships.

8. Teachers can benefit from the findings and get involved with high school students to also identify their career paths and contribute towards their overall career maturity.
9. There is a need to design indigenous scales that measure the career maturity of Pakistani students within the local context.
10. The research can be replicated in public high schools at a national level that may provide further validation of implementing career counselling across the country's high schools.
11. The results can be useful in encouraging the thought process among decision makers within high school systems and national education policymakers in implementing mandatory career counselling programs across the board for private and public high schools.

REFERENCES

Ali, S. A., & Waheed, U. (2017). Consequences of the lack of interest-based educational choice among Pakistani students: how technology could improve educational choice process. *Sci.Int, Lahore), 29(1),* 29-33

Ali, S., Yang, L., Button, C., & McCoy, T. (2011). Career education programming in three diverse high schools: A critical psychology-case study research approach. *Journal of Career Development, 39(4),* 357-385. doi: 10.1177/0894845311398131

Allen, K. R. and Bradley, L. (2015), Career Counseling With Juvenile Offenders: Effects on Self Efficacy and Career Maturity. *Journal of Addictions & Offender Counseling, 36*: 28–42. doi:10.1002/j.2161-1874.2015.00033.x

Amani, J. (2013). Social Influence and Occupational Knowledge as Determinants of Career Choice Intentions among Undergraduate Students in Tanzania. *International Journal of Learning and Development, 3*(3), 185-193.

American School Counselor Association. (2014). Careers/Roles. Retrieved from http://www.schoolcounselor.org/schoolcounselors-members/careers-roles

Amoah, S. A., Kwofie, I., & Kwofie, F. A. A. (2015). The School Counsellor and Students' Career Choice in High School: The Assessor's Perspective in a Ghanaian Case. *Journal of Education and Practice, 6*(23), 57-65.

Atli, A. (2017). Five-factor personality traits as predictor of career maturity. Eurasian *Journal of Educational Research, 68,* 153-167, http://dx.doi.org/10.14689/ejer.2017.68.8

Blustein, D. L. (2017). THE PSYCHOLOGY OF WORKING: A New Perspective for Career Development. *Career Planning & Adult Development Journal*, 33(2), 60-68.

Broadbent, R., Cacciattolo, M., & Papadopoulos, T. (2012). Good practice in secondary school careers programs: A case study of the approach of one inner city school. *Education+ Training*, *54*(2/3), 126-141.

Bryan, J., Moore-Thomas, C., Day-Vines, N., & Holcomb-McCoy, C. (2011). School counselors as social capital: The effects of high school college counseling on college application rates. *Journal of Counseling and Development, 89*, 190-199.

Bridgeland, J., & Bruce, M. (2011). 2011 National Survey of School Counselors: Counseling at a Crossroads. *College Board Advocacy & Policy Center*. Retrieved from https://eric.ed.gov/?id=ED527749

Buckner, T. D. (2014). *Developing efficacy in high school students' postsecondary decisions through career counseling in the classroom* (Order No. 3630383). Available from ProQuest Dissertations & Theses Global. (1586705102). Retrieved from https://search.proquest.com/docview/1586705102?accountid=135034

Burns, G. N., Jasinski, D., Dunn, S., & Fletcher, D. (2013). Academic support services and career decision-making self-efficacy in student athletes. *The Career Development Quarterly*, *61*(2), 161-167.

Cardoso, P., Isabel Nunes Janeiro, and Maria Eduarda Duarte (2018). Life Design Counseling Group Intervention with Portuguese Adolescents: A Process and Outcome Study**.** *Journal of Career Development* Vol 45, Issue 2, pp. 183 – 196

Career Guidance and Counseling Programs. (2014). Retrieved from www2.ed.gov: http://www2.ed.gov/about/offices/list/ovae/pi/cte/cgcp.html

Cassie, D. V., & Chen, C. P. (2012). The gender-mediated impact of a career development intervention. *Australian Journal of Career Development*, *21*(1), 3-13.

Chen, T. L., & Shen, C. C. (2012). Today's intern, tomorrow's practitioner?—The influence of internship programmes on students' career development in the Hospitality Industry. *Journal of Hospitality, Leisure, Sport & Tourism Education*, *11*(1), 29-40

Cheung, R., & Jin, Q. (2016). Impact of a career exploration course on career decision making, adaptability, and relational support in Hong Kong. *Journal of Career Assessment*, *24*(3), 481-496.

Chiesa, R., Massei, F., & Guglielmi, D. (2016). Career decision-making self-efficacy change in Italian high school students. *Journal of Counseling & Development*, *94*(2), 210-224.

Choi, S., Hutchison, B., Lemberger, M. E., & Pope, M. (2012). A longitudinal study of the developmental trajectories of parental attachment and career maturity of South Korean adolescents. *The Career Development Quarterly*, 60(2), 163-177. DOI: 10.1002/j.2161-0045.2012.00014.x

Choices, ILO (2011). Retrieved from:

https://www.ilo.org/islamabad/whatwedo/publications/WCMS_185248/lang--en/index.htm

Creed, P., & Hood, M. (2015). Process variables: maturity, identity, decision making, and adjustment. *APA handbook of career intervention. Washington, DC: American Psychological Association*

Creed, P. A., Patton, W., & Prideaux, L. A. (2007). Predicting change over time in career planning and career exploration for high school students. *Journal of adolescence*, *30*(3), 377-392.

Crews, M. (2006). Career maturity of college freshman as impacted by career counseling received in grades K-12: A reflective study (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3232496)

Crites, J. O., & Savickas, M. L. (2011). Career Maturity Inventory—Form C. Kent, OH. Available from www.vocopher.com

Datu, J. (2013). Cognitive-behavior intervention group counseling manual for reducing adolesecents' career indecision. *International Journal of Research Studies in Education*, *2*(2), 61-70.

Dawn Newspaper (2017) Retrieved from: https://www.dawn.com/news/1341111

Dietsche, P. (2013). Career planning in Ontario grade 10 students: counsellor perspectives. *The Canadian Journal of Career Development/Revue canadienne de développement de carrière*, *12*(1), 4-16.

Dhillon, U., & Kaur, R. (2005). Career maturity of school children. *Journal of the Indian Academy of Applied Psychology*, 31(1), 71-76.

Dogar, A. H., Azeem, M., Majoka, M. I., Mehmood, A., & Latif, S. (2011). Need Assessment of Students' Guidance and Counseling. *British Journal of Arts and Social Sciences*, *1*(2), 108-124.

Ebberwein, C. A., Krieshok, T. S., Ulven, J. C., & Prosser, E. C. (2004). Voices in transition: Lessons on career adaptability. *The Career Development Quarterly*, *52*(4), 292-308.

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.

Gamboa, V., Paixão, M. P., & de Jesus, S. N. (2013). Internship quality predicts career exploration of high school students. *Journal of Vocational Behavior*, *83*(1), 78-87.

Garcia, P. R. J. M., Restubog, S. L. D., Bordia, P., Bordia, S., & Roxas, R. E. O. (2015). Career optimism: The roles of contextual support and career decision making self-efficacy. *Journal of Vocational Behavior*, *88*, 10-18.

Gati, I., & Amir, T. (2010). Applying a Systemic Procedure to Locate Career Decision-Making Difficulties. *The Career Development Quarterly*, 58(4), 301-320

Gati, I., & Levin, N. (2014). Counseling for career decision-making difficulties: Measures and methods. *The Career Development Quarterly, 62*(2), 98-113.

Glading, R. G. (2007). *How high school mentoring and internship programs prepare students for success after high school* (Doctoral dissertation, Fordham University).

Gulbahce, A. (2007). An analysis of self-image and social comparison of the students who have different career maturity levels [Mesleki olgunluk duzeyleri farklı olan ogrencilerin sosyal karsilastirma ve benlik imgelerinin incelenmesi] (Unpublished doctoral dissertation). Ataturk Universitesi, Erzurum, Turkey

Gysbers, N. C., & Henderson, P. (2014). *Developing and managing your school guidance and counseling program*. John Wiley & Sons.

Gysbers, N.C., Stanley, J.B., Kosteck-Bunch, L., Magnuson, C.S., and Starr, M.F. (2011)"Missouri Comprehensive Guidance and Counseling Program." Missouri Department of Elementary & Secondary Education, the University of Missouri, and the Missouri Center for Career Education.

Harlow, A. J., & Bowman, S. L. (2016). Examining the career decision self-efficacy and career maturity of community college and first-generation students. *Journal of Career Development, 43*(6) 512-525. DOI: 10.1177/0894845316633780

Hassan, M. (2014). Parental guidance for career choice of secondary school students in the opinion of educational counselor. (Doctoral dissertation). University of Karachi.

Hayes, T. (2018). Educational and employment outcomes for students who complete a high school career and technical concentration. *Masters Theses and Doctoral Dissertations.*
Retrieved from https://scholar.utc.edu/theses/547

Hilling, E. (2017). The Importance of Career Counseling and Post-Secondary Readiness for High School Students. *Counselor Education Capstone*. 37. Retrieved from: https://digitalcommons.brockport.edu/edc_capstone/37

Hines, P. & Lemons, R. (2011). Poised to lead: How school counselors can drive college and career readiness. Retrieved from: http://www.edtrust.org/dc/publication/poised-to-lead

Hirschi, A. & Lage, D. (2008). Increasing the career choice readiness of young adolescents: An evaluation study. *International Journal of Educational Vocational Guidance, 8*, 95-110.doi:10.1007/s10775-008-9139-7

Human, L. H., & Human, M. (2016). The usefulness of facilitating narrative career counselling with learner-athletes in a South African sport school. *South African Journal of Higher Education*, *30*(3), 156-169.

Hurst, J. L., Thye, A., & Wise, C. L. (2014). Internships: The key to career preparation, professional development, and career advancement. *Journal of Family & Consumer Sciences*, *106*(2), 58-62.

