“ An analysis of financial literacy levels of young adults in Ireland, aged 18-24”

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Abstract

The study is aimed to explore if there are adequate levels of financial literacy among the young students of the age ranges 18 to 24 in Ireland. The study will explore the three components of financial literacy which are financial knowledge, financial attitude, and financial behavior. The demographics of the age and gender are also explored in the study. There is a gap in the literature in an Irish context and more recently in a European context. It can be useful for policy makers and educational institutions to understand if there is an issue with financial literacy and then having data to understand what elements to address through education. The methodology used here is the adaptation of the ideas of scale of PISA (2018), OECD techniques, and scale used by Potrich comprising age-appropriate questions. The sample size for this study was 56. The results from the study showed a large portion of the respondents had high financial literacy but results varied between women and men but a large sample size would be needed for accurate results. 57% of women had high financial literacy. For men, 81.3% had high financial literacy.

Declaration

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Introduction

There are both simple and complex financial problems that needs to be solved in life. While simple ones can be solved easily, adequate knowledge is required to solve the complex financial problems. With growing economic uncertainties and sophisticated financial markets, the need for financial literacy increases manifolds (Gaurav, Cole & Tobacman, 2011). This education helps a person make informed decisions as the burden of these decision is shifted from community to individuals. Whether it is planning for future or dealing with retirement, complex financial matters are involved in these decisions. Hence, it is necessary to be cognizant of the economic trends and develop skills and capabilities to make decisions accordingly (Lusardi & Mitchell 2011).

Under these circumstances, it is essential that research is focused on these areas to provide insights into the real lives of the people involved at both ends of such decisions. The study is a step to explore levels of financial literacy in the young students of ages 18 to 24 in Ireland. This chapter will highlight the problem statement and provide purpose and significance accordingly. After that, the remaining chapters will include a review of the literature and a conceptual framework for executing appropriate methodology. The Methodology chapter will highlight the details about the research strategy, sample, data collection, and data analysis technique. The last chapters are comprised of results, discussion, and conclusion.

Definitions

Financial literacy

OECD defined the financial literacy as the "knowledge and understanding of financial concepts and risks, and the skills, motivation, and confidence to apply such knowledge and understanding in order to make effective decisions across a range of financial contexts, to improve the financial well-being of individuals and society, and to enable participation in economic life." (Pena-Lopez 2012).

Financial knowledge

Financial knowledge is the understanding of capabilities and skills that are essential for a person to manage financial resources, take financial decisions, and to be considered as financially literate (Sanderson 2015).

Financial attitude

Financial attitude is an essential component of financial literacy that can be defined as “an inclination of person towards financial decisions in order to plan ahead for the finance management and to maintain and save resources for the future” (Rai, Dua, & Yadav 2019).

Financial behavior

Human behavior is another component essential for the measurement of financial literacy and defined as those “human behaviors that are essential for taking finance related decisions. It includes appropriate management of money, saving, construction of budget, payments of bills etc. (Bhushan & Medury 2014; Kalekye & Memba 2015).

Background of the Study

Financial literacy is not only important for commerce and trade industry but also for the common individual performing day to day tasks. Surprisingly, the level of financial literacy is lacking among the sizeable portion of the population in the majority of countries (Atkinson & Messy 2012). and remains a field that has a lot to be explored and developed around the world (Beckmann 2013). The case of Ireland is no different. According to different surveys conducted (Klapper & Lusardi 2015; OECD 2012). the financial literacy of the country is found to be 55% where latest studies are missing and data needs to be collected and interpreted for making informed choices. The current study is aimed to explore the financial literacy of young adults of age 18-24 in Ireland. The area is not widely explored in regard to young adults in Ireland, previous studies are larger scale and the lack of data creates problems for the policymakers to assess which area needs to be catered to. With time, young adults are becoming more aware of the changing global financial landscape and want to understand how to manage and survive in the volatile economy.

Statement of the Problem

Financial literacy is an important concept that helps the person in achieving better financial position and status while improving their standard of living (Lusardi 2012). Overall studies showed that the levels of financial literacy increase with an increasing age (Lusardi and Mitchell 2007). However, there are little studies that took the observations in regard to youth of a particular country. Hence, assuming the general trend and keeping in view the overall pattern of financial literacy, the level of financial literacy is hypothesized to be inadequate among the young students of age ranges 18 to 24 in Ireland.

Purpose of the Study

The current study aimed to explore the financial literacy of young adults of age 18-24 in Ireland. The area is not widely explored in Ireland and the lack of data creates problems for the policymakers to assess which area needs to be catered to. With time, young adults are becoming more aware of the changing global financial landscape and want to understand how to manage and survive in the volatile economy. In a survey by Mae (2009). around 84% of undergraduates indicated that they needed more education on financial management topics, 64% would have liked to receive information about financial management topics in high school and 40% would have liked to receive such information as college freshmen. For them, higher levels of financial literacy may be able to remedy such financial problems faced by students.

Providing financial consciousness to young Irish students is important for their daily functioning and to maintain their future living standards. Past research established the importance of studying financial literacy due to its implications toward financial behavior. It was also found out that low financial literacy causes many problems such as soaring debt, no planning for the future and is equally important for every age from teens to older adults (Lusardi & Mitchell 2014). The purpose of the study is to provide estimates about the level of financial literacy in young adults of Ireland. The questions are formulated to provide an idea about the use of concepts of financial knowledge, financial behavior and financial attitude by those young students. The research will also add to the scarce literature on financial literacy among young adults in Ireland and will provide direction for future studies.

Limitations of the Study

There are some limitations associated with this study. The first one is to reach the population at the times of COVID-19 as people are being cautious with an ongoing pandemic. This made it harder to reach people as there was a reliance on online distribution rather than in person research. As it is hard to reach the population and giving them equal chance of participation, the results cannot be generalized to the whole nation's population and their demographics. The questions were adopted from the PISA (2018), model that is used to assess the financial literacy data across countries. Due to wide use of the instruments, the questions are assumed to be reliable and valid for the current study. Using multiple measures of financial literacy would give more accurate results than the current measure.

Significance of the Study

The understanding of the concept of nation-wide financial literacy is important as it allows policy makers and strategists to formulate better ways of enhancing the knowledge and practicality of such concepts. There are many studies that were conducted in the European Union region and comparisons were drawn. However, the studies specific to a single country and the young adult population are limited and calls for more exploration. There is a need to fill this gap of knowledge regarding financial literacy in the context of Ireland to better address the potential deficiency of knowledge among this population and to bring improvement in their financial decisions (Fonseca et al. 2012).

The study will underline the core competencies related to financial literacy of the young students of age ranges 18-24 in Ireland by an exploration of three components of financial literacy that are financial knowledge, financial behavior and financial attitude as defined at the beginning of the chapter (Atkinson & Messy 2012). These skills are necessary to enhance the confidence among the people who can explore better ways for generating income and utilizing it in an appropriate manner (Jiyane & Zawada 2013). Finally, the financial literacy among youth also determines the future trajectory and economic conditions of the country.

Chapter 2

Literature Review

The literature is one of the significant parts of the research that strengthen the foundation of the research by building a deeper understanding of the topic in an organized way. In this section, key concepts are thoroughly defined, and vision and structure are constructed. Concept and theories related to financial literacy and its levels in Ireland are explored. A framework is developed to bridge the gap between theory and performing actual research by taking into consideration the available literature.

Concept of Financial Literacy

There are some concepts that are difficult to define as they embrace diversity of content and opinions. The case of financial literacy is somehow more unique as the concept has been defined in several terms and changed from time to time. Sometimes, it is defined in terms of knowledge, at other times, it may be referred to as financial education. Ability, competence and responsibility are some other terms that are used to define the concept. The focus is either on knowledge, or on the ability of using the knowledge and even people's self-confidence towards their own financial actions. However, it is used, the financial literacy remains an important concept to this day. It is an important life skill that provides an opportunity to individuals as well as society to make sound financial decisions and choices by learning financial concepts (Lusardi 2012; Lusardi & Mitchell 2014). Its distinction from the other financial concepts lies in its division into two dimensions. The first one is understanding and the second is the use. A person may have knowledge of financial concepts but if one does not use that knowledge effectively, one is considered financially illiterate. These concepts make it entirely different from financial education and knowledge (Huston 2010).

Many studies defined the concept based on their objectives and understanding of financial concepts. According to Huston (2010), 71 studies explored the concept of financial literacy and assigned as different as eight separate meanings to this term. Kozina and Ponikvar (2015) defined the concept of financial literacy as a form of human capital that is used in financial activities to increase financial well-being. Mahdzan and Tabiani (2013) simplified it as the acquisition of financial skills to survive in the modern world while another study attributed it to understanding and application of personal financial skills in life (Krechovska 2015). A closer definition to this study was given by Yildirim et al. (2017) and stated that it is the level of competence through which individuals make the educated assessment for using and managing money and to make a rational decision in selecting the financial instruments that shape investments.

With all these varying definitions, it is difficult to conceptualize the research framework. The study is going to take relevant literature to define the concept of financial literacy that is measurable. In this regard, the Organization for Economic Co-operation and Development OECD (2012) made efforts to provide all-inclusive definition that could measure the financial literacy in different cultures. It comprises of items such as "consciousness, knowledge, ability, attitude and behavior". Hung et al. (2009) made these attributes more specific including only knowledge, attitude, behavior, and ability and establishing the correlation among them. For the sake of this study, the three factors of financial literacy are taken into account that are measured widely across different cultures comprising of distinct sociodemographic variables. These are financial knowledge, financial behavior and financial attitude (Atkinson & Messy 2012; Agarwalla et al. 2013).

Financial Knowledge

Financial knowledge is, by far, the most essential term and attribute used alongside financial literacy. It is the basis and cannot eliminated from the concept as it corresponds to the dimension of understanding in the financial literate person. It is acquired through learning and helps in managing everyday tasks such as income, expenditure and saving (Delvande et al. 2008). Sanderson (2015) added to this and termed the financial knowledge as necessary for managing financial resources and these skills should be taught in school education programs to provide understanding to students and adolescents. The basic questions such as simple and compound interest, risk diversification, risk and return, and inflation form the basis of financial knowledge that is necessary to handle money efficiently and making informed choices about finance (OECD 2012; Howlette et al. 2008; Hasler & Lusardi 2017; Atkinson & Messy 2012).

There are many benefits that can by accrued by acquiring simple financial knowledge. It can help a person in making a difference in risk perception and investment avenues. It can help people of all ages, from students to the adults who are planning for retirement. Differences are evident between lay person and financially literate people regardless of age (Amagir, Groot, Maassen van den Brink, and Wilschut 2018; Diacon 2004; Van Rooij, Lusardi, and Alessie 2011). The biggest impact financial knowledge exert is to develop financial attitude and financial behavior by lowering the propensity effect (Dhar & Zhu 2006). Though it is an important component of financial literacy, it is not sufficient to fulfil the definition of literacy is not enough for measurement. Building a financial attitude is essential for making informed decisions and developing skills to manage the money and finance effectively.

