

The Effect of Student Primary Teachers' Irish Proficiency and Year of Study on their Self-Efficacy and Grit.

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Abstract

Previous literature has explored and linked students' positive psychological traits and their second language education. The current research aimed to address a gap in the literature for second language education and the positive psychology traits, Self-Efficacy and Grit. The study considered an Irish sample, specifically Student Primary Teachers. It also incorporated Irish language education, as there is a lack of literature in this area. The research was conducted to inform educational policies and guidelines and add to knowledge in the area. In order to investigate the research, an online survey was distributed to Student Primary teachers through purposive and snowball sampling. There was a total of 80 participants. The data collected was analysed using a 2x2 factorial between-groups Multivariate Analysis of Variance. The results displayed that there were no significant effects of the independent variables Irish Proficiency and Year of Study on the dependent variables Self-Efficacy and Grit. However, there was a significant correlation between Self-Efficacy and Grit. The current research provided possible explanations for the insignificant unexpected results of the study, which were contrary to previous research. The limitations, strengths, theoretical and practical implications, and advice for further research are stated in the discussion section.

Introduction

Self-Efficacy and Grit are positive psychology traits which will be examined in the current study. Grit is outlined as an individual maintaining interest and determination when attempting to tackle struggles to reach an achievement (Alhadabi & Karpinski, 2019). Waddington (2023) postulates Self-Efficacy as the perceived belief in one's capabilities in conducting a task. It also involves the beliefs in their inabilities. Cai et al. (2024) outline the need for further research on these variables in language learning. Research by Barry (2021) presented a study on Self-Efficacy in an Irish language context, which is a significant gap in the literature. The study postulates that more research on Irish language learners is needed, with positive psychology traits like Self-Efficacy.

Theory of Self-Efficacy

Waddington (2023) postulates Bandura's Social Cognitive Theory, how an individual acquires knowledge and behaviours in a social context. Self-Efficacy is a key construct of the theory. It is not assumed that an individual's actual abilities will be congruent with their perceived Self-Efficacy. Bandura's theory encapsulates how Self-Efficacy can encourage our choice in the effort and persistence we put into certain tasks. Graham (2022) portrays that Albert Bandura specifies Self-Efficacy is the development of persistence in relation to completing a challenging experience. It concerns the performance of the person. It is impacted by the environment and behaviours, and it influences these factors. Similar theories that align with Bandura's social cognitive theory with respect to Self-Efficacy are attribution theory whereby, people attempt to interpret their successes and failures of challenges. Attributing factors to the outcome they receive. High Self-Efficacy inclines to title success to elements within an individual's control as opposed to those with low Self-Efficacy who are prone to attribute failures to immutable components. Expectancy-value framework also corresponds with Bandura's theory, which concerns the motivation of an individual in completing a task, which is established by their perceived importance of the task and the expectancy of success. Cai et al. (2024) summarise the four sources of Self-Efficacy according to Bandura. The sources aim to boost Self-Efficacy. mastery experience, vicarious experience, verbal persuasion, and physiological and affective states. Mastery relates to an individual's previous successes with a challenge. Vicarious refers to comparison to similar individuals' performance. Verbal persuasion is the encouragement of those who are

knowledgeable. Lastly, physiological and affective states are associated with the management of the response an individual has while completing a task.

Theory of Grit

This research is analysing the relationship between two non-cognitive traits, Grit and Self-Efficacy. Wang et al. (2021) identify that Grit is postulated as a variable of positive psychology aiding language education. The broaden and build theory of positive emotions outlines positive psychology. It insinuates that positive emotions create an expansion on mindset, which encourages development. Positive psychology inspires growth using strengths, including aspects of education. Positive psychology is influenced in language learning through Grit. Persistence with aspirations and dependability with attentiveness through challenging experiences support pedagogical achievement. The attribute of malleability in Grit enables amplification of the trait with students through educational supports and interventions. Grit is a recent contribution to language learning, which requires more literature. Graham (2022) illuminates that Self-Efficacy can be influenced and impact other factors. It has been portrayed that Grit's combination of perseverance and interest in a specific challenge illuminates its similarity to Self-Efficacy, which develops on Bandura's literature that those with high Self-Efficacy persevere through scrutinization (Fathi et al., 2024).

Irish Language Proficiency

According to statistics on the population of Ireland (Central Statistics Office, 2023), there are 1.87 million Irish speakers in the country over the age of 3. Accounting for 40% of the population, a rise of 6% since 2016. This population is divided into three groups associated with their levels of proficiency. Those who speak Irish not well(55%), well(32%) and very well(10%). The frequency of use of Irish influenced fluency. 90% of those who spoke Irish daily and outside pedagogical settings spoke the language very well or well. 84% of those who did not use Irish other than in an educational setting did not speak the language well. There was an increase of Irish speakers who never speak the language from 2016 of an extra 13%. The government census postulates there is an abundance of Irish speakers in Ireland. This illustrates the importance of learning the language.

Research by Dunne (2019) investigates Student Primary Teachers' Irish Proficiency and attitudes towards the Irish language relative to the above statistics. The findings depict that teachers need more support promoting the Irish language. 97% of the students in 4th year

of the course outlined that the primary teacher's role is important to the revitalisation of the language. Results indicate that high proficiency positively correlated with positive views and satisfaction of teaching Irish. This justifies the study's use of a cross-sectional study with preservice teachers through their Year of Study and Irish Proficiency.