International Labour Organization. (2006). Career Guidance: A resource handbook for low- and middle-income countries. Retrived from: https://www.ilo.org/skills/pubs/WCMS_118211/lang--en/index.htm

ILO. (2017). Retrieved from: https://www.ilo.org/asia/lang--en/index.htm

Infantolino, Michelle, "High School Seniors' Perceived Stress of the College and Career Decision Making Process" (2017). *Counselor Education Capstone*. 43. https://digitalcommons.brockport.edu/edc_capstone/43

Ismail, A., Madrah, H., Aminudin, N., & Ismail, Y. (2013). Mediating role of career development in the relationship between career program and personal outcomes. *Hubs-Asia*, *9*(2).

Ismail, M. S., Abdullah, S. S., Mohamad, M. Z., & Khairuldin, W. M. K. F. W. (2018). Student's Career Maturity: Implications on Career Counselling. Retrieved from: https://www.researchgate.net/profile/Zaidin_Mohamad/publication/325119739_Student%27s_Career_Maturity_Implications_on_Career_Counselling/links/5af94e27a6fdcc0c03345386/Students-Career-Maturity-Implications-on-Career-Counselling.pdf

Jacobus G. Maree & Claire Symington (2015) Life design counselling effects on the career adaptability of learners in a selective independent school setting, *Journal of Psychology in Africa*, *25*:2, 143-150, doi: 10.1080/14330237.2015.1021531

Jafrani, S., Zehra, N., Zehra, M., Ali, S. M. A., Mohsin, S. A. A., & Azhar, R. (2017). Assessment of personality type and medical specialty choice among medical students from Karachi; using Myers-Briggs Type Indicator (MBTI) tool. *JPMA*, *67*(520).

Janeiro, I. N., Mota, L. P., & Ribas, A. M. (2014). Effects of two types of career interventions on students with different career coping styles. *Journal of Vocational Behavior*, *85*(1), 115-124.

Jokisaari, M., & Vuori, J., (2011). Effects of a group intervention on the career network ties of Finnish adolescents. *Journal of Career Development, 38*(5), 352-368

Jordan, Gessnitzer & Kauffeld (2016) Effects of a group coaching for the vocational orientation of secondary school pupils, Coaching: *An International Journal of Theory, Research and Practice*,*9*:2, 143-157, DOI: 10.1080/17521882.2016.1210185

Kamran, S., & Khalidi, D. (2011). How students decide about their careers? A case study of management students of textile institute of Pakistan, Karachi. *Journal of Independent Studies and Research, 9(2),* 39-48

Kaskey, V. (2012). An investigation into a career day on a student's choice of profession. *International Journal of Business and Social Science, 3*(14).

Khan , A. Z., Khan, H. G., Siraj, D., & Hijazi, D. (2011). Importance of school based ICT curriculum and career counseling in Pakistan. *International Journal of Humanities and Social Science, 1*(2). 61-67

Khan, H., Murtaza, F., & Shafa, D. D. (2012). Role of teachers in providing educational and career counseling to the secondary school students in Gilgit Baltistan of Pakistan. *International Journal of Academic Research in Progressive Education and Development, 1*(2). 85-102

Lapan, R. (2012) Comprehensive School Counseling Programs: In Some Schools for Some Students But Not in All Schools for All Students. Professional School Counseling: December 2012, Vol. 16, No. 2, pp. 84-88.https://doi.org/10.5330/PSC.n.2012-16.84

Leibrandt, S. O. (2016). *College-going capital: Understanding the impact of college readiness policies on schools and students* (Doctoral dissertation, University of Colorado at Boulder).

Levine, K. A., & Sutherland, D. (2013). History Repeats Itself: Parental Involvement in Children's Career Exploration/L'histoire se répète: La participation des parents dansl'exploration de carrière pour enfants. *Canadian Journal of Counselling and Psychotherapy (Online)*, *47*(2), 239.

Li, Y., Guan, Y., Wang, F., Zhou, X., Guo, K., Jiang, P., & Fang, Z. (2015). Big-five personality and BIS/BAS traits as predictors of career exploration: The mediation role of career adaptability. *Journal of Vocational Behavior*, *89*, 39-45.

Lindstrom, L., Doren, B., Post, C., & Lombardi, A. (2013). Building career PATHS (postschool achievement through higher skills) for young women with disabilities. *The Career Development Quarterly*, *61*(4), 330-338.

Macera, M. H., & Cohen, S. H. (2006). Psychology as a profession: An effective career exploration and orientation course for undergraduate psychology majors. *The Career Development Quarterly*, *54*(4), 367-371.

Maree, J. G. (2016). Career construction as a way of resolving career indecision. *South African Journal of Higher Education*, *30*(3), 170-192.

Maree, J. G. (2018). Innovative career construction counselling for a creative adolescent. *British Journal of Guidance & Counselling*, 1-16.

Maree, J. G. (2018). Promoting career development in the early years of a person's life through self-and career construction counselling (using an integrated, qualitative+ quantitative approach): a case study. *Early Child Development and Care*, *188*(4), 437-451.

Martinez, R. R., Baker, S. B., & Young, T. (2017). Promoting career and college readiness, aspirations, and Self-Efficacy: Curriculum field test. *The Career Development Quarterly, 65*(2), 173-188. doi:10.1002/cdq.12090

National Education Management Information Systems. (2017) Retrieved from: http://www.aepam.edu.pk/Index.asp?PageId=3

National Education Policy. (2017). Retrieved from: http://www.moent.gov.pk/userfiles1/file/National%20Educaiton%20Policy%202017.pdf

Niles, S. G., & Harris-Bowlsbey, J. (2009). *Career development and diverse populations*. Upper Saddle River, NJ: Pearson

NCDA. (2015). Retrieved from http://www.ncda.org/pdf/counselingcompetencies.pdf National Career Development Association

Ngo, Melissa, "Spartaneous Individual College Career Workshop" (2017). *Capstone Projects and Master'sTheses*.182 https://digitalcommons.csumb.edu/caps_thes_all/182

Obi, M. C., & Mohd, T. N. (2013). Career decision making process among high school students. *International Journal of Research in Education Methodology, 3*(2), 282-292.

Pakistan National Youth Strategy. (2008). Retrived from: http://www.moya.gov.pk/national_youth_policy.html

Papadimitriou, M. (2014). High School Students' Perceptions of Their Internship Experiences and the Related Impact on Career Choices and Changes. *Online Journal for Workforce Education and Development*, *7*(1), 8.

Pascual, N. T. (2014). Factors Affecting High School Students' Career Preference: A Basis for Career Planning Program. *International Journal of Science: Basics and Applied Research*, *16*(1), 1-14.

Perdrix, S., Stauffer, S. Masdonati, J., Massoudi, K., & Rossier, J. (2012). Effectiveness of career counseling: A one-year follow-up. *Journal of Vocational Behavior, 80*, 565-578.

Perry, J. C., & Wallace, E. W. (2012). What schools are doing around career development: Implications for policy and practice. *New Directions for Student Leadership*, *2012*(134), 33-44.

Pesch, K. M. (2014). *Occupational knowledge in college students: Examining relations to career certainty, career decision making self-efficacy, and interest congruence* (Doctoral dissertation, Iowa State University).

Peterson, J. J., Wardwell, C., Will, K., & Campana, K. L. (2014). Pursuing a purpose: The role of career exploration courses and service-learning internships in recognizing and developing knowledge, skills, and abilities. *Teaching of Psychology*, *41*(4), 354-359.

PNHDR-UNDP. (2017).
Retrived from:
http://www.pk.undp.org/content/pakistan/en/home/library/human-development-reports/PKNHDR.html

Porfeli, E. J., & Lee, B. (2012). Career development during childhood and adolescence. *New directions for youth development*, *2012*(134), 11-22.

Rawatlal, K. V., & Pillay, S. (2017). Career counselling intervention efficacy with South African university students. *Journal of Psychology in Africa*, *27*(6), 569-572.

Rehfuss, M. C., & Sickinger, P. H. (2015). Assisting High School Students with Career Indecision Using a Shortened Form of the Career Construction Interview. *Journal of School Counseling*, *13*(6), n6.

Roach, S. W. (2015). *The effectiveness of a career course on program of study selection and career maturity of high school freshmen* (Doctoral dissertation), Liberty University.

Rowan-Kenyon, H., Perna, L., & Swan, A. (2011). Structuring opportunity: The role of school context in shaping high school students' occupational aspirations. *The Career Development Quarterly*, *59*(4), 330-344.

Sahin, A., Gulacar, O., & Stuessy, C. (2015). High school students' perceptions of the effects of international science Olympiad on their STEM career aspirations and twenty-first century skill development. *Research in Science Education*, *45*(6), 785-805.

Saniter, N., & Siedler, T. (2013). The effects of occupational knowledge: job information centers, educational choices, and labor market outcomes: IZA Discussion Paper No. 8100. Available at SSRN: https://ssrn.com/abstract=2426854

Savickas, M. (2005). The theory and practice in career construction . In S. Brown, & R. Lent (Eds.), *Career development and counseling: Putting theory and research to work*. (pp.42-53).

Savickas, M. L. (2013). The theory and practice of career construction. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to* work (2nd ed. pp. 147–183). New York, NY: Wiley.

Savickas, M. L., & Porfeli, E. J. (2011). Revision of the career maturity inventory: The adaptability form. *Journal of Career Assessment*, *19*(4), 355-374.

Schenck, P. M., Anctil, T. M., Smith, C. K., & Dahir, C. (2012). Coming full circle: Reoccurring career development trends in schools. *The Career Development Quarterly*, *60*(3), 221-230.

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.

Scholl, M. B., & Cascone, J. (2010). The constructivist résumé: Promoting the career adaptability of graduate students in counseling programs. The Career Development Quarterly, 59(2), 180-191.