Financial Attitude

Most of the time, financial knowledge builds up the financial attitude in the person. With increasing knowledge, the awareness about the matters such as money management, saving, and spending increases. In turn, it builds the essential concepts, sources of information and add a totally different dimension of emotion about the finance. This personal inclination about financial matters to plain and maintain the finances is known as financial literacy (Shockey 2002). The concept is interrelated to financial behavior and knowledge and work on the principle of trial-and-error learning. With sound financial knowledge, a person adopts the financial behavior whose consequence builds the financial attitude (Ajzen 1991). It is necessary that this attitude is built at an early age through financial education programs. These programs enhance the literacy among different generations and develop favorable financial attitudes (Bhushan & Medury 2014). It provides the raw material to improve personal financial attitudes as well as increase financial well-being of the people (Ibrahim & Alqaydi 2013).

Specifically, Kasman, Heuberger, and Hammond (2018) and Shahryar and Tan (2014) reported that financial attitude is positively related to financial literacy among the youth. However, the type of attitude they build over the years also matter in helping them manage their money and assets. While positive financial attitude of students and youth enhance financial knowledge and literacy, the negative financial attitude destroy the decision-making power in financial matters. Negative attitudes make the choices more ambiguous and risk-taking behavior is diminished. Hence, building financial attitude, it is imperative to touch the positive emotions rather than building negative emotion towards the financial management (Sohn, Joo, Grable, Lee, & Kim 2012). The positive attitude further encourages the behavior of the person and help the person to take better financial decisions and actions later in life.

Financial Behavior

Developing knowledge, emotions and attitude is essential for financial literacy, however, without an action, these attributes are of no use. Action and behavior comprise of learning the concepts in real world. It is by far the most important variable for measuring the financial literacy through instruments and hence it is determinant of financial literacy (Lusardi & Mitchell 2013; OECD 2013). It includes decision making and money management actions such as “constructing appropriate budget program and controlling it, quick payment of bills and regular saving nature” (Bhushan & Medury, 2014; Kalekye & Memba, 2015). Devising such tasks for the students and young adults help them to adapt to economic fluctuations in a better way. It is fundamental attribute in the learning of financial literacy and a dimension without which the literacy is just reduced to education without action or benefit.

Just like positive and negative financial attitude, financial behavior can also comprise of positive and negative dimensions. On one hand, positive financial behavior develops the capacities for planning expenditures and enhancing financial stability. On the other hand, the negative behavior reduced the financial well-being of an individual by making them to rely on vicious cycle of loans and credit cards (Atkinson & Messy 2012). They went into a state where they cannot tolerate any risk and become indecisive and unsatisfied with their financial decisions and financial management (Sages & Grable 2009). Hence, to build the financial literacy, efforts must be made to build positive financial behaviors of an individuals that further shape their positive financial attitude and conform to their financial knowledge (Bhushan & Medury 2014). Hence, all three components combine to develop financial literacy of the individuals by increasing positive effect and building self-confidence in making sound financial decisions in the life (Banerjee, Kumar & Philip 2017).

Financial Literacy in Ireland

There are many surveys that are conducted over the time to provide evidence of financial literacy in the people across the globe. However, every region has different social and economic attributes that shape their financial knowledge, behaviors and attitudes. A study by Shim Barber, Card, Xiao, and Serido (2010) affirmed this through survey of undergraduate students. They concluded that the students’ decisions to better management of finances and adopting risky behaviors depend on socioeconomic and demographic profiles of the students. To fully understand the concepts of financial literacy in the environment of Ireland, this study is developed. The current study is concerned with financial literacy among student in Ireland with age ranging from 16 to 22. Despite people believing that they have the knowledge and understanding of financial literacy, their knowledge remains insufficient even in the advanced economies of the world. According to Standard & Poor's Global Financial Literacy Survey (Klapper & Lusardi 2015), about 55% of Irish people deemed to be financially literate which means that one in every two Irish people do not have a grasp on financial literacy.

A similar survey also showed that Nordic countries, Norway, Denmark, and Sweden, are way ahead with 71% of their population considered financially literate whereas Canada is closely following behind with 68%. The study by OECD (2012) also reported similar results on the financial literacy of Irish measuring it at 55%. This study also has another important contribution. It measured the 15-year-old students' mathematics ability and found that those countries where 15-year-old students performed well on the OECD's Program for International Student Assessment (PISA) math test possess a high understanding of financial concepts. The importance of financial literacy in Ireland can be assessed from another study in which Birpalia (2018) investigated the influencing factors of personal finance and risk tolerance of millennials in Ireland. The factors of the research were financial literacy, demographics, personality traits, and the role of parents. Financial literacy has been found to exert significant influence on the decisions about personal finance showing better management among those that possess higher financial literacy.

Hypotheses Development

Financial operations are part of our daily life yet there is a little knowledge about how to manage the money and plan for future financial well-being. Saving, spending and investment decisions come with variety of risk and opportunities and only informed choices can save us from overarching risks. According to financial survey that was carried on a large scale, it was determined that one in three adults are not able to answer the questions that require relatively low levels of financial knowledge, let alone carry out simple numeracy calculations (Stolper & Walter 2017). The situation is alarming everywhere including Ireland. It is hard to imagine that these individuals can respond effectively when faced with complex financial decisions and choices. The financial world is becoming more complex as the world is utilizing resources at fast pace. Consumers are increasingly offered a dizzying array of financial products with different levels of risk and reward. Most often, the risk is being borne by the single individual rather than organization as they have little knowledge how to secure help from the financial institutes. Finding about the financial literacy in EU and USA echo similar patterns. The lower income groups, women and less-educated respondents score lower than the rest of the population. Financial literacy rates across age cohorts form a hump shaped distribution. Individuals below 25 years and above 70 years score lowest and the correct response rate peaks among 55–65-year old's (Lusardi and Mitchell, 2011). Women tend to score lower than men in all countries and within age groups and are more likely to answer 'do not know' than men. By contrast, there is no gender gap in financial literacy among schoolchildren, underlining the need for financial education from a young age (OECD, 2012). Keeping in view the above discussion and literature, the hypothesis of the study is:

H1: The financial literacy level is inadequate among the young students with the age range 18-24 in Ireland.

Measures of Financial Literacy

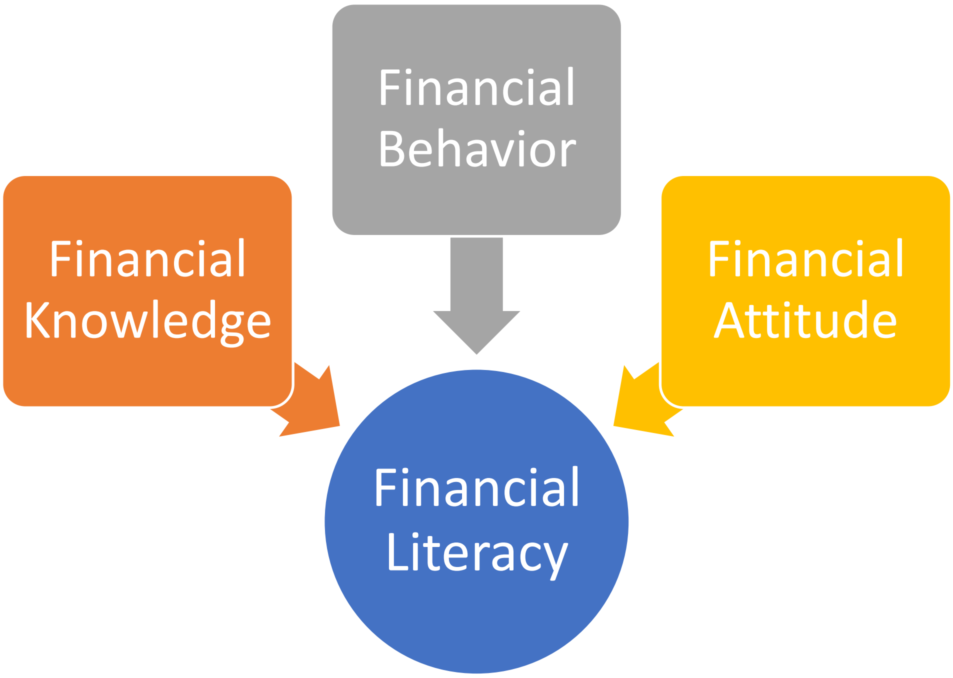
Just like the concept and definitions of financial literacy, the tools to measure it are also broad and depend on objective and subjective attitudes of authors. The following discussion will take into account the broad nature of measures introduced by the researchers and develop an appropriate measure for this study to comprehend adequate levels of financial literacy among the targeted population.

Adequate level of financial literacy is required for financial wellbeing of the individual and that of the family. It impacts short term requirement like day-to-day money management as well as long term requirement like buying home, children education, and secure retirement. Ineffective money management can also result in behavior that makes consumers more vulnerable to a financial crisis. Over the years, scholars used different attributes to determine the level of financial literacy. Research conducted by the George Washington University (Hasler & Lusardi 2017) used the four fundamental concepts to measure the levels of financial literacy which were numeracy (interest), compound interest, inflation, and risk diversification. A more sophisticated approach was adopted by Van Rooji et al. (2012) and proposed the Financial Literacy Index that measures it in two levels. The first one is basic financial literacy consisted of 5 questions that measure simple interest, compound interest, inflation, time value of money, and money illusion. The advanced index consisted of 11 questions and measures concepts such as investment and portfolio choices. Such advanced concepts were mostly used to assess the financial levels of the older adult.

For studying young adults, similar approach is introduced by Lau, Chung, and Hui (2005). They divided financial literacy into two dimensions. The first was the knowledge or financial awareness that measures people's understanding of common financial concepts and products. The second dimension was an action upon knowledge and described the individual's ability to make informed financial decisions in managing their finances in the areas such as basic money management, financial planning, and investment. Lusardi and Mitchell (2011) devised a measure comprising of “Big Three” financial literacy questions that has been used in more than 20 countries. The scale is based on three key principles which are Simplicity, Relevance, Brevity, and Capacity to differentiate. The first question measures numeracy or capacity to do solve simple problem, the second question measures the understanding of inflation, and the last question measures the understanding of risk diversification.

Further insights can be taken from the JumpStart Coalition for Personal Financial Literacy survey that is used to assess and advance financial literacy among students from kindergarten to college aged. The survey was used in one study to test knowledge and understanding of financial terms in four areas namely income, money management, savings, and investments (Mandell 2008). The target population was high school students in the USA, South Korea, UK, Japan, and Australia. A common theme of the survey suggested that students make financial decisions based on little understanding, face difficulty finding easy to understand information, and think they know more than they do (Smith & Stewart 2009; OECD 2012).

The current study will build on the measures given by OECD (2013), Atkinson and Messy (2012), and operationalized by Potrich, Vieira and Paraboni (2020). Based on these studies it was proposed that financial literacy is combination of financial knowledge, behaviour and attitudes.



Potrich, Vieira and Paraboni (2020) developed the tool to measure the financial literacy by using these three categories and is used by this study to measure the financial literacy in youth of Ireland. In the category of financial knowledge, the basic understanding of mathematics specifically including the simple and compound interest, risk and return evaluation, diversification strategies, saving of the resources and conducting the cost and benefit analysis. In financial attitude, the intention of the students regarding financial decision will be measured. Finally, in the category of financial behaviour, their actions and other financial aspects of their lives will be discussed.