Silic, I. (2016). How Students Choose College in Croatia. Rochester Institute of Technology.
Retrieved from: http://scholarworks.rit.edu/theses/9373

Sivakumar, B., & Sridhar, N. (2016). A Study on Career Maturity of XI Standard Students. *The International Journal of Indian Psychology*, *3*(2), 82-91.

Sovet, L., & Metz, A. J. (2014). Parenting styles and career decision making among French and Korean adolescents. *Journal of Vocational Behavior*, *84*(3), 345-355.

Spurk, D., Kauffeld, S., Barthauer, L., & Heinemann, N. S. (2015). Fostering networking behavior, career planning and optimism, and subjective career success: An intervention study. *Journal of vocational behavior*, *87*, 134-144.

Super, D. E. (1975). A life-span, life-space approach to career development. Journal of vocational behavior, 16(3), 282-298.

Super, D. E. (1990). A life-span, life-space approach to career development. In D. Brown, L.Brooks, & Associates (Eds.), *Career choice and development*: *Applying contemporary theories to practice* (2nd ed., pp. 197-261). San Francisco: Jossey-Bass.

Talib, J. B. A., Mohamad, Z., & Wahab, N. A. (2015). Effects of Career Exploration Module on Career Planning, Career Self-Efficacy and Career Maturity among Community College Students. *Mediterranean Journal of Social Sciences*, *6*(6 S1), 464.

Talib, J. A., Salleh, A., Amat, S., Ghavifekr, S., & Ariff, A. M. (2015). Effect of career education module on career development of community college students. *International Journal for Educational and Vocational Guidance*, *15*(1), 37-55.

Torpey, E. (2015). Same occupation, different pay: how wages vary. *Career Outlook, September.* Retreived from https://www.bls.gov/careeroutlook/2015/article/should-i-get-a-masters-degree.htm?view_full

Turan, E., Çelik, E., & Turan, M. E. (2014). Perceived social support as predictors of adolescents' career exploration. *Australian Journal of Career Development*, *23*(3), 119-124.

Ulas, O., & Yildirim, I. (2015). Predictors of career maturity among high school students. *Hacettepe Universitesi Egitim Fakultesi Dergisi-Hacettepe University Journal of Education*, *30*(2), 151-165.

UNDP. (2015) United Nations Development Programme, New York, NY. Retrieved from hdr.undp.org/sites/default/files/2015_human_development_report.pdf

Vignoli, E. (2015). Career indecision and career exploration among older French adolescents: The specific role of general trait anxiety and future school and career anxiety. *Journal of Vocational Behavior*, *89*, 182-191.

Waheed, S., & Zaim, A. H. (2015). A model for talent management and career planning. *Educational Sciences: Theory and Practice*, *15*(5), 1205-1213.

Wang, Y. C., & Lee, Y. M. (2017). The Effectiveness of Two Positive Career Counseling Modules for Working Parents in Taiwan. *Journal of Employment Counseling*, *54*(1), 23-37.

Waddell, J., Spalding, K., Canizares, G., Navarro, J., Connell, M., Jancar, S., & Victor, C. (2015). Integrating a career planning and development program into the baccalaureate nursing curriculum: Part I. Impact on students' career resilience. *International journal of nursing education scholarship*, *12*(1), 163-173.

Watts, A. G. (2013). False dawns, bleak sunset: the Coalition Government's policies on career guidance. *British Journal of Guidance & Counselling*, *41*(4), 442-453.

Watts, A. G. (2017). The emerging policy model for career guidance in England: Some lessons from international examples. *Journal of the National Institute for Career Education and Counselling, 27*(1), 32-39

Weber, S. A. (2016). "My Training Wheels are Off:" How First Generation College Students Made Meaning of the Influence of their College Access and Support Programs (Doctoral dissertation, Syracuse University)

Whiston, S. C., & Quinby, R. F. (2009). Review of school counseling outcome research. *Psychology in the Schools*, *46*(3), 267-272.

Willner, T., Gati, I., & Guan, Y. (2015). Career decision making profiles and career decision making difficulties: A cross-cultural comparison among US, Israeli, and Chinese samples. *Journal of Vocational Behavior*, *88*, 143-153

World Bank. (2017). Retrived from: http://documents.worldbank.org/curated/en/143021506909711004/World-Bank-Annual-Report-2017

Yaqoob, U., Arif, F., Samad, M., & Iqbal, A. (2017). Career counselling and its knowledge among high school students in Pakistan. *International Journal Of Community Medicine And Public Health*, *4*(7), 2261-2268.

Yun, S., & Min, S. (2015). Analysis on occupational preference, career, aspiration and career attitude maturity of middle & high school students. *Indian Journal of Science and Technology*, 8(S7), 664-673.

Appendix - A

LIST OF EXPERTS

1. Ms. Ayesha Khan, Guidance Counsellor & SAT supervisor, SuperNova School
2. Mr. Farhan Naeem, Senior Manager Guidance Counselling and Student Affairs, Roots Millennium Schools
3. Ms. Farheen Gul, Guidance Counsellor, Roots Millennium Schools

Appendix - B

Case Processing Summary

		N	%
Cases	Valid	43	100.0
	Excluded[a]	0	.0
	Total	43	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.777	120

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CP1	393.2973	858.381	.156	.743
CP2	392.6486	869.068	-.050	.746
CP3	392.8919	841.877	.251	.740
CP4	393.2703	858.703	.061	.746
CP5	392.5676	864.308	.057	.745
CP6	393.2432	870.245	-.058	.749
CP7	394.6216	907.408	-.496	.759
CP8	394.4865	868.535	-.038	.748
CP9	394.0811	885.854	-.246	.753
CP10	393.0270	870.138	-.063	.747
CP11	393.4865	850.923	.183	.742
CP12	393.1892	860.880	.111	.744
CP13	393.2432	866.634	.004	.745
CP14	392.9189	870.965	-.087	.747
CP15	393.1081	864.377	.048	.745
CP16	392.9459	864.886	.044	.745
CP17	393.0541	865.053	.014	.746
CP18	393.8378	878.029	-.244	.749
CP19	393.8108	872.380	-.110	.747
CP20	393.2703	857.592	.104	.744

CE1	393.4595	863.644	.053	.745
CE2	393.0811	845.632	.358	.739
CE3	393.7838	842.452	.263	.740
CE4	393.8649	825.176	.429	.735
CE5	393.0541	846.275	.421	.739
CE6	393.1081	850.210	.224	.741
CE7	393.6757	872.447	-.094	.748
CE8	394.1892	881.713	-.186	.752
CE9	392.3784	911.520	-.220	.808
CE10	393.5135	848.146	.270	.741
CE11	393.8108	861.102	.068	.745
CE12	393.6486	836.901	.453	.737
CE13	394.0000	825.889	.539	.734
CE14	393.6486	822.345	.535	.733
CE15	393.6486	833.179	.524	.736
CE16	393.4324	836.641	.520	.737
CE17	393.4595	834.977	.441	.737
CE18	393.8649	837.842	.501	.737
CE19	393.8378	832.640	.514	.736
CE20	394.0000	827.500	.428	.735
DM1	393.6757	846.892	.284	.740
DM2	393.2162	814.396	.661	.730
DM3	394.0000	828.389	.354	.736
DM4	393.8649	844.787	.220	.741
DM5	392.9459	847.330	.428	.739
DM6	393.2432	838.134	.326	.738
DM7	393.6216	848.797	.218	.741
DM8	394.4595	849.644	.157	.743
DM9	393.5405	851.144	.189	.742
DM10	393.1351	847.731	.316	.740
DM11	393.8919	851.932	.179	.742
DM12	393.7297	838.703	.434	.737
DM13	393.7297	823.425	.587	.733
DM14	392.9189	866.299	.017	.745
DM15	393.5676	828.530	.509	.735
DM16	393.4054	843.414	.388	.739
DM17	393.3784	825.131	.572	.733
DM18	393.7838	839.952	.433	.738
DM19	393.7027	848.437	.240	.741
DM20	393.5946	854.137	.127	.744

WOWI1	393.2432	871.411	-.103	.747
WOWI2	393.7027	838.104	.463	.737
WOWI3	394.9189	844.632	.219	.741
WOWI4	393.3243	879.170	-.184	.750
WOWI5	393.2973	845.215	.349	.739
WOWI6	393.1351	860.842	.090	.744
WOWI7	395.2432	848.967	.252	.741
WOWI8	394.1081	869.488	-.053	.747
WOWI9	394.3243	859.447	.096	.744
WOWI10	394.4324	841.752	.295	.739
WOWI11	393.4054	856.192	.205	.742
WOWI12	394.2162	849.619	.233	.741
WOWI13	393.0811	859.965	.142	.744
WOWI14	394.8649	823.953	.478	.734
WOWI15	393.7568	852.578	.282	.741
WOWI16	393.4324	852.974	.293	.741
WOWI17	393.8378	845.917	.323	.740
WOWI18	394.2162	849.896	.282	.741
WOWI19	394.3243	845.281	.407	.739
WOWI20	393.8108	844.380	.374	.739
KPO1	394.2703	874.758	-.171	.748
KPO2	394.2162	879.563	-.176	.751
KPO3	393.7568	894.189	-.374	.755
KPO4	393.8919	889.710	-.251	.755
KPO5	394.2162	845.063	.251	.740
KPO6	392.8108	862.102	.112	.744
KPO7	393.4054	866.526	-.016	.747
KPO8	393.7297	866.703	-.014	.747
KPO9	393.4595	840.977	.340	.739
KPO10	393.6757	851.225	.174	.742
KPO11	393.5135	885.701	-.275	.752
KPO12	393.8108	871.102	-.070	.748
KPO13	393.0811	880.854	-.234	.750
KPO14	394.0270	833.583	.388	.737
KPO15	392.8378	894.251	-.275	.757
KPO16	392.5676	839.641	.201	.741
KPO17	393.6216	843.797	.327	.739
KPO18	393.4054	848.859	.337	.740
KPO19	393.7027	847.270	.237	.741
KPO20	393.8378	843.973	.329	.739

KPO21	394.1892	837.880	.326	.738
KPO22	393.8649	859.620	.127	.744
KPO23	393.9730	863.471	.033	.746
KPO24	393.6757	849.947	.251	.741
KPO25	393.7838	871.841	-.111	.747
KPO26	393.8378	869.306	-.057	.746
KPO27	393.7297	848.925	.278	.741
KPO28	393.3514	843.623	.330	.739
KPO29	393.4595	842.922	.280	.740
KPO30	393.7838	857.619	.096	.744
KPO31	393.5946	864.414	.019	.746
KPO32	392.9189	847.465	.178	.742
KPO33	394.0000	879.500	-.169	.751
KPO34	393.8108	876.880	-.130	.751
KPO35	394.1351	841.842	.335	.739
KPO36	394.0811	855.743	.115	.744
KPO37	393.8649	863.731	.040	.745
KPO38	393.2432	858.856	.119	.744
KPO39	393.7297	853.703	.207	.742
KPO40	393.2432	863.467	.033	.746

Appendix - C

Your application for a registration access code to Vocopher has been approved.