The current study will also provide recommendations on the improvement of the financial literacy of young adults in Ireland. The process of increasing financial literacy involves many steps and creating basic financial consciousness is an important one. It could start by managing budgets and understanding spending and debt. The other way to improve financial education among young adults is through enhancing cognitive capabilities. Those with high cognitive ability are more likely to participate in financial markets and accumulate assets during their adult lives (Benjamin, Brown & Shapiro 2013). Financial literacy is essential as it develops the positive knowledge, behavior attitude among the people. It is also important in establishing preventive measures for controlling indebtedness and providing leverage to individuals in regard to financial transition and making informed choices (Anderloni & Vandone 2010).

The study is important as it will provide a picture of area that socially, economically, and culturally distinct. It would be a step in conducting similar research to include cultural variables when providing an insight about financial literacy in a particular geographical area. There are many limitations when it comes to measuring financial literacy. That is why authors and researchers suggested that financial literacy should be considered broadly and include more specific areas and unique factors. The difficulty is in the unavailability of operationally valid instrument to measure the financial literacy in its entirety (Remund 2010). There is a strong disconnect between the concepts and operations of the concept (Fernandes et al. 2014) that can be considered the limitation of this study. However, this study is step in the right direction and will help the future researchers to reach the valid instrument to measure financial literacy.

Chapter 3
Research questions

Financial literacy is essential for survival in the uncertain economy of today. Young people are more prone to making irrational financial decisions due to their lack of knowledge and practical skills (Opoku 2016). Studies also affirmed this fact by showing that the level of financial literacy increased with increasing age (Lusardi and Mitchell 2007). The literature provides ample support for the fact that more research is needed to study individual youth populations of different nations. There is also strong evidence that the youth want to understand these concepts and apply them to their lives to achieve more financial freedom and sort out their problems such as debt (Mae 2009). Based on the literature, the main research question is formulated as:

I. What are the financial literacy levels among the young adults with an age range of 18 to 24 in Ireland?

The current study is going to explore the adequacy of financial literacy levels, among the specific cohort of young adults aged 18-24 living within Ireland. The instrument used in the study is the Youth Financial Literacy Short Scale (Potrich et al., 2020) which has three main components: financial knowledge, financial attitude, and financial behavior. Potrich et al.(2020) developed this survey to measure financial literacy among young people specifically, using these three categories or components. In the sub-questions of the research, the study is going to find explore the levels of financial knowledge, financial attitudes, and financial behavior among young adults in Ireland which will provide an understanding of which of these components is most and least developed among this group. For instance, which of the three dimensions of financial literacy is prominent among the youth of Ireland? The dimension of knowledge may be more prominent than the attitude or behavior. In other words, it will help us determine if young adults in Ireland are better able to apply financial knowledge or develop a favorable financial attitude. Further, the demographic factors are also taken into account. The level, education and gender differences will be assessed for each component. The questions are formulated as:

i. Do young adults in Ireland demonstrate a high level of financial knowledge?
ii. Do young adults in Ireland report positive financial attitudes?
iii. Do young adults in Ireland report positive financial behaviors?

iv. Is there a significant gender difference among young adults in Ireland in terms of their levels of financial knowledge, attitudes and behavior?

v. Is there a significant difference between young adults who have college-level experience with a finance-related subject and those who have not in terms of their levels of financial knowledge, attitudes and behavior?

Aims and Objectives of the Study

Despite common knowledge, previous research suggests that the financial literacy in Ireland lags behind some prosperous nations. However, the lack of studies assessing financial literacy among young adults hinders policymakers to make informed choices about whether more education is needed in regard to financial literacy and in what specific areas.. Keeping in view the importance of financial literacy and lack of literature support in the context of Ireland, the following aims and objectives of the study are underlined.

1. To measure the levels of financial literacy among young adults aged 18 - 24 in Ireland.
2. To explore the separate levels of financial knowledge, financial behavior, and financial attitude among young adults of age ranges 18 to 24 in Ireland.
3. To gain a greater understanding of the impact of demographic factors such as advanced financial education and gender on levels of financial literacy among young adults of age ranges 18 to 24 in Ireland.

Chapter 4
Methodology

Research Methods

Research methods lay out the means by which we collect and analysis data to better understand the research topic of interest. Specifically, the current research study aimed to investigate the financial literacy levels of young adults with the age range of 18-24. A review of the literature defined the research methods previously adopted to identify the financial literacy levels of young adults. Mainly, it is apparent from the literature that financial literacy has been studied using quantitative as well as qualitative measures (Bayar et al., 2017). In this regard, Lusardi et al. (2010) utilised the quantitative method where the respondents were asked about three quantitative questions based on interest, inflation and risk diversification scenarios and assessed via descriptive statistics whether responses were correct or incorrect - more correct answers would mean higher financial literacy. Alternatively, Sprow (2010) conducted a research study where the qualitative methodology was applied via a case study approach. Hence, the evidence from the literature supports both quantitative as well as qualitative methods when investigating financial literacy. However, the majority of previous studies have applied quantitative methods to identify levels of financial literacy among participants. The justification for this approach is that the quantitative method can provide accurate and standardized results regarding the determination of financial literacy levels. In the case of the qualitative method, the extracted financial literacy levels could be more subjective which can lead to more chances of inaccuracy and error. So, for greater objective accuracy, the present research study utilised a quantitative method to assess the financial literacy levels of young adults aged between 18 and 24.

Research Approach

There are two leading approaches in the research literature - the inductive and the deductive approach. The inductive approach initiates from observations and uses these to generate tentative hypotheses. After the development of the hypotheses, data is collected and analysis is conducted. Based on the findings of this analysis theory is developed. On the contrary, in the deductive approach, an already developed theory is tested via the development of hypotheses and data collection in a variant situation (Opie, 2019). In the present research, the level of financial literacy is measured for young adults and according to a review of the relevant literature the conceptual and theoretical framework of financial literacy is very well developed. Hence, the deductive approach is well suited to the current research. Specifically, the theoretical concepts of financial literacy are not only defined in a standardised way but multiple scales of measurement have also been developed (OECD, 2018). The current study uses a relatively new measure of financial literacy that has been tested in a large sample of Brazilian young adults. In the case of the present study, this research is more concerned with the determination of financial literacy levels in young adults in an Irish context. This is an emerging area in the field of finance to assess the existing knowledge of young adults regarding financial matters with an aim to introduce different kind of curriculum to students to support the development of financial literacy (Varcoe et al., 2005). Hence, the best suited approach for the current study is the deductive approach. Based on this approach, the current research used literature-based theories and scales to identify the level of financial literacy in young adults and compared the levels of different groups (e.g., those with and without previous experience studying business) while also comparing their financial literacy levels with those of existing research studies.

Research Strategy

Research strategies specify the nature of the data to be collected and the analysis techniques necessary to answer the research questions. The main objective of the current research, was to assess the financial literacy of a sample of young adults in Ireland using quantitative data as explained in the research methods section with the support of existing literature. Many previous research papers reviewed in the literature have used surveys in order to gather the required information to determine financial literacy levels (Stella et al., 2020). A systematic review has also been conducted to summarise existing research on financial literacy(Goyal and Kumar, 2021). Hence, an explanatory strategy is being used in the area of financial literacy. Besides that, experimental strategies have explored the impact of training on financial literacy using the tests of Program for International Student Assessment (PISA;Cordero and Pedraja, 2019Students were given tests of financial situations and their responses were assessed before and after the financial training provided to the students. Given the aim of this study was to determine levels of financial literacy, the survey approach appeared the best suited method from the literature as surveys can identify and quantify the levels of financial literacy and have been adapted and used with a young adult population (Potrich, 2020). Other measures such as the PISA technique can also provide this level of measurement however they are more time-consuming and may be less appropriate for young adults from the age of 18 to 24 given their complexity.

Measurement of Variables

This is not a causal research study, rather it assessed the levels of financial literacy among young adults in Ireland and compared results between different participant groups and how they compared to pre-existing research. Therefore, it is descriptive research. Hence, the current research focuses on one dependent variable - financial literacy. The measurement of the variable is performed via three main categories - financial knowledge, financial behaviour and financial attitudes (Potrich et al., 2020).

- Financial Knowledge: includes the basic understanding of mathematics specifically including simple and compound interest, risk and return evaluation, diversification strategies, saving of resources and conducting cost and benefit analysis which can assist in the financial decision-making process.
- Financial Attitudes: the intention of the person towards the financial decisions they are going to take in their financial life – are they inclined to save and plan ahead or not.
- Financial Behaviour: the behaviour of the person regarding the financial aspects of their life that can affect their well-being (e.g., paying bills).

This specification of financial literacy can assist in evaluating the different components of financial literacy. Further, it helps demonstrate where the young adult is lacking or is more efficient via the different components of financial literacy.

Measuring Scale

The questionnaire which is applied in the present research study to determine the financial literacy among young adults in Ireland is adopted from the study by Potrich et al. (2020). This paper tested a new short scale, PISA (2018) was developed in order to test the financial literacy level among young adults. So, this scale is most suited to the aim of the current research. Specifically, the development of the scale is associated with the adaption of the ideas of measuring the financial literacy from the scales of PISA (2018) and OECD techniques. However, the items included in this specific scale by Potrich and colleagues does not include so much complication that it could not be understood by young adults. Specifically, the scale was initially based on 22 items where 12 items were associated with financial knowledge, 7 items were linked with financial behaviour while 3 items were measuring the financial attitude of the young adults. However, after conducting pilot tests, and analysing the scale via factor and exploratory analyses, the factor loads restricted the scale to 12 items where 5 items belonged to financial knowledge, 5 with financial behaviour and 2 with financial attitudes. Hence, after reliability and validation tests, the scale was reduced resulting in increased ease of administration with young populations. The detailed questionnaire along with the items can be viewed in Appendix A. Financial knowledge is measured via correct and incorrect answers, while financial behaviour and attitudes are measured using five-point Likert Scales. The benefits of using this scale are multiple including the direct, objective measure of financial literacy and that it is appropriate for young adults as well. Finally, this survey is also easy to administer for the participant with lesser effort and time required as the survey is shorter than other previous measures while still comprehensively assessing financial literacy.

Standardised Application of Scale

In their paper, Potrich et al. (2020) specified how to analyse the raw data collected via the scale to identify the participants' levels of financial literacy. This standardised scoring process involves three steps. The coding of the responses is performed at the ***first step*** where:

- Financial knowledge is coded with the value of 1 = correct answer and value 0 = incorrect answer
- Financial Behaviour is coded with five-point Likert scales where Never = value 1; Almost never = value 2; Sometimes = value 3; Almost always = value 4; Always = value 5
- Financial Attitude is again coded with five-point Likert scales depicting Strongly agree = value 1; Agree = value 2; Indifferent = value 3; Disagree = value 4; Strongly disagree = value 5

At the ***second step*** the standardised measures of each dimension are defined. For the five-point Likert scales (Financial behaviour and Financial attitudes scales), the weighted average of the factor loading is multiplied with the response of the participant. The item numbers below represent the responses of the participants for the specific question.

- Financial knowledge: KNOW = [Item1 + Item2 + Item3 + Item4 + Item5]
- Financial behaviour: BEH = [0.237*Item6 + 0.236*Item7 + 0.180*Item8 + 0.149*Item9 + 0.198*Item10]
- Financial attitude: ATTI = [0.686*Item11 + 0.314*Item12]

In the ***third step***, the data is inserted in the following equations (1) and (2) to assess whether participants demonstrate low or high financial literacy. Each equation includes the calculated scores from step 2 for the three main categories of financial literacy, namely Knowledge (KNOW), Behaviour (BEH) and Attitude (ATTI):

$$D_0 = (4.108 - KNOW)^2 + (2.628 - BEH)^2 + (3.267 - ATTI)^2 \quad (1)$$

$$D_1 = (4.695 - KNOW)^2 + (4.480 - BEH)^2 + (4.038 - ATTI)^2 \quad (2)$$

After calculating the values of D_0 and D_1, the ***fourth and final step*** specified by Potrich et al. (2020) consists of determining the participant's level of financial literacy which is categorised as either high or low. The rules are:

If $D_0 > D_1$, the participant is considered to have a HIGH level of financial literacy.

If $D_0 < D_1$, the participant is considered to have a LOW level of financial literacy.

Sample Specifications

The population targeted for the current research study consisted of young adults with ages between 18-24 resident in Ireland. As this whole population could not be accessed due to limited resources, the sample of the study is extracted using the non-probability sampling technique. The study aimed to collect a sample of 200 young adults based on the fact that it can result in better outcomes and more authentic conclusions. Moreover, Aljundi et al., (2019) argued that a larger sample size reflects the stance of the population more effectively.

Ultimately, the sample of the present research consisted of 56 young adults aged 18-24.

Data Collection Procedure

Due to the prevalence of the current COVID-19 pandemic, a physical approach to the participants was not practical or safe so conducting the study via an online platform was considered best practice. Overall, the aim was to gather at least 200 participant responses so that a robust analysis could be conducted to assess financial literacy levels, and so the results may have been generalisable to the wider population of young people in Ireland.

The data collection procedure which was followed in the current research study consisted of recruiting participants using social media platforms such as LinkedIn and Facebook. Youth Financial Literacy Short Scale (Potrich et al., 2020) was distributed online and demographic information such as gender, age and what participants studied at college was also collected. Data was only collected from young adults resident in Ireland aged 18-24 and questions were included in the demographics as an eligibility check for that inclusion criteria. Moreover, the young adults who are willing to participate were informed that their information would be kept confidential and their identity was also not asked as responses were anonymous. Respondents were free to withdraw at any time, the data was also stored on a password protected computer.

Data Analysis Plan

The collected raw data in the present research will be processed using the three steps detailed above in the *Standardised Application of Scale* section. Responses will be coded and weighted scores will be calculated and inserted into the equations for D_0 and D_1. This data will then be used to determine each participant's level of financial literacy categorised as either high or low (as specified above). These calculations will be performed with the help of the MS Excel Software. Once the financial literacy levels have been determined, we will report the percentage of the sample with high financial literacy and the percentage with low financial literacy. This will help answer our main research question which is concerned with determining the financial literacy levels of young adults in Ireland.

Additionally, we will examine the mean responses to each of the financial literacy components (calculated during step 2 of the *Standardised Application of Scale* section above). which will help us answer the research questions concerned with determining the levels of each of these components among young adults in Ireland. Finally, we will assess whether there are any statistically significant differences between participant groups in terms of their scores from the three financial literacy components. We will compare participant groups on the basis of previous experience studying business-related subjects and gender. We will conduct two-way ANOVAs using SPSS for this analysis where gender and previous experience with business-related subjects will be our independent variables and the scores for each of the financial literacy categories will be our dependent variables. These participant groups were chosen as the literature suggests that gender may influence financial literacy levels and that more experience with financial concepts may contribute to higher levels of financial literacy. This analysis will help answer our additional research questions concerned with group differences in financial literacy component levels based on gender and previous experience with business-related subjects.

Chapter 5
Analysis and Results

Demographics

Table 1 below shows descriptive statistics for the age of the participants. The minimum age of the respondents was 18 while the maximum was 24 as required by the eligibility criteria. The average age of the respondents who participated in the research was approximately 22 years.

Table 1: Descriptive statistics

	N	Min	Max	M	SD	Range
What is your current age?	56	18.00	24.00	22.3393	1.25447	6.00

Table 2 shows the frequency of participants' demographics including age, gender and previous business-related education. The majority of participants were 23 years old with the remainder spread out across the range of 18-24. Most of the respondents identified as men while only 7 identified as women. One participant identified as transgender

Table 2: Frequency and percentage table

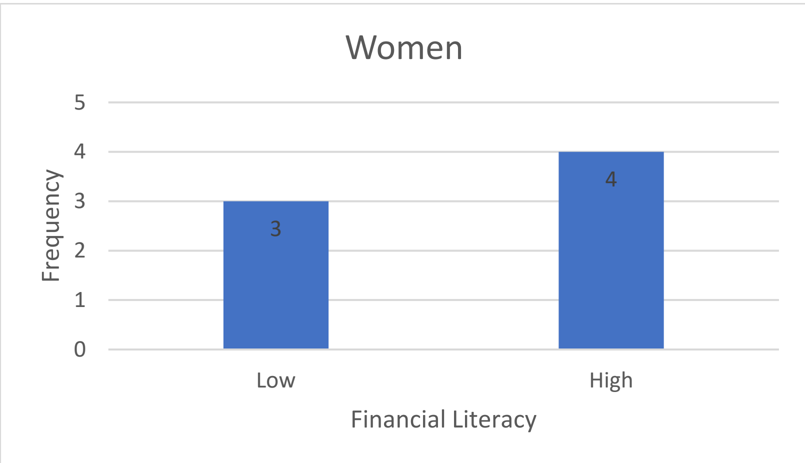
		N	%
What is your current age?	18.00	1	1.8
	19.00	1	1.8
	20.00	3	5.4
	21.00	5	8.9
	22.00	16	28.6
	23.00	23	41.1
	24.00	7	12.5
What gender do you identify as?	Woman	7	12.5
	Man	48	85.7
	Transgender	1	1.8

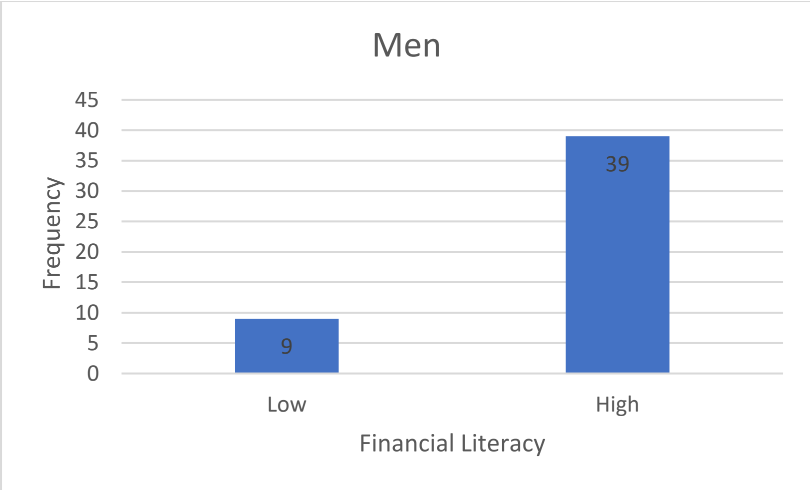
Have you studied a business-related subject such as Economics, Finance or Accounting at 3rd Level education?	Yes	46	82.1
	No	10	17.9
If yes, what business-related subject do you currently or have you previously studied	Business Studies	8	17.39
	Accounting	7	15.22
	Economics	6	13.04
	Finance	14	30.43
	Other	11	23.91

Levels of Financial Literacy

Table 3 below shows the frequency and percentage value of financial literacy levels for men and women and the total sample. Financial literacy scores are divided into two levels - low and high. The low financial literacy score was calculated by obtaining two scores - D_0 and D_1 as described in the previous Methodology chapter. If $D_0 > D_1$, the individual was considered to have a HIGH level of financial literacy. If $D_0 < D_1$, the individual was considered to have a LOW level of financial literacy.

For the overall population, 44 (78.06%) had high financial literacy while 12 (21.4%) had low financial literacy. For women, 4 (57.1%) had high financial literacy and 3 (42.9%) had low financial literacy. For men, 39 (81.3%) had high financial literacy and 9 (18.8%) had low financial literacy.





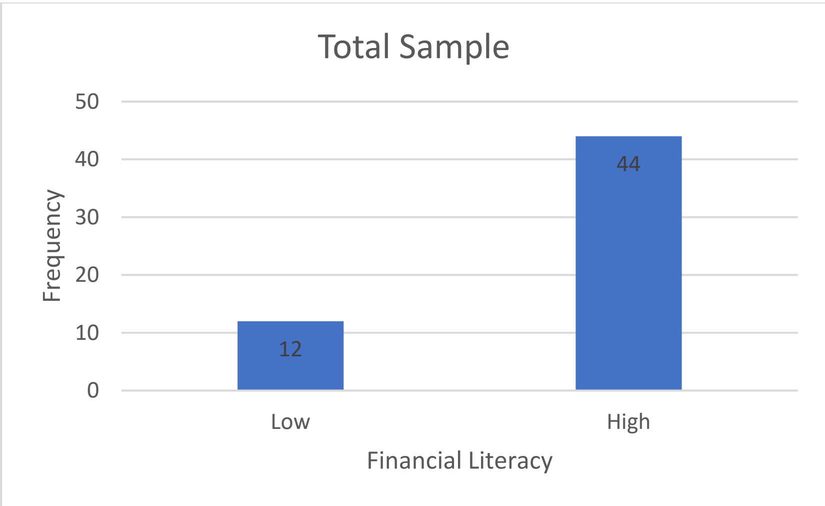


Figure 1: Financial literacy Bar plot for man woman and the overall population

The bar plot above (*figure 1)* shows the frequency distribution of financial literacy for men, women, and the overall population. For the woman, we observe an almost equal proportion of financial literacy though slightly more high financial literacy. A higher proportion of men in this sample had high financial literacy than low financial literacy. A higher proportion of the respondents in this sample had high financial literacy than low financial literacy.

Table 4: Frequency of Business-Education Experience

		N	%
Woman	Yes	6	85.7
	No	1	14.3

Man	Yes	39	81.3
	No	9	18.8

Based on the result of the descriptive analysis in table 5, the average financial attitude score for the whole sample is 3.06 and the median score is 3.16. This indicates that on an average, the respondents were relatively indifferent in terms of their financial attitudes since a score of 3 indicated an indifferent response. The standard deviation as presented by the table was 0.91, this indicates that the financial attitude scores tended to be closer to the mean score for this variable.

On average the participants demonstrated a financial behavior score of 4.35 and the median score was 4.63. This indicates that the respondents showed relatively high levels of responsible financial behavior by, for example, almost always keeping some part of their money for future needs. The low standard deviation value indicates that the spread of financial behavior scores were close to the mean.

The participants had a mean financial knowledge score of 3.98 and the median score was 4.00. With a maximum possible score of five, this mean score indicates that on an average, the respondents had a high level of financial knowledge. The standard deviation value indicates little spread away from the mean for the financial knowledge scores.