Here is your registration access code: [redacted]

You have been granted administrator access to the Vocopher website. This will allow you to view and use the career development inventory instrument and others for your students/clients.

To access the administrator login page, go to http://www.vocopher.com/admin

This is your Administrator username: [redacted]
This is your Administrator password: [redacted]

Contact kglavin@vocopher.com if you have any further questions.

* Note: Vocopher is a free service. No one, under any circumstances, should be charged to use the services on this web site. Feel free to contact kglavin@vocopher.com if you have any further questions.

Sincerely

Vocopher: The Career Collaboratory
kglavin@vocopher.com

Appendix - D

INSTRUCTIONS:

This questionnaire that you are about to fill out is the 'Career Development Inventory'. It consists of two parts. Part 1 is 80 questions and part 2 is 40 questions. Please read them carefully and answer to the best of your ability. There is no wrong answer. The Career Development Inventory measures how well you are engaging in the process of constructing your career. It is not an interest inventory that indicates whether or not a particular occupation is a wise choice for you, rather it shows whether or not in the process of building your career you are making choices wisely.

This inventory asks you about school, work, your future career, and some of the plans you may have made. Answers to questions like these can indicate what kind of help may be useful to you in planning and preparing for vocational and technical school training, or for going to college before pursuing your occupational career.

Please highlight or circle your responses.

Please fill in the following before you start the questionnaire:

1) Age 17 18 19

2) Gender Male Female

3) Grade level AS A2

4) Academic Achievement Below Avg Avg Above Avg

5) Have you received individual counselling in the past academic year ? Yes No

   If Yes, How many sessions 1 2 3 4 5

6) Have you received group counselling in the past academic year? Yes No

   If Yes, How many sessions 1 2 3 4 5

7) Have you attended college fairs? Yes No

   If Yes, How many sessions 1 2 3 4 5

8) Have you attended career days? Yes No

   If Yes, How many sessions 1 2 3 4 5

9) Have you done any internships in the past two years? Yes No

   If Yes, How many 1 2 3 4 5

The Career Development Inventory: Part 1. Career Orientations

A. CAREER PLANNING

How much thinking and planning have you done in the following areas? For each question below choose the answer that best tells what you have done so far.

1. Finding out about educational and occupational possibilities by going to the library, sending away for information, or talking to somebody who knows
   A. I have not yet given any thought to this.
   B. I have given some thought to this, but haven't made any plans yet.
   C. I have some plans, but am still not sure of them.
   D. I have made definite plans, but don't know yet how to carry them out.
   E. I have made definite plans, and know what to do to carry them out.
2. Talking about career plans with an adult who knows something about me.
   A. I have not yet given any thought to this.
   B. I have given some thought to this, but haven't made any plans yet.
   C. I have some plans, but am still not sure of them.
   D. I have made definite plans, but don't know yet how to carry them out.
   E. I have made definite plans, and know what to do to carry them out.
3. Taking classes that will help me decide what line of work to go into when I leave college or university.
   A. I have not yet given any thought to this.
   B. I have given some thought to this, but haven't made any plans yet.
   C. I have some plans, but am still not sure of them.
   D. I have made definite plans, but don't know yet how to carry them out.
   E. I have made definite plans, and know what to do to carry them out.
4. Taking classes which will help me in college, in job training, or on the job.
   A. I have not yet given any thought to this.
   B. I have given some thought to this, but haven't made any plans yet.
   C. I have some plans, but am still not sure of them.
   D. I have made definite plans, but don't know yet how to carry them out.
   E. I have made definite plans, and know what to do to carry them out.
5. Taking part in school or out-of-school activities which will help me in college, in training, or on the job.
   A. I have not yet given any thought to this.
   B. I have given some thought to this, but haven't made any plans yet.
   C. I have some plans, but am still not sure of them.
   D. I have made definite plans, but don't know yet how to carry them out.
   E. I have made definite plans, and know what to do to carry them out.
6. Taking part in school or after school activities (for example, science club, school newspaper, volunteer nurse's aide) that will help me decide what kind of work to go into when I leave school.
   A. I have not yet given any thought to this.
   B. I have given some thought to this, but haven't made any plans yet.
   C. I have some plans, but am still not sure of them.
   D. I have made definite plans, but don't know yet how to carry them out.
   E. I have made definite plans, and know what to do to carry them out.
7. Getting a part-time or summer job that will help me decide what kind of work I might go into.
   A. I have not yet given any thought to this.
   B. I have given some thought to this, but haven't made any plans yet.
   C. I have some plans, but am still not sure of them.

D. I have made definite plans, but don't know yet how to carry them out.
E. I have made definite plans, and know what to do to carry them out.

8. Getting money for college or for job training.
A. I have not yet given any thought to this.
B. I have given some thought to this, but haven't made any plans yet.
C. I have some plans, but am still not sure of them.
D. I have made definite plans, but don't know yet how to carry them out.
E. I have made definite plans, and know what to do to carry them out.

9. Working out problems that might make it hard for me to get the kind of training or the kind of work I would like.
A. I have not yet given any thought to this.
B. I have given some thought to this, but haven't made any plans yet.
C. I have some plans, but am still not sure of them.
D. I have made definite plans, but don't know yet how to carry them out.
E. I have made definite plans, and know what to do to carry them out.

10. Getting the kind of training, education, or experience I will need to get the kind of work I would like.
A. I have not yet given any thought to this.
B. I have given some thought to this, but haven't made any plans yet.
C. I have some plans, but am still not sure of them.
D. I have made definite plans, but don't know yet how to carry them out.
E. I have made definite plans, and know what to do to carry them out.

11. Getting a job once I have finished my education and training.
A. I have not yet given any thought to this.
B. I have given some thought to this, but haven't made any plans yet.
C. I have some plans, but am still not sure of them.
D. I have made definite plans, but don't know yet how to carry them out.
E. I have made definite plans, and know what to do to carry them out.

12. Doing things that will help me be a good worker, one who is most likely to be sure of a job.
A. I have not yet given any thought to this.
B. I have given some thought to this, but haven't made any plans yet.
C. I have some plans, but am still not sure of them.
D. I have made definite plans, but don't know yet how to carry them out.
E. I have made definite plans, and know what to do to carry them out.

The next questions concern the kind of work you would like to do when you complete your education. At this stage, you probably have not definitely decided on a specific occupation, but you probably can think of a field or type of job you would like to work at. Keeping in mind the type of job you think you might like to be in after you finish your schooling, choose the one best answer that tells the amount of knowledge you already have about these jobs.

13. What people really do on the job.
A. Hardly any knowledge.
B. A little knowledge.
C. An average amount of knowledge.
D. A good deal of knowledge.
E. A great deal of knowledge.

14. The abilities needed for the occupation.
A. Hardly any knowledge.
B. A little knowledge.

C. An average amount of knowledge.
D. A good deal of knowledge.
E. A great deal of knowledge.

15. The working conditions on such jobs.
A. Hardly any knowledge.
B. A little knowledge.
C. An average amount of knowledge.
D. A good deal of knowledge.
E. A great deal of knowledge.

16. The education or training needed to get such a job.
A. Hardly any knowledge.
B. A little knowledge.
C. An average amount of knowledge.
D. A good deal of knowledge.
E. A great deal of knowledge.

17. The need for people on that kind of job in the future.
A. Hardly any knowledge.
B. A little knowledge.
C. An average amount of knowledge.
D. A good deal of knowledge.
E. A great deal of knowledge.

18. Different ways of getting into that occupation.
A. Hardly any knowledge.
B. A little knowledge.
C. An average amount of knowledge.
D. A good deal of knowledge.
E. A great deal of knowledge.

19. The chances of advancing in that kind of kind of job or occupation.
A. Hardly any knowledge.
B. A little knowledge.
C. An average amount of knowledge.
D. A good deal of knowledge.
E. A great deal of knowledge.

20. What sort of working day and work week the future might have in that occupation.
A. Hardly any knowledge.
B. A little knowledge.
C. An average amount of knowledge.
D. A good deal of knowledge.
E. A great deal of knowledge.

B. CAREER EXPLORATION

Questions 21 through 30 have four possible answers. Choose the one best answer for each question to show whether
or not you would go to the following sources for information or help in making your plans for work or further education.

21. Father, mother, uncles, aunts, etc.
A. Definitely not.
B. Probably not.
C. Probably.
D. Definitely.

22. Brothers, sisters, or cousins.
    A. Definitely not.
    B. Probably not.
    C. Probably.
    D. Definitely.
23. Friends.
    A. Definitely not.
    B. Probably not.
    C. Probably.
    D. Definitely.
24. Coaches of school or other teams.
    A. Definitely not.
    B. Probably not.
    C. Probably.
    D. Definitely.
25. Teachers
    A. Definitely not.
    B. Probably not.
    C. Probably.
    D. Definitely.
26. School counselors.
    A. Definitely not.
    B. Probably not.
    C. Probably.
    D. Definitely.
27. Other adults who know things and can help people.
    A. Definitely not.
    B. Probably not.
    C. Probably.
    D. Definitely.
28. College catalogs, books, guidance materials etc...
    A. Definitely not.
    B. Probably not.
    C. Probably.
    D. Definitely.
29. People in the occupation or at the institute or college I am considering.
    A. Definitely not.
    B. Probably not.
    C. Probably.
    D. Definitely.
30. TV shows, movies, or magazines.
    A. Definitely not.
    B. Probably not.
    C. Probably.
    D. Definitely.

Questions 31 through 40 also have four possible answers. This time choose the one best answer to show how much useful information the people or sources listed below have already given you or directed you to in making your plans for the future.

31. Father, mother, uncles, aunts, etc...
    A. No useful information.

B. Some useful information.
C. A good deal of useful information.
D. A great deal of useful information.

32. Brothers, sisters, or cousins.
A. No useful information.
B. Some useful information.
C. A good deal of useful information.
D. A great deal of useful information.

33. Friends.
A. No useful information.
B. Some useful information.
C. A good deal of useful information.
D. A great deal of useful information.

34. Coaches of school or other teams.
A. No useful information.
B. Some useful information.
C. A good deal of useful information.
D. A great deal of useful information.

35. Teachers
A. No useful information.
B. Some useful information.
C. A good deal of useful information.
D. A great deal of useful information.

36. School counselors.
A. No useful information.
B. Some useful information.
C. A good deal of useful information.
D. A great deal of useful information.

37. Other adults who know things and can help people.
A. No useful information.
B. Some useful information.
C. A good deal of useful information.
D. A great deal of useful information.

38. College catalogues, books, guidance materials, etc.
A. No useful information.
B. Some useful information.
C. A good deal of useful information.
D. A great deal of useful information.

39. People in the occupation or at the institute or college I am considering.
A. No useful information.
B. Some useful information.
C. A good deal of useful information.
D. A great deal of useful information.

40. TV shows, movies, or magazines.
A. No useful information.
B. Some useful information.
C. A good deal of useful information.
D. A great deal of useful information.

C. DECISION-MAKING

What should each of the following students do? Choose the one best answer for each case.

41. E.R. took some tests that suggest some promise for clerical work. This student says, "I just can't see myself sitting behind a desk for the rest of my life. I'm the kind of person who likes variety. I think a traveling job would suit me fine." E.R. should:

A. disregards the tests and do what he or she wants to do.

B. do what the tests say since they know best.

C. look for a job that requires accounting ability but does not pin one to a desk.

D. ask to be tested with another test since the results of the first one are probably wrong.

42. J.D. might like to become a computer programmer, but knows little about computer programming, and is going to the library to find out more about it. The most important thing for J.D. to know now is:

A. what the work is, what one does on the job.

B. what the pay is.

C. what the hours of work are.

D. where one can get the right training.

43. A.M. is very good with skilled handiwork and there isn't anybody in the class who has more mechanical aptitude or is better at art. A.M.'s best grades are in math, but A.M. likes all of these things, What should A.M. do?

A. Look for an occupation that will use as many of these interests and abilities as possible.

B. Pick an occupation that uses math, since there is a better future in that than in art or in working with one's hands.

C. Decide now on one of these activities because of ability or interest, and then pick an occupation that uses that kind of asset.

D. Put off deciding about the future and wait until interest in some of these activities declines.

44. B.R. gets very good science grades but doesn't care too much about this subject. The subject B.R. liked best is art even though grades in it are only average. This student is most likely to do best in a future occupation if he or she:

A. forgets about interest in art since achievement is so much better science.

B. doesn't worry about the achievement in art, because if you like something you can become good at it.

C. looks for an occupation which uses both art and science, but more science than art.

D. looks for an occupation which involves both art and science, but more art than science.

45. L. F. seems not to care what kind of work is available on leaving school as long as it is working with people. If this is all this student cares about, he or she is likely to make a bad choice because:

A. this kind of work usually requires a college degree.

B. employers usually hire people with definite interests and objectives.

C. people look down on those who work with people because such work usually doesn't pay as well as technical work.

D. occupations in which one works with people can be very different from each other in the abilities and interests that are needed.

46. R.A. had good grades in all high school courses, he wants to go to college, has parents' approval for going to college, but he has no occupational plans. What is the best next step for R.A.?

A. Delay college until occupational plans emerge.

B. Choose a college major that is very difficult.

C. Choose a college where exploring several majors is encouraged during the first two years.

D. Find out about graduate and professional school requirements.

47. A.K. can't decide whether to become an air-conditioning and refrigeration technician or an engineer. In making the choice, to which of the following should A.K. pay the most attention?

A. How much money A.K. wants to earn.

B. How much education and training A.K. is likely to be able to get.

C. What A.K.'s parents would prefer.

D. Which occupation people respect most.

48. P.T. is a high school junior with no education or vocational plans beyond high school. What would you recommend that P.T do first?

A. A thorough search of colleges to attend.

B. An analysis of relevant personal characteristics such as abilities, interests, and values.

C. An intensive study of information about occupations.

D. A matching of P.T's abilities with job requirements.

49. E.B is a ninth-grader with excellent school grades and very high scores on all ability tests, but has no educational or vocational plans. What is the best advice to give to E.B.?

A. Arrive at a definite goal as soon as possible.

B. Not to be concerned about a goal or a plan because success is almost certain.

C. Concentrating on the selecting the right college.

D. Find out when important choices will have to be made and get the needed information.

50. An uncle has just told T.H. that his company is always looking for tool and dies makers, pays them well and keeps them on the payroll even in bad times. T.H. is interested and wants to learn more about the occupation. What is the most important thing for T.H. to learn?

A. Where else tool and dice makers work.

B. How much training is required.

C. What is the work tool and die makers do.

D. What tool and die makers actually are paid.

51. L.M. has good grades and is looking forward to studying engineering in college. What is the best advice to help L.M. plan a tenth-grade course schedule?

A. Be sure to schedule college preparatory math and science.

B. Get all of the shop courses it is possible to take.

C. Take a light load because in college it will be hard work.

D. Allow time for a part-time job to learn what engineers do.

52. J.M. who has always dreamed of being either a lawyer or a business executive, cannot plan for college because of the cost. J.M's grades and test scores show good promise for college. What should be recommended for J.M. after high school?

A. Find a job in a law office and go to law school at night.

B. Get a job in a business concern that offers on-the-job training and other educational opportunities.

C. Forget about law and business and work in a field that requires no education.

D. Find a rewarding hobby.

53. M.J. is considering becoming either a research chemist or a lawyer. In choosing between the, two, which of the following should be given the most weight?

A. Whether M.J.'s ability in science and grades in science courses are good enough.

B. Whether M.J. can afford to go to graduate school.
C. Whether M.J. can get admitted to graduate school.
D. Whether M.J.'s friends think the choice is a good one.

54. After careful thought, E.K. has decided on business training for a year or two after high school. However, deciding between majors in accounting and in sales remains a problem for E.K. In exploring this problem, what should be given most weight?
A. The difference in training time required by the two majors.
B. The chances of being admitted for training in the major.
C. Which major requires more work.
D. Which major best fits E.K.'s abilities and interests.

55. J.F. is the best all-around artist in the class, winning art competitions consistently. But academic subject matter comes hard to J.F., who will probably graduate in the bottom fifth of the senior 'class. Which is the most realistic educational plan for J.F.?
A. Seek admission to a university where one can combine art and regular college subjects to earn a Bachelor of Fine Arts.
B. Forget about any education beyond high school.
C. Forget about art and concentrate on college preparatory subjects.
D. Seek admission to an art school where poor academic grades will not be a handicap.

56. L.D. wants to be a newspaper reporter. Which of the following paths might lead to becoming a qualified newspaper reporter?
A. Working full-time on a newspaper and continuing education on a part-time basis.
B. Earning a bachelor's degree in journalism.
C. Taking a liberal arts degree first, followed by a graduate degree in journalism.
D. Any of the above.

57. B.D.'s interest in and skill at helping others have become the most important part of B.D.'s self-picture. Which occupation should B.D. probably not be considering?
A. Nurse's aide.
B. Recreation worker.
C. Sales person.
D. Teacher's aide.

58. R. R. gets' B's in math and science but has failed ninth-grade English twice and gets D's in social studies courses. Which occupation makes the most sense for R.R.?
A. Engineering technician.
B. Veterinarian.
C. Civil engineer.
D. Science and math teacher.

59. J.R has high ability, excellent grades, and the money to go to college. R.J.'s only clear future goal is to make a great deal of money. What should R.J. do?
A. Pursue a career in medicine because that's where the money is.
B. Arrive at an appropriate vocational goal and the money will take care of itself.
C. Change goals because wanting a lot of money is not a good thing.
D. Find out what wanting to make a lot of money really means.

60. A.S has good tested ability but has poor high school grades. The counselor advises that A.S. will not be admitted to any college because of the high school record. A.S. thinks the problems that caused the low grades are now solved and wants to get more education. What is A.S.'s best course of action?
A. Forget about college and seek a satisfying job.
B. Repeat courses in high school in order to improve the grades.

C. Find out about junior colleges and community colleges whose admission standards are less demanding.

D. Get private tutoring in the weak subjects.

D. WORLD-OF-WORK INFORMATION: Choose the one best answer to each of the following questions about career development and the world of work.