Table 5: Descriptive Statistics

	Min	Max	Mean	SD	Median	Skewness	Kurtosis
Attitude	1.00	4.69	3.06	.91	3.16	-.09	-.75
Behavior	2.00	5.00	4.35	.79	4.63	-1.32	1.01
Financial Knowledge	2.00	5.00	3.98	.52	4.00	-1.62	7.24

Testing for Normality

Skewness and kurtosis are used to determine if the variable is normally distributed. Skewness is a measure of symmetry and kurtosis measures if the data is heavy-scaled or light-scaled to the normal distribution. The negative skewness values for the variables indicate that the scores are left skewed. When kurtosis values are greater than 3 as is the case for Financial Knowledge this indicates that the financial behavior score distribution has a heavier tail. When kurtosis values are less than 3 as is the case for the other two variables, this indicates that the score distribution has a lighter tail. Byrne (2010) argued that data is considered to be normal if skewness is between -2 to +2 and kurtosis is between -7 to +7. An observation of the values of skewness and kurtosis for each of the 3 variables in Table 5 show that they are within this acceptable range. This indicates that the data are approximately normally distributed and so parametric tests are utilized.

Financial Attitudes

Table 6: Descriptive Statistics

What gender do you identify as?		N	Mean	Std. Deviation
Woman	Yes	6	2.91	1.51
	No	1	2.37	
	Total	7	2.83	1.40
Man	Yes	39	3.13	0.89
	No	9	2.90	0.61
	Total	48	3.09	0.84
Total	Yes	45	3.10	0.98
	No	10	2.84	0.60
	Total	55	3.06	0.92

Table 6 above shows that women who had previous experience with business-related subjects (hence forth referred to as education experience) had a higher mean financial attitude score (*M*=2.91, *SD*=1.51) compared to the women who did not have business education experience (*M*=2.37). Men who had education experience had a higher mean financial attitude score (*M*=3.13, *SD*=0.89) than men without education experience (*M*=2.90, *SD*=0.61) and women with or without education experience. Participants who had education experience had a higher financial attitude score (*M*=3.10, *SD*=0.98) in general compared to those who did not have education experience.

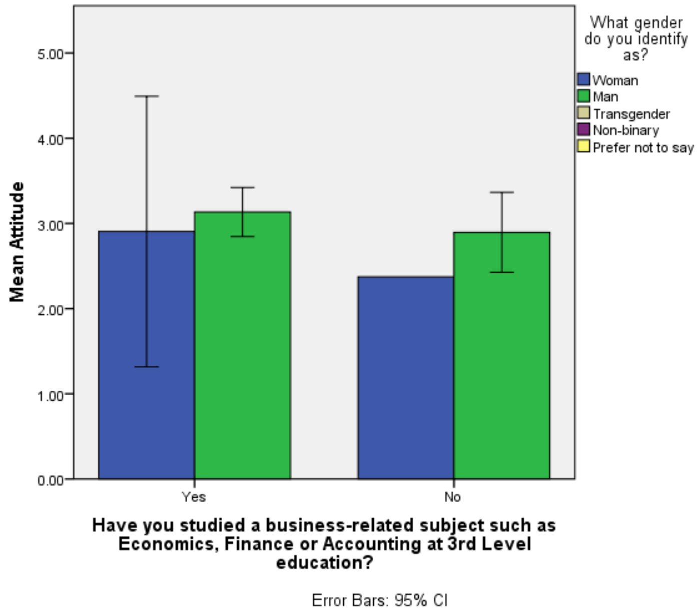


Figure 3: Clustered bar plot for financial attitude

A Two-Way ANOVA was conducted to determine whether there was any effect of participant gender and business education experience on financial attitudes. The following ANOVA results should however be interpreted with caution, however, as the groups contain very unequal group sizes - this will be discussed as a limitation in the next chapter. There was no significant interaction between gender and education experience on financial attitude, $F(1,51) = 0.08$, $p = 0.783$, $\eta_p^2 = 0.001$. An analysis of the main effects was conducted, and the result showed that there was no significant main effect of gender on financial attitude scores, $F(1,51) = 0.50$, $p = 0.485$, $\eta_p^2 = 0.01$. Also, there was no significant main effect of Education Experience ($F(1,51) = 0.52$, $p = 0.473$, $\eta_p^2 = 0.01$) on financial attitudes score.

Table 7: Financial Attitude

Source	df	MS	*F*	*p*	Effect Size
Gender	1	0.43	0.50	0.485	0.01
Education Experience	1	0.46	0.52	0.473	0.01
Gender * Education Experience	1	0.07	0.08	0.783	0.001
Error	51	0.87			

R Squared =0.023 (Adjusted R Squared = -0.034)

Financial Behavior

Table 8: Descriptive Statistics

What gender do you identify as?		N	Mean	Std. Deviation
Woman	Yes	6	4.42	0.85
	No	1	3.37	
	Total	7	4.27	0.88
Man	Yes	39	4.51	0.63
	No	9	3.72	1.11
	Total	48	4.36	0.79
Total	Yes	45	4.50	0.65
	No	10	3.68	1.05
	Total	55	4.35	0.80

Table 8 above shows that women who had education experience had a higher mean financial behavior score (*M*=4.42, *SD*=0.85) compared to the women who did not have education experience (*M*=3.37). Men who had education experience had a higher mean financial behavior score (*M*=4.51, *SD*=0.63) compared to the men who did not have education experience (*M*=3.72, *SD*=1.11) and marginally more than women with and without education experience. Participants who had education experience had higher financial behavior scores (*M*=4.50, *SD*=0.65) compared to those who did not have education experience (*M*=3.68, *SD*=1.05).

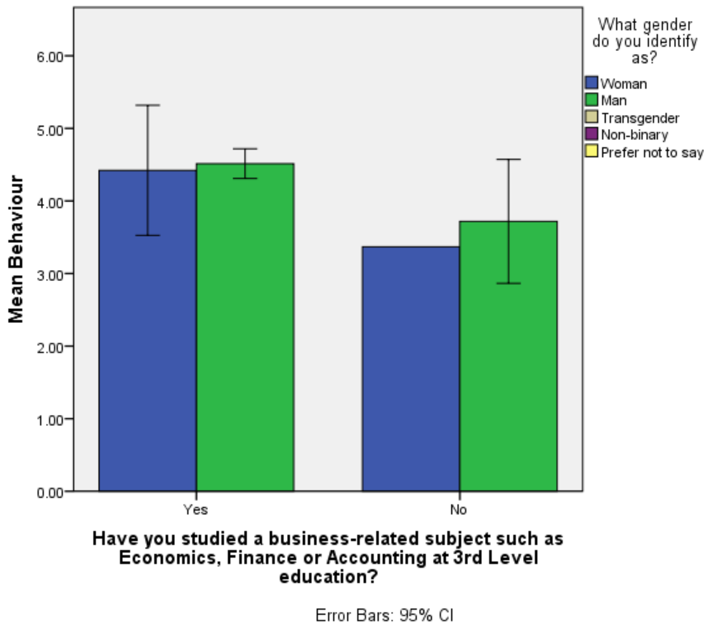


Figure 4: Clustered bar plot for financial behavior

A Two-Way ANOVA was conducted to determine the effect of gender and education experience on financial behavior. There existed no significant interaction between gender and education experience on financial behavior, $F(1,51) = 0.09$, $p = 0.764$, $\eta_p^2 = 0.02$. Therefore, an analysis of the main effects was conducted, and the result showed that there was a significant main effect of education experience ($F(1,51) = 4.66$, $p = 0.036$, $\eta_p^2 = 0.084$) on financial behavior. Participants who have studied a business-related subject had higher mean financial behavior ($M = 4.47$) compared to participants who have not studied a business-related subject ($M = 3.54$). There was no significant main effects of gender ($F(1,51) = 0.27$, $p = 0.608$, $\eta_p^2 = 0.005$) on financial behavior.

Table 9: Financial Behavior

Source	df	MS	F	P	Effect Size
Gender	1	0.15	0.27	.608	.005
Education Experience	1	2.62	4.66	.036	.084
Gender * Education Experience	1	0.05	0.09	.764	.002
Error	51	0.56			

R Squared = .164 (Adjusted R Squared = .115)

Financial Knowledge

Table 10: Descriptive Statistics

What gender do you identify as?		N	Mean	Std. Deviation
Woman	Yes	6	3.67	0.82
	No	1	3.00	0.91
	Total	7	3.57	0.79
Man	Yes	39	4.03	0.43
	No	9	4.11	0.60
	Total	48	4.04	0.46
Total	Yes	45	3.98	0.50
	No	10	4.00	0.67
	Total	55	3.98	0.53

Table 10 above shows that women who had education experience had a higher mean financial knowledge score (*M*=3.67, S*D*=0.82) compared to the women who did not have education experience (*M*=3.00, S*D*=0.91). Surprisingly, men who did not have business education experience had a mean financial knowledge score (*M*=4.11, *SD*=0.60) that was slightly higher compared to the men who had education experience (*M*=4.03, *SD*=0.43) and women with and without previous business education experience. Participants who had education experience had approximately the same financial knowledge score (*M*=3.98, *SD*=0.50) as those who did not have education experience (*M*=4.00, *SD*=0.67).

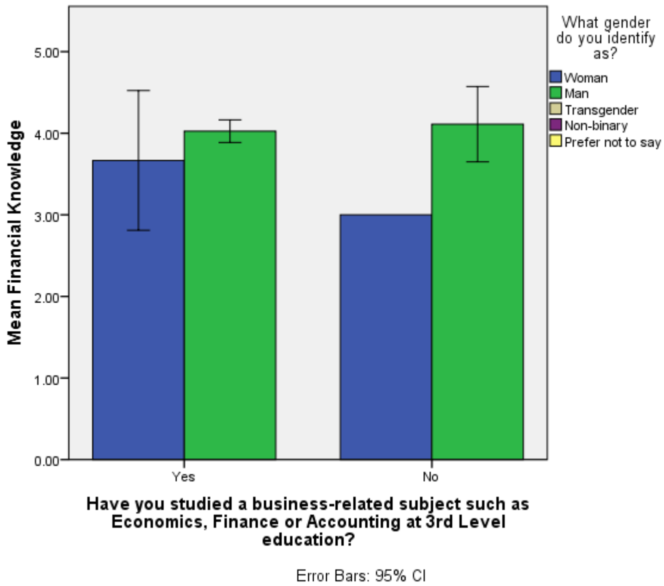


Figure 5: Clustered bar plot for financial Knowledge

A Two-Way ANOVA was conducted to determine the effect of gender and education experience on financial knowledge. There existed no significant interaction between gender and education experience on financial behavior, $F(1,51) = 1.68$, $p = 0.201$, $\eta_p^2 = 0.032$. Therefore, an analysis of the main effects was conducted, and the result showed that there was a significant main effect of gender, $F(1,51) = 6.41$, $p = 0.014$, $\eta_p^2 = 0.112$) on financial knowledge. Men had a significantly higher mean financial knowledge ($M = 4.07$) compared to women ($M = 3.33$). There was no significant main effects of education experience, $F(1,51) = 1.00$, $p = 0.322$, $\eta_p^2 = 0.019$) on financial knowledge.