61. Tenth graders should be expected to know

A. exactly what occupation they want to go into.

B. the kind of work but not necessarily the specific occupation they want.

C. where to get the job they want.

D. the different occupations a person with their interests and abilities could go into.

62. When a teacher or counselor encourages student to explore themselves and the world about them, what he or she wants them to do is to

A. be active in school affairs.

B. go on field trips.

C. try themselves out in a variety of situations and activities.

D. take some aptitude tests.

63. Exploring interests, abilities, and opportunities is something that people should be encouraged to engage in

A. throughout their lives.

B. when they become dissatisfied with the way things are.

C. when they lose their jobs.

D. when things start to go wrong.

64. Which of the following will help high school students most in thinking about a career?

A. Making the right contacts.

B. Setting an occupational goal early and sticking to it.

C. Finding out where the best opportunities for employment are.

D. Finding out what activities and courses they like most and are best at.

65. The reason why many young people change jobs frequently between the ages of 18 and 25 is that they

A. doesn’t know when they are well off.

B. received wrong advice from their parents and teachers.

C. are the first to be fired when business is bad.

D. don't know enough about themselves or work to make good choices.

66. Suppose you know what kind of work you would like to do and also know about the many different occupations which can be found in that field. What information would you need to be able to pick out those occupations which are at the right level for you? (By field is meant the kind of work you would like to do, for example, scientific work, social service work, work involving machines and tools; by level is meant the amount of education and training you would need to get, and the amount of responsibility you would have to carry on the job.)

A. Information about your abilities.

B. Information about your educational and training requirements.

C. Information about what it would cost to get the needed training and education.

D. All of the above.

67. The most important thing about the courses you take at college or the jobs you take after you leave school is

A. what the courses or jobs tell you about your interests and abilities.

B. whether the courses or jobs are easy or difficult.
C. whether your parents approve of the choice of courses or jobs.
D. what your instructors or employers think of you.

68. Being happy in a job is mostly a matter of
A. being paid well.
B. having interesting things to do when your day's work is done.
C. knowing what you want from a job and getting it.
D. receiving promotions and pay increases.

69. Students who want to go to college or to seek a particular kind of job when they leave high school can improve their chances most by
A. being active in school affairs.
B. choosing appropriate high school courses.
C. getting along with their teachers and counselors.
D. choosing courses in which they know they will get good grades.

70. A student who, on leaving high school, takes a semi-skilled factory job at a good wage instead of a learner's job or apprenticeship
A. gives up a better future for a better present.
B. should work up to a more skilled job easily enough.
C. is probably following the counselor's advice.
D. is probably giving in to pressure from parents.

71. Family doctors (physicians) usually learn their jobs in
A. high schools.
B. community colleges or technical schools.
C. four-year colleges or universities.
D. graduate or professional schools.

72. Mail carriers usually learn their jobs in
A. high schools.
B. apprenticeships or on-the-job training.
C. community colleges or technical schools.
D. four-year colleges or universities.

73. Medical laboratory technicians are most likely to use
A. levels.
B. log tables.
C. tongue depressors.
D. microscopes.

74. A stock broker is most likely to use
A. a calculator.
B. calipers.
C. forceps.
D. a micrometer.

75. Bookkeepers are most likely to use
A. lathes.
B. calculators
C. ledgers.
D. slide rules.

76. Which of the following workers is most likely to be able to forget about work after leaving the office?
A. Administrative assistant.
B. Secretary.
C. Typist.

D. Credit clerk.

77. Waiters and waitresses are usually paid
    A. weekly salaries.
    B. hourly wages.
    C. wages and tips.
    D. tips only.
78. In starting a new job, it is most important to
    A. make sure the other workers like you.
    B. show that you are your own boss.
    C. be aware of how others feel about things.
    D. hide your own feelings from others.
79. In dealing with customers, clients, or other outsiders with whom your work brings you in contact, it is most important to
    A. show them you know more about your work than they do.
    B. understand what they want and see if you can help them get it.
    C. make sure that you do only as you are told.
    D. do whatever brings in the most money.
80. Which of the following is most important in a job interview?
    A. Telling the interviewer you will do any work so long as the job is a good one.
    B. Knowing what salary or pay to ask for.
    C. Finding out whether you and the job are right for each other.
    D. Being introduced by a mutual friend.

The Career Development Inventory: Part II. Knowledge of Preferred Occupation

One of the kinds of information required in career planning is knowledge of the occupational world, particularly of the occupations being considered as possible career goals. This section is designed to help you determine how much you know about the occupational area you are currently moving toward in your career planning, even though you may not have definitely decided on a specific occupation.

Read through the following twenty lists of occupations and check all those which you might like to be when you go to work. Then add in the blank spaces, any occupations not listed which you are particularly interested in. Put them in the group or groups where they seem to fit best.

Group A Physical Sciences:	Group B Physical Applied Science:	Group C Biological and Medical Science:	Group D Social Science Research:
Chemist	Architect	Dentist	Anthropologist
Geologist	Engineer (all types)	Medical Doctor	Economist
Mathematician	Geographer	Pharmacist	Market research analyst
Physicist	Industrial Engineer	Scientific Farmer	Social psychologist
Statistician	System Analyst	Veterinarian	Sociologist
----------	----------	----------	----------
Group E Social Science Teaching/ Social Service:	Group F Writing and Law:	Group G Art and Music:	Group H Public Performance:
Guidance Counsellor	Editor	Art Director	Actor/Actress

Marriage Counsellor School Psychologist Social Teacher Social Worker ----------	Lawyer Librarian Reporter Script Writer ----------	Commercial Artist Dress Designer Interior Decorator Musician ----------	Announcer(radio/TV) Dancer Musical Entertainer Professional Athlete ----------
Group I Business Financial: Auditor Bursar/Controller Computer analyst Cost Accountant Credit Analyst ----------	Group J Business Management: Sup't of Bldgs & Grounds Bank Manager Hotel Manager Personnel Manager Store Owner/Manager ----------	Group K Business Sales/Promotion: Advertising Manager Broker/Account Executive Buyer Public Relations/Manager Sales Manager ----------	Group L Business Office/Clerical Bank Teller Bookkeeper Clerk/Typist Postal Clerk Stenographer ----------
Group M Business Merchandising: Car Rental Clerk Department Store Salesperson Life Insurance Agent Real Estate Agent Retail Salesperson ----------	Group N Technical Physical Science: Air Traffic Controller Electronic Technician Photoengraver Surveyor Weather Analyst ----------	Group O Technical Health Sciences: Dental Hygienist Dietician Nurse (Registered) Occupational Therapist Optician ----------	Group P Technical Crafts: Auto Mechanic Dress Maker Electrician Jeweler Printer ----------

Group Q Technical Outdoor:	Group R Technical Mechanical:	Group S Personal service:	Group T Manual/Physical
Dairy Farmer	Appliance Repair	Beautician	Gas Station Attendant
Fish/Game Warden	Bulldozer Operator	Hospital Attendant	Parking Lot Attendant
Flower Grower	Bus Driver	Host/Hostess	Porter
Grain Farmer	Dry Cleaner	Receptionist	Radio Assembler
Landscape Gardner	Sewing Machine Operator	Waiter/Waitress	Stevedore
----------	----------	----------	----------

INSTRUCTIONS

Characteristics of Preferred Occupation: These five questions below deal with the kind of work involved. They should be answered in terms of the Occupational Group you selected when filling in the Occupational Group Preference Form. Be sure that you have marked the letter of your Preferred Occupational Group on the answer sheet.

Duties: Most occupations involve some combination of working with words, numbers, people, and things. In your Preferred Occupational Group the:

1. Most important is	A. Words	B. Numbers	C. People	D. Things
2. Next important is	A. Words	B. Numbers	C. People	D. Things
3. Least important is	A. Words	B. Numbers	C. People	D. Things

4. Tools and Equipment: The Occupational Group you selected requires the use of:

- A. no special tools or equipment.
- B. hand-tools, without real precision.
- C. hand-tools, with real precision.
- D. equipment, with simple handling or adjustments.
- E. complex equipment requiring technical knowledge and skill.

5. Physical Requirements: In this Occupational Group the work is generally:

- A. sedentary; done sitting down and lifting only light objects.
- B. light; one may stand or walk but does not have to lift heavy objects.
- C. moderately heavy; things to be lifted never weigh more than 50 pounds and usually less than 25.
- D. heavy; with much standing, walking, and lifting objects weighing up to 100 pounds in loading or moving equipment.

Ability Requirements: Occupations differ in the abilities required to learn and do the work. Following is a list of these abilities. Think of how people differ in these abilities and rate your Occupational Group to show how much of each of the abilities is typical of workers in the Occupational Group.

6. Verbal ability (understanding and working with words). On this ability, this Occupational Group is typically made up of:

- A. the bottom 10% of people in general.
- B. below average people.
- C. average, middle third of people in general.

D. above average people.

E. the top 10% of people in general.

7. Non-verbal reasoning (ability to find relationships among objects, patterns, and designs). On this ability, this Occupational Group is typically made up of:

A. the bottom 10% of people in general.

B. below average people.

C. average, middle third of people in general.

D. above average people.

E. the top 10% of people in general.

8. Numerical ability (working with numbers and using them in solving problems). On this ability, this Occupational Group is typically made up of:

A. the bottom 10% of people in general.

B. below average people.

C. average, middle third of people in general.

D. above average people.

E. the top 10% of people in general

9. Clerical ability (ability to check combinations of letters and numbers quickly and accurately). On this ability,
this Occupational Group is typically made up of:

A. the bottom 10% of people in general.

B. below average people.

C. average, middle third of people in general.

D. above average people.

E. the top 10% of people in general.

10. Mechanical ability (ability to understand mechanical principles and equipment and to apply the laws of everyday
science). On this ability, this Occupational Group is typically made up of:

A. the bottom 10% of people in general.

B. below average people.

- C. average, middle third of people in general.
- D. above average people.
- E. the top 10% of people in general.