Table 11: Financial Knowledge

Source	df	MS	F	p	Effect Size
Gender	1	1.658	6.41	0.014	0.112
Education Experience	1	0.26	1.00	0.322	0.019
Gender * Education Experience	1	0.43	1.68	0.201	0.032
Error	51	0.26			

R Squared = .119 (Adjusted R Squared = .067)

Chapter 6

Discussion

The study was designed to explore the levels of financial literacy among the young adults of Ireland with the age ranges of 18 to 24. Specifically, the three components of financial literacy being studied included financial knowledge, financial attitudes, and financial behavior. As per the findings, the average age of the respondents was 22. Out of fifty six respondents, the majority were men with few women completing the study and transgender individual who had to be excluded from subsequent gender comparisons due to the low number. Most of the participants were or had studied business-related subjects of Economics, Finance, Accounting at 3rd level. Among these subjects, finance was opted by the majority of the participants.

The study hypothesized that financial literacy would be inadequate among the young adults of Ireland with age ranges from 18 to 24. The findings indicated that a large portion of the sample actually had high financial literacy while the rest of the participants (21.4%) had low levels of financial literacy. These findings were in contrast to the proposition of the study, but other factors should be considered while explaining these results. As per the Standard & Poor's Global Financial Literacy Survey (Klapper & Lusardi 2015), about 55% of Irish people were deemed to be financially literate. In addition to that, a study by Shim Barber, Card, Xiao, and Serido (2010) concluded that students' decisions to better manage finances or adopt risky behaviors depends on the socioeconomic and demographic profiles of the students. As most of the sample had some business-related experience, it could be that their financial literacy concepts were clearer and more developed than the average young adult in Ireland. These findings are further affirmed by the study of Chung and Park (2014) who found that college students in the fields of business have considerably high financial literacy. Their field helped them in attaining better knowledge on investments and finance which played to their strength in the latter part of their lives. Other studies (Pintye & Kiss 2016; OECD, 2012) also explored the fact that early interests in the fields of business, finance, and mathematics led to a high level of financial literacy. Those students were better adapted to the financial realities of the world and made informed choices when it came to dealing in financial products and saving options. Their behaviors were more conscious rather than haphazard as demonstrated by non-business field students. A larger sample would be needed to determine whether this pattern of effects holds.

The results showed that the 4 women (57.1%) had high financial literacy and 3 (42.9%) had low financial literacy. For men, 39 (81.3%) had high financial literacy and 9 (18.8%) had low financial literacy. Among them, the majority of women and men have studied business-related subjects. The findings of the study did not coincide with the previous literature. A number of studies (Lusardi & Mitchell 2011; Hasler & Lusardi 2017; Goyal & Kumar 2021) suggested that the women's scores in financial literacy are comparatively lower than the male counterparts. The report presented by OECD (2012) affirmed that women tend to score lower than males in all the researched countries and are more likely to answer "do not know" than men. However, the same study (OECD 2012) also founded that the gender gap is negligent in financial literacy among school children. This finding may partially explain the results where no gender gap was found in the youth.The very unequal sample sizes in regard to gender, with few women taking the survey make it difficult to draw strong conclusions and there needs to be more research with larger balanced groups. With the completion of high school, they may possess better financial capabilities when it comes to calculations. However, there is no study to confirm this assumption. More likely, the finding showed a flaw in sample size where there was a huge gap among the male and female participants.

The study also analyzed different components of financial literacy including financial knowledge, financial attitude, and financial behavior, and got mixed results. The question proposed by the research tried to determine the levels of these different components and whether one was present more strongly than the others among young adults in Ireland. The result showed that the participants had high financial knowledge and in turn, a high financial literacy score was observed in them. The model used by this study was based on the OECD (2012), Atkinson and Messy (2012), and Potrich, et al. (2020), and all of these studies considered financial knowledge as an important component of financial literacy. In this regard, Sanderson (2015) pointed well to the fact that financial knowledge is based on simple to complex mathematical problems and is essential to manage financial resources. Getting the knowledge about finance in early years would make young people capable of managing money and making informed choices about expenses (OECD 2012; Howlette et al. 2008; Hasler & Lusardi 2017; Atkinson & Messy 2012). Many studies have also treated the variable of financial knowledge as the sole component of financial literacy (e.g., Knoll and Houts, 2012) Hence, the extent to which financial knowledge contributes to financial literacy is immense and was likely demonstrated by the participants of this study. Surprisingly, the results showed a significant relationship between gender and financial knowledge despite the neutrality of gender in the overall financial literacy concept. Here the findings indicated that men had a significantly higher mean financial knowledge compared to women but as stated above more research with larger sample sizes need to be conducted to verify this. On the other hand, there was no significant main effect of education experience found in relation to financial knowledge. These contrasting results call for further understanding of such concepts in detail.

Financial behavior was another component measured in this study. The majority of the respondents were found to be highly financially literate, and the results also showed their propensity towards positive financial behavior that depicted their money-saving behavior. By looking at mean scores this is actually where young people in Ireland scored most highly. And this is where there was a main effect of business education experience. As depicted by the previous studies (Lusardi & Mitchell 2013; OECD 2013), It is an important variable for measuring financial literacy through instruments and hence it is a determinant of financial literacy. Dwiastanti (2015) also found a positive correlation between financial behavior and financial literacy, however, the direction of their relationship remains unclear and calls for further studies. The literature (Bhushan & Medury, 2014; Kalekye & Memba, 2015) also suggested that financial behavior is shown by money management actions hence affirming the findings of this study as well. Furthermore, the study of de Bassa Scheresberg (2013) showed that respondents who display higher financial literacy or higher confidence in math or personal finance knowledge are less likely to use high-cost borrowing and more likely to plan for retirement or to have set aside savings for emergencies. These results coincide with the current study where a significant relationship was found between the educational experience and financial behavior. In contrast to that, the studies regarding gender differences remained non-significant in the current findings regarding Ireland (Nababan & Sadalia 2012).

The last component that was studied provided different results than expected. The model provided by Atkinson and Messy (2012) showed three elements of financial literacy that were financial knowledge, financial behavior, and financial attitude. However, on average, the respondents were indifferent in terms of their financial attitude. The previous studies by Kasman, Heuberger, and Hammond (2018) and Shahryar and Tan (2014) only suggested a positive relationship between financial attitudes and financial literacy among the youth. However, the studies also showed that the type of financial attitude varies as per the circumstances of the person and how they define their management of personal finances. Furthermore, the study by Ajzen (1991) determined the route of the development of financial attitudes. He demonstrated that with sound financial knowledge, a person adopts the financial behavior whose consequences build the financial attitude. As the study was taking into account the youth, it may be that there was little clarity about financial attitudes in the young people, perhaps these attitudes are still developing though financial knowledge and responsible financial behavior was high. There is evidence that individuals below 25 years score lowest in financial literacy and its related components (Lusardi & Mitchell 2011). However, these potential explanations can only be confirmed after further research in this area. In addition to that, the study did not find a significant relationship between gender, educational experience, and financial attitude. Hence, this component needs further evaluation not only in the context of Ireland but also around the world, by conducting more studies using multiple methodologies and larger sample sizes. This will give more accurate and true results and allow for more indepth analysis.

Limitations of the Study

The methodological limitations became evident in the latter part of the study. The first limitation was a failure to reach the estimated sample size in the study. The study aimed to collect a sample of 200 young adults based on the fact that it can result in better outcomes and more authentic conclusions. Due to restrictions of COVID-19 oreventing in person research, the collection of data from such a large sample was difficult. Ultimately, the sample of the present research consisted of 56 young adults aged 18-24. This sample had many limitations in both size and form. The collection of data from 56 participants does not allow the research to generalize the findings to the larger population of Irish young adults.. The sample is unlikely to be representative of all the young population of Ireland which limits the utility of the findings.

In addition to that, the majority of the participants had previous experience with business fields, with most of them studying finance. Hence, the findings may only hold for the youth who pursue these subjects. In addition to that, the sample was not gender-balanced. The male participants were in a far greater ratio than females and the inclusion of the transgender group was not possible due to the small sample. This form of bias within the sample increased the possibility of bias in the findings. As it was hard to reach the population and give them an equal chance of participation, the results could not be generalized to the whole nation's young population and their demographics. It is unknown if gender comparisons will hold in larger and more gender balanced samples, further research is necessary to determine this.

In terms of methodology, the two-way ANOVA test also had some limitations. First, it assumes that the sample belongs to a simple random category, independent, belongs to a large population is indifferent in terms of individuals. The unequal sample sizes can be an issue when interpreting results as they might hold true for larger and equal samples. These results need further consideration and future studies to develop strong relationships and causation factors in terms of financial literacy.

Conclusion and Recommendations

The study was designed to explore the levels of financial literacy among young adults of the age ranges 18 to 24 in Ireland. The components of financial knowledge, financial attitude, and financial behavior were used in the study to assess financial literacy by adopting the scale used by Potrich et al. (2020) comprising age-appropriate questions. Financial knowledge was defined in the study as having a basic understanding of mathematics specifically including simple and compound interest, risk and return evaluation, diversification strategies, saving of resources, and conducting cost and benefit analysis which can assist in the financial decision-making process. Financial behaviour in the scale measured the behaviour of the person regarding the financial aspects of their life that can affect their well-being while financial attitude was related to the intention of the person towards the financial decisions they are going to take in their financial life such as saving and planning. In addition to that, gender and previous business education experience was taken into account to determine if there was an effect of gender and business education on these financial literacy components. The study used the quantitative method of research with a sample size of 56 participants. The findings indicated that a large portion of the sample had high financial literacy while the rest of the participants had low levels of financial literacy..

Implications

The study has wide-ranging implications in both theoretical and practical aspects. Theoretically, it is by far the most recent and only study that explored financial literacy in the context of the youth of Ireland. Before that, the studies were most often designed for adult participants and across different countries. Such studies were unable to provide an understanding of this issue in an Irish cultural context focused on young people. With the exploration of this specific area of research, this study has not only contributed to the scarce academic literature but also opened new avenues of research for future studies.

As the world is facing another catastrophe in the form of COVID-19, financial management has become a top priority across the world. Hence, this study can contribute to the theoretical basis for future research and policy development in financial management. Practically, the study has wide-range implications for those in the field of financial literacy and management. Educators can take a closer look at the curriculum design and introducing simple financial concepts can increase the level of financial literacy in young adults. Along with that, the study has provided financial managers with the chance to explore more about financial literacy and its components. It would be interesting to understand in further detail financial attitudes across ages, how they form and the key factors that influence these attitudes. By understanding this you can then start working towards changing attitudes to gain more positive results.

Future Research Suggestions

Due to COVID-19, access to a large sample was not possible. Further studies should be developed in this regard to check the level of financial literacy among young adults and to determine the role of financial knowledge, attitude, and behavior in this context with a larger, more representative sample. This would help determine whether the current findings could be generalized to the whole young population of Ireland. The selection of a large sample will provide better and unbiased results.

The financial attitude component requires further research as participants responded rather indifferently to this aspect of financial literacy.

In addition to that, the sample of the current study consisted of mainly male participants. In future studies, the sample should be inclusive with equal participation of different genders. This is to ensure accurate results that represent a larger sample of the young adult population and not just men Additionally, future research should compare more equal sized groups of business-related and non-business related students to determine how this effects levels of financial literacy and its associated components While it is a common understanding that business and finance students have a better understanding of financial literacy, real-life financial decisions are not only reserved for them. The inclusion of greater numbers of students belonging to other fields for comparison will help provide greater clarity around any potential effects of business education experience – this could be compared at both second and third level education.