11. Spatial ability (ability to see objects in relation to each other, to judge sizes and shapes, and to think in three dimensions).
On this ability, this Occupational Group is typically made up of:

- A. the bottom 10% of people in general.
- B. below average people.
- C. average, middle third of people in general.
- D. above average people.
- E. the top 10% of people in general.

12. Motor coordination (ability to move body accurately, quickly, and smoothly). On this ability, this Occupational Group
is typically made up of:

- A. the bottom 10% of people in general
- B. below average people.
- C. average, middle third of people in general.
- D. above average people.
- E. the top 10% of people in general.

13. English skills (knowledge of use of correct grammar, punctuation, and capitalization). On this ability, this
Occupational Group is typically made up of:

- A. the bottom 10% of people in general.
- B. below average people.
- C. average, middle third of people in general.
- D. above average people.

- E. the top 10% of people in general.

14. Reading ability. On this Occupational Group, workers must be able to:

- A. read and remember complex passages involving special vocabularies.
- B. understand the meanings of words in general literary use.
- C. read ordinary newspapers and carry on conversations.
- D. understand simple instructions and answer simple questions.

Interests: Consider the interests involved in your Preferred Occupational Group.

15. Here are 9 types of interests that people may have. Choose the one that is most typical of the occupations in the group you selected.

- A. Verbal -working with words, stories, ideas
- B. Numerical -working with numbers, arithmetic, calculators, etc.
- C. Clerical -detail work calling for accuracy and neatness with words or figures
- D. Mechanical -working with things, machines, equipment
- E. Scientific -experimenting, laboratory research, understanding the how and why of things
- F. Artistic/Musical -enjoying design, color, shape or enjoying listening to or playing music
- G. Promotional -influencing others personally or in writing
- H. Social -helping people who are in need or in trouble
- I. Outdoor -activities involving being outdoors

16. Now choose the one from the list below that is second most typical of the occupations in your Occupational Group Preference.

- A. Verbal -working with words, stories, ideas
- B. Numerical -working with numbers, arithmetic, calculators, etc.
- C. Clerical -detail work calling for accuracy and neatness with words or figures

- D. Mechanical -working with things, machines, equipment
- E. Scientific -experimenting, laboratory research, understanding the how and why of things
- F. Artistic/Musical -enjoying design, color, shape or enjoying listening to or playing music
- G. Promotional -influencing others personally or in writing
- H. Social -helping people who are in need or in trouble
- I. Outdoor -activities involving being outdoors

Values: Occupations differ in the extent to which they permit workers in the occupation to find what they want in life. In the following 14 questions, indicate how well the Occupational Group you picked provides opportunities for satisfying the values listed.

	Values	**Opportunities for satisfying**		
17.	Achievement(feeling you have really accomplished something)	A. Poor	B. Average	C. Good
18.	Altruistic(Helping people)	A. Poor	B. Average	C. Good
19.	Artisitic (enjoying beauty)	A. Poor	B. Average	C. Good
20.	Good Companionship(having plesant people to work with)	A. Poor	B. Average	C. Good
21.	Creative(making new things or creating new ideas)	A. B. Poor	C. D. Average	E. F. Good
22.	Economic (making plenty of money and having good things)	A. Poor	B. Average	C. Good
23.	Independence (being free to do things your way)	A. Poor	B. Average	C. Good
24.	Intellectual (working with ideas and solving problems)	A. Poor	B. Average	C. Good
25.	Managing(planning work and supervising people)	A. Poor	B. Average	C. Good
26.	Prestige (having the respect of others)	A. Poor	B. Average	C. Good
27.	Security (being sure of a job)			

		A. Poor	B. Average	C. Good
28.	Variety(changing activities or location)	A. Poor	B. Average	C. Good
29.	Way- of -life (living a good life in a nice place)	A. Poor	B. Average	C. Good
30.	Working Conditions (having a good place to work in)	A. Poor	B. Average	C. Good

Other Characteristics:

31. Select the response below that shows the amount of education required by your Preferred Occupational Group.

- A. Postgraduate degree (M.A. or Ph.D.) from a graduate school.
- B. Professional degree (M.D., LLB., etc.) from a professional school.
- C. B.A. or B.S. from a college or university.
- D. A.A. or certificate from a two-year college.
- E. Diploma from a business or technical school after high school.
- F. High school diploma.
- G. None of the above.

32. In your Preferred Occupational Group one needs

- A. no specialized training.
- B. special courses (for instance, commercial or vocational) in high school.
- C. an apprenticeship or more than a few days of on-the-job training.
- D. one or more short courses in business or technical school.
- E. a particular major in college.

F. a postgraduate or professional degree in a special field.

33. The best single way to get one's first job in this Occupational Group is through

A. direct application to the employer.

B. an examination that puts one on the eligible list.

C. the union.

D. one's school, or college, or professional school.

E. an employment agency.

34. Occupations vary in their social and economic levels, that is, in how well the people working in them can live.
How does the Occupational Group you have in mind compare with others in this way? It is

A. among the lowest.

B. below average.

C. about average in how people can live.

D. above average.

E. among the highest level occupations.

35. The work in some occupational fields is likely to change considerably as a result of future developments
in technology and science. The Occupational Group you are rating is likely to

A. require quite different knowledge and skills.

B. change somewhat.

C. stay pretty much the same.

36. How steady is the work in this Occupational Group?

- A. Even in bad times, workers are usually sure of a job and a regular income.
- B. Except in bad times, workers are usually sure of a job and a regular income.
- C. There is some risk of brief periods of unemployment.
- D. Employment is affected by economic changes and the risk of unemployment is great.

37. How steady is the income from this kind of work?

- A. Income goes up and down with worker performance, as in piece-work, or commission, or fee-charging jobs.
- B. Income varies from week to week with overtime pay or temporary lay-offs.
- C. Income is steady, based on a fixed salary.

38. Annual income differs from one occupation to another. How well does this Occupational Group pay? It is

- A. one of the lowest paying fields.
- B. below average.
- C. about average in how well it pays.
- D. above average.
- E. one of the highest paying fields.

39. Most people in this Occupational Group work for

- A. government agencies: federal, state, municipal, etc.
- B. private companies, organizations, or institutions.
- C. both governmental and private organizations.

40. The hours of work in these occupations are generally

- A. regular, daytime hours fixed by the organization.
- B. shift work, involving no change of shift.
- C. shift work, involving changing shifts at times.
- D. irregular, changing from day to day or week to week, as the situation demands.
- E. irregular, but under the control of the individual.
- F. fixed, but under the control of the individual.

Appendix - E

INFORMATION SHEET

Hello Student,

My name is Zainab Alam and I am a Masters students at the National University of Sciences and Technology in Islamabad, Pakistan. As part of the requirement for the MS degree in Career Counselling & Education at NUST, I have to carry out a research study. The study is concerned with assessing the impact career counselling has on the career maturity of high school students.

The study will involve approximately 45 minutes of your time. Your school career counsellor will hand out the information sheet, consent forms and the 'Career Development Inventory' which is the questionnaire that needs to filled with your responses.

You have been requested to participate because you are specifically suitable and meet the requirements to provide the data that is necessary for this study. Your participation is entirely voluntary and only after gaining your consent (form is attached). You have the option of withdrawing before the study commences, even if you have agreed to participate, or discontinue any time after you fill in the questionnaire.

I will ensure that no clues to your identity appear in the thesis and your anonymity is maintained. The data will be kept confidential for the duration of the study, available only to me and my research supervisor. On completion of the project, the results will be presented in a thesis. They will be seen by my supervisor and department. The thesis may be read by future students on the course. The study may be published in a research journal.

If you need any further information, you may ask your school counsellor or contact me directly through your school career counsellor. Thank you for your time.

Appendix - F

CONSENT FORM

Title of Research: IMPACT of CAREER COUNSELLING ON CAREER MATURITY OF HIGH SCHOOL STUDENTS

Name of Researcher: Zainab Alam

Please initial all boxes

1. I confirm that I have read and understand the information sheet for the study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time (before, during or after) without giving any reason and without any repercussions. ☐

3. I understand that my responses will be gathered and reported anonymously with confidentiality maintained. ☐

4. I agree to take part in the study. ☐

Date _____ Signature (Initials) _____

Impact of Career Counselling on Career Maturity of High School Students

ORIGINALITY REPORT

15%	8%	10%	6%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Higher Education Commission Pakistan Student Paper	2%
2	media.proquest.com Internet Source	1%
3	"Psycho-social Career Meta-capacities", Springer Nature America, Inc, 2014 Publication	1%
4	Susan Sharp. "disentangling strain, personal attributes, affective response and deviance: a gendered analysis", Deviant Behavior, 2/16/2005 Publication	1%
5	"Handbook of Career Development", Springer Nature America, Inc, 2014 Publication	<1%
6	lib.dr.iastate.edu Internet Source	<1%
7	jpma.org.pk Internet Source	<1%
8	Huan Zou. "Antecedents and consequences of new venture growth strategy: An empirical study in China", Asia Pacific Journal of	<1%

	Management, 07/21/2009 Publication	
9	Briana K. Keller, Susan C. Whiston. "The Role of Parental Influences on Young Adolescents' Career Development", Journal of Career Assessment, 2008 Publication	<1%
10	Submitted to Grand Canyon University Student Paper	<1%
11	Submitted to National Institute of Education Student Paper	<1%
12	Esther Tan. "The Career Maturity of Singaporean Adolescents - Where do We Stand and What Can be Done?", Asia Pacific Journal of Education, 1989 Publication	<1%
13	www.i-scholar.in Internet Source	<1%
14	gradworks.umi.com Internet Source	<1%
15	libres.uncg.edu Internet Source	<1%
16	digital.library.unt.edu Internet Source	<1%
17	trace.tennessee.edu Internet Source	<1%
18	Journal of Managerial Psychology, Volume 25, Issue 8 (2010-11-20) Publication	<1%