References

Agarwalla, S.K., Barua, S.K., Jacob, J. and Varma, J.R., 2013. Financial literacy among working young in urban India. Indian Institute of Management Ahmedabad, WP, (2013-10), p.02

Ajzen, I., 1991. The theory of planned behavior. Organizational behavior and human decision processes, 50(2), pp.179-211.

Aljundi, R., Lin, M., Goujaud, B. and Bengio, Y., 2019. Gradient based sample selection for online continual learning. arXiv preprint arXiv:1903.08671.

Amagir, A., Groot, W., Maassen van den Brink, H. and Wilschut, A., 2018. A review of financial-literacy education programs for children and adolescents. Citizenship, Social and Economics Education, 17(1), pp.56-80.

Anderloni, L. and Vandone, D., 2011. Risk of over-indebtedness and behavioural factors. In Risk tolerance in financial decision making (pp. 113-132). Palgrave Macmillan, London

Atkinson, A. and Messy, F.A., 2012. Measuring financial literacy: Results of the OECD/International Network on Financial Education (INFE) pilot study.

Atkinson, A. and Messy, F.A., 2012. Measuring financial literacy: Results of the OECD/International Network on Financial Education (INFE) pilot study.

Banerjee, A., Kumar, K., & Philip, D. (2017). Financial literacy, awareness and inclusion. Retrieved from https://scholar. google.co.in/scholar?hl=en&as_sdt=0%2C5&q=Banerjee%2C+Kumar%2C+and+Philip+%282017%29+financial+literac y&btnG=

Bayar, Y., Sezgin, H.F., Öztürk, Ö.F. and Şaşmaz, M.Ü., 2017. Impact of financial literacy on personal savings: A research on Usak University staff. Journal of Knowledge Management Economics and Information Technology, VII (6), December, pp.1-19.

Beckmann, E., 2013. Financial literacy and household savings in Romania. Numeracy, 6(2), p.9.

Beckmann, E., 2013. Financial literacy and household savings in Romania. Numeracy, 6(2), p.9.

Behavior. Journal of Education and Practice, 6(33), pp.99-105.

Benjamin, D.J., Brown, S.A., and Shapiro, J.M., 2013. Who is 'behavioral'? Cognitive ability and anomalous preferences. Journal of the European Economic Association, 11(6), pp.1231-1255.

Benjamin, D.J., Brown, S.A., and Shapiro, J.M., 2013. Who is 'behavioral'? Cognitive ability and anomalous preferences. Journal of the European Economic Association, 11(6), pp.1231-1255.

Bhushan, P. and Medury, Y., 2014. An empirical analysis of inter linkages between financial attitudes, financial behaviour and financial knowledge of salaried individuals. Indian Journal of Commerce and Management Studies, 5(3), pp.58.

Birpalia, K., 2018. Assessing and predicting the influencing factors of personal financial decisions by the millennial generation in Ireland (Doctoral dissertation, Dublin Business School).

Birpalia, K., 2018. Assessing and predicting the influencing factors of personal financial decisions by the millennial generation in Ireland (Doctoral dissertation, Dublin Business School).

Brown, M., Henchoz, C., and Spycher, T., 2018. Culture and financial literacy: Evidence from a within-country language border. Journal of Economic Behavior & Organization, 150, pp.62-85.

Brown, M., Henchoz, C., and Spycher, T., 2018. Culture and financial literacy: Evidence from a within-country language border. Journal of Economic Behavior & Organization, 150, pp.62-85.

Calder, B.J., L.W. Phillips, and A.M. Tybout. 1981. Designing research for application. Journal of Consumer Research 8, no. 2: 197–207.

Calder, B.J., L.W. Phillips, and A.M. Tybout. 1981. Designing research for application. Journal of Consumer Research 8, no. 2: 197–207.

Chen, H., and Volpe, R.P., 1998. An analysis of personal financial literacy among college students. Financial services review, 7(2), pp.107-128.

Chen, H., and Volpe, R.P., 1998. An analysis of personal financial literacy among college students. Financial services review, 7(2), pp.107-128.

Chung, Y. and Park, Y., 2014. The effects of financial education and networks on business students financial literacy. American Journal of Business Education (AJBE), 7(3), pp.229-236.

Churchill, G. and Casella, G., 1991. Sampling based methods for the estimation of DNA sequence accuracy. Technical Report BU-1138-M, Cornell University, Biometrics Unit.
Churchill, G. and Casella, G., 1991. Sampling based methods for the estimation of DNA sequence accuracy. Technical Report BU-1138-M, Cornell University, Biometrics Unit.
Cole, S., & Shastry, G. (2009, January 14). Smart money: The effect of education, cognitive ability, and financial literacy on financial market participation (Working Paper 09-071). Harvard Business School, Harvard University. Retrieved February 2, 2010 from http://hbswk.hbs.edu/item/6093.html
Cole, S., & Shastry, G. (2009, January 14). Smart money: The effect of education, cognitive ability, and financial literacy on financial market participation (Working Paper 09-071). Harvard Business School, Harvard University. Retrieved February 2, 2010 from http://hbswk.hbs.edu/item/6093.html
Cordero, J.M. and Pedraja, F., 2019. The effect of financial education training on the financial literacy of Spanish students in PISA. Applied Economics, 51(16), pp.1679-1693.

De Bassa Scheresberg, C., 2013. Financial literacy and financial behavior among young adults: Evidence and implications. Numeracy, 6(2), p.5.

Delavande, A., Rohwedder, S. and Willis, R.J., 2008. Retirement planning and the role of financial literacy and cognition. Michigan Retirement Research Center Working Paper, 190, p.2008.

Dhar, R. and Zhu, N., 2006. Up close and personal: Investor sophistication and the disposition effect. Management Science, 52(5), pp.726-740.

Diacon, S. 2004. Investment risk perceptions: Do consumers and advisers agree? The International Journal of Bank Marketing, 22(3), pp.180–198.

Dwiastanti, A., 2015. Financial Literacy as the Foundation for Individual Financial

Fernandes, D., Lynch Jr, J.G. and Netemeyer, R.G., 2014. Financial literacy, financial education, and downstream financial behaviors. Management Science, 60(8), pp.1861-1883.

George, D., & Mallery, P. (2001) 'SPSS for windows step by step: A simple guide and reference 10.0 update (3rd ed.).', Boston: Allyn & Bacon.

Goyal, K. and Kumar, S., 2021. Financial literacy: A systematic review and bibliometric analysis. International Journal of Consumer Studies, 45(1), pp.80-105.

Grima, S. and Pavia, S., 2019. Retirement Planning by Maltese Nationals: A Study of Influential Factors. In Contemporary Issues in Behavioral Finance. Emerald Publishing Limited.

Hanson, T.A., & Olson, P.M. 2018. Financial literacy and family communication patterns. Journal of Behavioral and Experimental Finance, 19, p 64-71.

Hasler, A. and Lusardi, A., 2017. The gender gap in financial literacy: A global perspective. Global Financial Literacy Excellence Center, The George Washington University

Howlett, E., Kees, J. and Kemp, E., 2008. The role of self-regulation, future orientation, and financial knowledge in long-term financial decisions. Journal of Consumer Affairs, 42(2), pp.223-242.

Hung, A.A., Parker, A.M. and Yoong, J. 2009, "Defining and measuring financial literacy", Working Paper No 708, Social Science Research Network, RAND Corporation, Santa Monica, CA.

Huston, S.J., 2010. Measuring financial literacy. Journal of consumer affairs, 44(2), pp.296-316.

Ibrahim, M.E. and Alqaydi, F.R., 2013. Financial literacy, personal financial attitude, and forms of personal debt among residents of the UAE. International Journal of Economics and Finance, 5(7), pp.126-138.

Kalekye, P.N. and Memba, F., 2015. The role of financial literacy on the profitability of women owned enterprises in Kitui town, Kitui County, Kenya. International Journal of Science and Research, 4(6), pp.2360-2365.

Kasman, M., Heuberger, B., & Hammond, R. A. (2018). Recommendations for improving youth financial literacy education. Retrieved from https://www.brookings.edu/ wp-content/uploads/2018/10/ES_20181001_FinancialLiteracy-Recommendations.pdf

Kehiaian, S.E., 2012. Factors and behaviors that influence financial literacy in US households. Nova Southeastern University.

Klapper, L., Lusardi, A. and Van Oudheusden, P., 2015. Financial literacy around the world. Standard & Poor's Ratings Services Global Financial Literacy Survey. Washington: Standard & Poor's.

Knoll, M.A. and Houts, C.R., 2012. The financial knowledge scale: An application of item response theory to the assessment of financial literacy. Journal of Consumer Affairs, 46(3), pp.381-410.

Kozina, F. and Ponikvar, N. (2015). Financial Literacy of First-Year University Students: The Role of Education. International Journal of Management, Knowledge and Learning, 4(2), p.245.

Krechovska, M. (2015). Financial Literacy as a path to sustainability. Trendy v podnikání-Business Trends, 5(2), p.4. Lusardi, A, and Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. Journal of Economic Literature 52 (1): p 5-44.

Kılıç, Y., Ata, H.A. and Seyrek, İ.H., 2015. Finansal okuryazarlık: Üniversite öğrencilerine yönelik bir araştırma. Muhasebe ve Finansman Dergisi, (66), pp.129-150.

Laerd, S. (2017) Two-way ANOVA using SPSS Statistics. Statistical tutorials and software guides. Available at: https://statistics.laerd.com/.

Lau, A., Chung, E. and Hui, Y., 2005. Quantitative research on financial literacy levels in Singapore. Singapore: The MoneySENSE Financial Education Steering Committee (FESC). Retrieved December, 11, p.2007.

Liamputtong, P. ed., 2019. Handbook of research methods in health social sciences. Singapore: Springer Nature.

Ludlum, M., Tilker, K., Ritter, D., Cowart, T.W., Xu, W. and Smith, B.C., 2012. Financial literacy and credit cards: A multi-campus survey.

Lusardi, A. and Mitchell, O.S., 2007. Financial literacy and retirement preparedness: Evidence and implications for financial education. Business economics, 42(1), pp.35-44.

Lusardi, A. and Mitchell, O.S., 2013. The economic importance of financial literacy: Theory and evidence (Working Paper No. 18952).

Lusardi, A. and Tufano, P., 2009. Debt literacy, financial experiences, and over indebtedness (No. w14808). National Bureau of Economic Research.

Lusardi, A., & Mitchell, O.S. 2014. The economic importance of financial literacy: Theory and evidence. Journal of Economic Literature, 52(1), 5-44.

Lusardi, A., 2012. Numeracy, financial literacy, and financial decision-making (No. w17821). National Bureau of Economic Research.

Lusardi, A., Mitchell, O.S. and Curto, V., 2010. Financial literacy among the young. Journal of consumer affairs, 44(2), pp.358-380.

Mae, S., 2009. How undergraduate students use credit cards: Sallie Mae's national study of usage rates and trends 2009. Accessed September, 13, p.2010.