19	diginole.lib.fsu.edu Internet Source	<1%
20	www.scielo.gpeari.mctes.pt Internet Source	<1%
21	www.tojet.net Internet Source	<1%
22	www.ask.com Internet Source	<1%
23	uir.unisa.ac.za Internet Source	<1%
24	Leong. Encyclopedia of Counseling Publication	<1%
25	machinelearningtutorials.com Internet Source	<1%
26	Lee, S.-A., H.-S. Lee, H.-S. Song, and S.-G. Kim. "The relationship between attachment and career maturity: The mediating role of self-efficacy", International Social Work, 2012. Publication	<1%
27	Fuzi M. Abusa, Peter Gibson. "TQM implementation in developing countries", Benchmarking: An International Journal, 2013 Publication	<1%
28	Submitted to American Public University System Student Paper	<1%
29	"International Handbook on Giftedness", Springer Nature America, Inc, 2009 Publication	<1%

30	etd.lib.fsu.edu Internet Source	<1%
31	www.mcser.org Internet Source	<1%
32	Birol, Cem, and Yeliz KÄ±ralp. "A comparative analysis of the career maturity level and career indecision of the first grade high school students", Procedia - Social and Behavioral Sciences, 2010. Publication	<1%
33	nottingham.ac.uk Internet Source	<1%
34	"Exploring New Horizons in Career Counselling", Springer Nature America, Inc, 2015 Publication	<1%
35	P. D. Pumfrey, A. Schofield. "Work Experience and the Career Maturity of Fifth-Form Pupils", British Journal of Guidance & Counselling, 2007 Publication	<1%
36	E. F. Biller. "Career Development of the Learning Disabled Adolescent: A Focus on Career Maturity", Career Development for Exceptional Individuals, 04/01/1985 Publication	<1%
37	www.ukessays.com Internet Source	<1%
38	collections.mun.ca Internet Source	<1%

39	Submitted to University of Northumbria at Newcastle Student Paper	<1%
40	"Psychology of Career Adaptability, Employability and Resilience", Springer Nature, 2017 Publication	<1%
41	Selma B Laskin, Artis J Palmo. "The effect of Decisions and Outcomes on the career maturity of high school students", Journal of Vocational Behavior, 1983 Publication	<1%
42	Aikaterini Papakota. "Career counselling development", Industry and Higher Education, 2016 Publication	<1%
43	www.schoolcounselor.org Internet Source	<1%
44	www.coursehero.com Internet Source	<1%
45	Munteanu, A., I. Costea, and R. Palos. "Relationships between Academic Achievement and Personality Dynamics during Adolescence", South African Journal of Psychology, 2011. Publication	<1%
46	Submitted to The University of the South Pacific Student Paper	<1%
47	www.nmmu.ac.za Internet Source	<1%

48	Submitted to Southern Illinois University Student Paper	<1%
49	www.voced.edu.au Internet Source	<1%
50	Wendy Patton, Mary McMahon. "Career Development and Systems Theory", Springer Nature America, Inc, 2014 Publication	<1%
51	hndassignmenthelp.co.uk Internet Source	<1%
52	Submitted to Napier University Student Paper	<1%
53	Liying Zhang, Meirong Chen, Xiaoqing Zeng, Xinqiang Wang. "The Relationship between Professional Identity and Career Maturity among Pre-Service Kindergarten Teachers: The Mediating Effect of Learning Engagement", Open Journal of Social Sciences, 2018 Publication	<1%
54	Yun, Soonyoung, and Shinhong Min. "Analysis on Occupational Preference, Career, Aspiration and Career Attitude Maturity of Middle & High School Students", Indian Journal of Science and Technology, 2015. Publication	<1%
55	Submitted to Brunel University Student Paper	<1%
56	Bas Giesbers, Bart Rienties, Wim H. Gijselaers, Mien Segers, Dirk T. Tempelaar. "Social	<1%

	Presence, Web Videoconferencing and Learning in Virtual Teams", Industry and Higher Education, 2009 Publication	
57	www.suaire.suanet.ac.tz:8080 Internet Source	<1%
58	Submitted to University of Stellenbosch, South Africa Student Paper	<1%
59	Submitted to TSU, University College Student Paper	<1%
60	iccis.pafkiet.edu.pk Internet Source	<1%
61	Submitted to Angelo State University Student Paper	<1%
62	Submitted to Bridgepoint Education Student Paper	<1%
63	Esther Tan. "The Influences of School and Home Factors on the Career Development of Secondary School Students", Asia Pacific Journal of Education, 1988 Publication	<1%
64	Soon-A Lee, Hae-Suk Lee, Haeng-Sook Song, Soon-Gyu Kim. "The relationship between attachment and career maturity: The mediating role of self-efficacy", International Social Work, 2012 Publication	<1%
65	Submitted to University of Queensland Student Paper	<1%

66	Benshoff, John J. Kroeger, Sue Ann Scali. "Career maturity and academic achievement in college students with disabilities.", The Journal of Rehabilitation, April-June 1990 Issue Publication	<1%
67	metatoc.com Internet Source	<1%
68	Greg J Neimeyer, Dorothy D Nevill, Barbara Probert, Mary Fukuyama. "Cognitive structures in vocational development", Journal of Vocational Behavior, 1985 Publication	<1%
69	Submitted to University of Wales, Bangor Student Paper	<1%
70	etd.ohiolink.edu Internet Source	<1%
71	Tracy Hui, Mantak Yuen, Gaowei Chen. "Career Adaptability, Self-Esteem, and Social Support Among Hong Kong University Students", The Career Development Quarterly, 2018 Publication	<1%
72	S. Anderson. "Self-Efficacy as a Determinant of Career Maturity in Urban and Rural High School Seniors", Journal of Career Assessment, 06/01/1997 Publication	<1%
73	www.ncbi.nlm.nih.gov Internet Source	<1%
74	Wendy Patton, Peter Creed, Rebecca Spooner-Lane. "Validation of the Short Form of the	<1%

Career Development Inventory—Australian Version with a Sample of University Students", Australian Journal of Career Development, 2005
Publication

75	Creed, P.A.. "Predicting change over time in career planning and career exploration for high school students", Journal of Adolescence, 200706 Publication	<1%
76	repository.upi.edu Internet Source	<1%
77	www.hrmars.com Internet Source	<1%
78	theses.ucalgary.ca Internet Source	<1%
79	Heather T. Rowan-Kenyon. "Structuring Opportunity: The Role of School Context in Shaping High School Students' Occupational Aspirations", The Career Development Quarterly, 06/2011 Publication	<1%
80	eportfolio.phersphective.ca Internet Source	<1%
81	R. Punch. "Predicting Career Development in Hard-of-Hearing Adolescents in Australia", Journal of Deaf Studies and Deaf Education, 04/01/2005 Publication	<1%
82	"Abstracts from the XXVI CINP Congress, Munich, 13–17 July 2008", The International	<1%

	Journal of Neuropsychopharmacology, 2008 Publication	
83	scholar.lib.vt.edu Internet Source	<1%
84	getd.libs.uga.edu Internet Source	<1%
85	"Handbuch Karriere und Laufbahnmanagement", Springer Nature America, Inc, 2019 Publication	<1%
86	www.freewebs.com Internet Source	<1%
87	www2.careers.govt.nz Internet Source	<1%
88	www.scribd.com Internet Source	<1%
89	journals.sagepub.com Internet Source	<1%
90	documents.mx Internet Source	<1%
91	Thomas J. Quirk, Meghan H. Quirk, Howard F. Horton. "Excel 2013 for Physical Sciences Statistics", Springer Nature America, Inc, 2016 Publication	<1%
92	Angeli Santos, Weiwei Wang, Jenny Lewis. "Emotional intelligence and career decision-making difficulties: The mediating role of career decision self-efficacy", Journal of Vocational Behavior, 2018 Publication	<1%

93	www.encyclopedias.biz Internet Source	<1%
94	Tien, Hsiu-Lan Shelley Wang, Yu-Chen. "Career counseling research and practice in Taiwan.(Special Issue: Career Development and Interventio", Career Development Quarterly, Sept 2016 Issue Publication	<1%
95	Donald E Super, Dorothy D Nevill. "Work role salience as a determinant of career maturity in high school students", Journal of Vocational Behavior, 1984 Publication	<1%
96	Tom-Erik Dybwad. "The Structural Validity of Daidalos: A measure of career maturity", Scandinavian Journal of Educational Research, 4/2008 Publication	<1%
97	Mengting Li, Weiqiao Fan. "The Role of Thinking Styles in Career Development Among Chinese College Students", The Career Development Quarterly, 2017 Publication	<1%
98	Blustein, D.L.. "Social cognitive orientations and career development: a theoretical and empirical analysis", Journal of Vocational Behavior, 198708 Publication	<1%
99	Patton, Wendy Creed, Peter A.. "Developmental Issues in Career Maturity and Career Decision Status.", Career Development	<1%

Quarterly, June 2001 Issue
Publication

100	Allen, Katie R. Bradley, Loretta. "Career counseling with juvenile offenders: effects on self-efficacy and career maturity.(Report)", Journal of Addictions & Offender Counsel, April 2015 Issue Publication	<1%
101	Legum, Harry L. Hoare, Carol H.. "Impact of a career intervention on at-risk middle school students' career maturity levels, academic ", Professional School Counseling, Dec 2004 Issue Publication	<1%
102	Kim, Kyung-Nyun, and Se-Hee Oh. "Effects of social constraints on career maturity: the mediating effect of the time perspective", Asia Pacific Education Review, 2013. Publication	<1%
103	Jane L. Swanson. "020 Assessment of career development and maturity.", American Psychological Association (APA), 2013 Publication	<1%

Exclude quotes	Off	Exclude matches	Off
Exclude bibliography	Off		