Mahdzan, N. and Tabiani, S. (2013). The Impact of Financial Literacy on Individual Saving: An Exploratory Study in the Malaysian Context. Transformations in Business and Economics, 12(1), p.42.

Mandell, L., 2008. The financial literacy of young American adults. The Jumpstart Coalition for Personal Financial Literacy.

Mimura, Y., Koonce, J., Plunkett, S.W., & Pleskus, L. 2015. Financial information source, knowledge, and practice of college students from diverse backgrounds. Journal of Financing Counseling & Planning, 26(1), p 63-78

Mindrila, D. (2010) 'Maximum likelihood (ML) and Diagonally weighted least squares (DWLS) estimation procedures: A comparison of estimation bias with ordinal and multivariate non-normal data', International Journal of Digital Society, 1, pp. 60–66.

Nababan dan Sadalia, 2012. Analisis Personal Financial Literacy dan Financial Behavior Mahasiswa Strata I Fakultas Ekonomi Universitas Sumatera Utara, Jurnal Online, http://jurnal.usu.ac.id/index.php/jmim/article/view/651, in 25 Oktober 2015.

OECD, 2018. OECD/INFE toolkit for measuring financial literacy and financial inclusion.

Opie, C., 2019. Research approaches. Getting Started in Your Educational Research: Design, Data Production and Analysis, 137.

Opoku, A., 2016. Financial literacy among senior high school students evidence from Ghana (Doctoral dissertation)

Organisation for Economic Co-operation and Development (OECD). 2012, OECD/INFE High-Level Principles on National Strategies for Financial Education, OECD Publishing, Paris.

Organisation for Economic Co-Operation and Development (OECD). 2013, PISA 2012 Assessment and Analytical Framework: Mathematics, Reading, Science, Problem Solving and Financial Literacy, OECD Publishing, Paris.

Organization for Economic Co-operation and Development, 2013. PISA 2012 results in focus: What 15-year-olds know and what they can do with what they know.

Orton, L. 2007. Financial Literacy: Lessons from International Experience; Canadian Policy Research Networks: Ottawa, ON, Canada.

Pintye, A., & Kiss, M. (2016). Financial literacy of students in business and economics higher education. The Annals of the University of Oradea: Economic Sciences, 25(1), 781-789.

PISA, 2018. PISA 2018 released financial literacy items. Accessed from: https://www.oecd.org/pisa/test/PISA2018-financial-literacy-items.pdf. Accessed at: 3rd Feb, 2021.

Potrich, A.C.G., Vieira, K.M. and Kirch, G., 2015. Determinants of financial literacy: Analysis of the influence of socioeconomic and demographic variables. Revista Contabilidade & Finanças, 26(69), p.362.

Potrich, A.C.G., Vieira, K.M. and Paraboni, A.L., 2020. YOUTH FINANCIAL LITERACY SHORT SCALE: PROPOSITION AND VALIDATION OF A MEASURE.

Remund, D., (2010). Financial Literacy Explicated: The Case for a Clearer Definition in an Increasingly Complex Economy. The Journal of Consumer Affairs, Vol. 44 (2), p 276-295

Sages, R.A. and Grable, J.E., 2010. Financial Numeracy, Net Worth, and Financial Management Skills: Client Characteristics That Differ Based on Financial Risk Tolerance. Journal of financial service professionals, 64(6).

Sanderson, A. 2015. Importance of financial literacy. Bankers Association of Zimbabwe (BAZ) Newsletter. Retrieved from http://www.baz.org.zw/consumer-centre/education-centre/importance-financial-literacy

Sekaran, U. and Bougie, R., 2016. Research methods for business: A skill building approach. John Wiley & Sons.

Shahryar, S. and Tan, S.T., 2014. Spending behaviour of a case of Asian university students. Asian Social Science, 10(2), pp.64-69.

Shim, S., Barber, B.L., Card, N.A., Xiao, J.J. and Serido, J., 2010. Financial socialization of first-year college students: The roles of parents, work, and education. Journal of youth and adolescence, 39(12), pp.1457-1470.

Shim, S., Xiao, J.J., Barber, B.L., & Lyons, A.C. 2009. Pathways to life success: A conceptual model of financial well-being for young adults. Journal of Applied Developmental Psychology, 30(6), p.708-723.

Shockey, S.S. 2002, "Low-wealth adult's financial literacy: money management behavior and associates factors, including critical thinking", Unpublished doctoral dissertation, The Ohio State University (AAT 3039524).

Smith, B.A. and Stewart, F., 2009. Learning from the experience of organization for economic co-operation and development countries: Lessons for policy, programs, and evaluations. Overcoming the Saving slump: How to increase the effectiveness of financial education and saving programs, pp.345-367.

Sohn, S.H., Joo, S.H., Grable, J.E., Lee, S. and Kim, M., 2012. Adolescents' financial literacy: The role of financial socialization agents, financial experiences, and money attitudes in shaping financial literacy among South Korean youth. Journal of adolescence, 35(4), pp.969-980.

Sprow, K.M., 2010. Adult financial literacy education and Latina learners: A qualitative case study.

Stango, V. and Zinman, J., 2011. Fuzzy math, disclosure regulation, and market outcomes: Evidence from truth-in-lending reform. The Review of Financial Studies, 24(2), pp.506-534.

Stella, G.P., Filotto, U. and Cervellati, E.M., 2020. A Proposal for a New Financial Literacy Questionnaire. International Journal of Business and Management, 15(2).

Stolper, O.A. and Walter, A., 2017. Financial literacy, financial advice, and financial behavior. Journal of business economics, 87(5), pp.581-643.

Swiecka, B., Yeşildağ, E., Özen, E. and Grima, S., 2020. Financial literacy: The case of Poland. Sustainability, 12(2), p.700.

Thompson, S. 2014. Financing the future: Australian students' results in the PISA 2012 Financial Literacy assessment

Van Rooij, M., Lusardi, A. and Alessie, R., 2011. Financial literacy and stock market participation. Journal of Financial Economics, 101(2), pp.449-472.

Van Rooji, M.C., Lusardi, A. and Alessi, R.J.M., 2012. Literacy, retirement planning, and household wealth. Economic Journal, 122, pp.449-476.

Varcoe, K., Martin, A., Devitto, Z. and Go, C., 2005. Using a financial education curriculum for teens. Journal of Financial Counseling and Planning, 16(1).

Wagland, S.P. and Taylor, S., 2009. When it comes to financial literacy, is gender really an issue? Australasian Accounting, Business and Finance Journal, 3(1), p.3.

Widdowson, D.; Hailwood, K. Financial literacy and its role in promoting a sound financial system. Reserve Bank New Zealand Bull. 2007, 70, 37–47.

Woods, J.J., Seychell, S., Ozen, E., Spiteri, J., Suban, R. and Grima, S., 2020. Explaining Heterogeneity in Risk Appetite and Tolerance: The Turkish Case. In Contemporary Issues in Audit Management and Forensic Accounting. Emerald Publishing Limited.

Yıldırım, M., Bayram, F., Oğuz, A. and Günay, G., 2017. financial literacy level of individuals and its relationships to Demographic variables. Mediterranean Journal of Social Sciences, 8(3), p.19.

Appendices

Appendix A: Youth Financial Literacy Short Scale(Portrich et al.,2020)

Item Num	**Items**	**Options**				
Item 1	Suppose you had €100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow? You do not make any other deposits or withdraw any money from this account.	More than €102.*	Exactly €102.	Less than €102.		
Item 2	Do you think that the following statement is true or false? Buying a single company stock usually provides a safer return than a stock mutual fund.	True.*	FALSE	Do not know		
Item 3	Suppose you saw the same TV in two different stores for the starting price of $1,000.00. Store A offers a discount of $150.00, while store B offers a discount of 10%. What is the best alternative?	Buy at store A ($150.00 discount).*	Buy at store B (10% discount).	Do not know.		
Item 4	Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, would you be able to buy more than, exactly the same as, or less than today with the money in this account?	More than today.	Exactly the same as today.	Less than today.*		
Item 5	Suppose you borrowed $100.00 from a friend and after a week paid $100.00. How much interest are you paying?	0%*	1%	2%	1	1

		Never	Almost Never	Sometimes	Almost Always	Always
Item 6	I reserve the money I receive monthly for future needs.					
Item 7	I keep part of my income every month.					
Item 8	I save money regularly to achieve long-term financial goals, such as educating my children, purchasing a home, retiring?					
Item 9	I save more when I receive a salary increase.					
Item 10	In the past 12 months, I have been able to save money.					
		Strongly Agree	**Agree**	**Indifferent**	**Disagree**	**Strongly Disagree**
Item 11	I find it more rewarding to spend money than to save for the future.					
Item 12	Money is made to spend.					

Notes to the questionnaire analysis

- *is showing correct answer in item 1 to 5
- Coding: If the answer of item 1 to item 5 is correct, code as 1, if it is wrong code as 2
- From item 6 to 10, code never 1, almost never 2, sometimes 3, almost always 4, always 5
- From item 11 to 12, code strongly agree 1, agree 2, indifferent 3, disagree 4, strongly disagree 5

Appendix B: Information Sheet

I would like to invite you to take part in a research study exploring financial literacy among young adults in Ireland. Before you decide whether to participate, please take a moment to read the following information which will explain the nature of the research. If you have any questions or need further information you can contact the Lead Researcher Soliudeen Sonekan at the following email address: X20120826@student.ncirl.ie.

Who is conducting this research?

My name is Soliudeen Sonekan, I am a Masters in Entrepreneurship student at National College of Ireland. I am undertaking this study as part of my dissertation course requirements.

What is this research about?

This study will use brief self-report questionnaires to measure financial literacy levels of young adults (aged 18 – 24). Financial literacy refers to the ability to understand and effectively use various financial skills, including personal financial management, budgeting, and investing.

Findings from this research will provide us with a greater understanding of levels of financial literacy among young adults in Ireland and help identify areas where there may be a need for further support or training, so your input would be extremely helpful.

What will taking part involve?

Taking part in this study will involve answering a brief survey involving 12 questions related to financial literacy (multiple choice and rating scales) as well as some demographic questions. This survey should take approximately 10-15mins to complete.

Will taking part be confidential?

Participation is completely confidential. No identifying data will be collected on any participants. The data from this study will be held on a password-protected computer, to which only the lead researcher will have access. A report of the study will be produced to meet course requirements and may be submitted for publication, but the data will be analysed on an aggregate level, and no individual participants will be identifiable. Your responses will be completely anonymous. Any collected data will be deleted upon full completion of the research dissertation.

Can I withdraw from the study?

Yes. Participation in this study is completely voluntary and you have the right to refuse participation and withdraw at any time during the study. You can discontinue the study simply by closing your internet browser window. However, you will be unable to withdraw after completing the study and submitting your responses, as the data analysis process may have begun and as all responses are anonymous, we will not be able to identify your data.

At the conclusion of this study, you will receive further information to inform you about the nature of this research. Should you have any concerns or need clarification at any point, contact Soliudeen Sonekan X20120826@student.ncirl.ie (Lead Researcher) or Dr Lynn Farrell lynn.farrell@ncirl.ie (Project Supervisor).

By completing this survey, you are consenting to participate in this study. If you do not wish to participate you can close this internet browser window. Please complete the survey once only.

Thank you.

Soliudeen Sonekan