Grit, Self-Efficacy, Irish Language Proficiency, Year of Study, and Undergraduate Primary Teacher Students

An article by Alhadabi and Karpinski (2019) explores Grit, Self-Efficacy and goal orientations of students' performance in university. The methodology used a sample size of 258 university students from different studies in the United States. Results portrayed that Grit and Self-Efficacy can positively influence the approaches of students' goals, which can direct a student to academic success. Those with high Self-Efficacy negatively correlated with avoidance of learning like procrastinating and positively aligned with the goal orientations corresponding with academic achievement performance. It focuses on the same non-cognitive attributes as the current research. This outlines the importance of studying these variables as they can influence the academic outcomes of students. Generalisability of the research is a limitation as it was conducted in America. This study will aid the growth of generalisability of the literature as it will focus on an Irish context.

In contrast to the findings of the previous study, Fathi et al. (2024) suggest Grit relates to language achievement. The research measures the impact of Self-Efficacy on second language acquisition. It also examines growth mindsets' effect on second language achievement and Grit as a mediator. Attempting to analyse what are the variables creating an adequate language learner. The research involved 379 intermediate English language learners in Iran. The mean age was 22, which is like the age group of the current study. Self-Efficacy and Grit were both directly correlated with language achievement. This supports two of the concepts that this study is analysing with the differing context of Irish as a second language. Grit was also identified as a mediator of Self-Efficacy and language achievement, which emphasises the importance of Grit and Self-Efficacy further in language education, as Self-Efficacy influences Grit which can then influence achievement in a language learning context. The research also found that Grit and growth mindset impact each other to influence achievement, and that growth mindset impacts second language achievement through Grit. This study justifies the need for more research on positive psychological factors relative to language learning. The study suggests further research in different populations, languages and

educational systems, which is what this study aims to do. The research by Fathi et al. (2024) also recommends analysis on Language Proficiency in the relationship of Grit and Self-Efficacy.

Similarly, the impact of Self-Efficacy beliefs on performance of the Irish language has previously been studied by Barry (2021). Participants included adults who previously completed Irish in their Leaving Certificate Examination. The ability to manipulate Self-Efficacy to encourage high and low outcomes in pedagogical success was postulated. This shows the influence of previous experience on Self-Efficacy. The study divided participants into 3 groups, high and low performance, and a control group, which was not affected by the conditions. The high achievement group performed badly after their results were deflated from the first time they were examined. The low performing group's results were inflated, and the second time they were examined, their results had increased. The control group did worse the second time they did the test. This emphasises that Self-Efficacy is an essential element of language education to encourage optimum achievement in language learning. The age group in the study with higher Self-Efficacy were younger, insinuating that the longer individuals are out of education with compulsory Irish learning, deflates attrition. A limitation of the study presented that the Irish test was not necessarily comprehensive enough. The study also analysed the amount of time participants used to do the Irish test, to analyse if Self-Efficacy predicted this variable however, it was insignificant, this does not relate to this research, as the Irish Proficiency utilises self-report measures, as does the use of deception. Barry (2021) insinuates more literature on Self-Efficacy, and the Irish language is needed.

Furthermore, Zhang et al. (2024) illustrate how teachers form their beliefs of Self-Efficacy through mastery experience, which is developed by Bandura's social cognitive theory. The mastery experience consists of challenges individuals face acquiring Self-Efficacy, through perseverance. Grit is partly defined as a characteristic which includes perseverance. Therefore, it may encourage Self-Efficacy. An example of the mastery experience, which encourages Self-Efficacy for teachers, is the amount of experience they have in the role. This justifies the research looking at student teachers, giving insight on whether their experience level influences their Grit and Self-Efficacy. The research provides findings that the most influential factor of teachers' Self-Efficacy may be teaching experience. This indicates the possible effect of experience through Year of Study. Further research is advised on the Influence of Primary teacher education on Self-Efficacy.

Current Study & Conclusion

The current study considers the collective research in the domain of positive and educational psychology. Wang et al. (2021) identify positive psychology traits in the field of language learning are relatively recent in literature. Further research is suggested on different cultures and contexts, with encouragement to study more than one variable of positive psychology on language learners (Fathi et al., 2024). Irish proficiency and second language research are justified through a lack of previous literature on the Irish language. Barry (2021) encourages developments on Self-Efficacy, specifically with Irish language learning. Zhang et al. (2024) advises to include student teachers as participants, which gives reasoning towards the current study. The hypotheses and research question will be analysed through an online questionnaire design. They were formulated based on the contribution of the previous literature and aim to add to the research in the area.

Research Question and Hypotheses

Research Question: Is there a significant multivariate effect of Year of Study and Irish Proficiency on Student Primary Teachers' Self-Efficacy and Grit?

Hypotheses are displayed in table 1 below (Appendix A).

Table 1

Hypotheses

H1	There will be an effect on Self-Efficacy based on Year of Study.
H2	There will be an effect on Grit based on Year of Study.
H3	There will be an effect on Self-Efficacy based on Irish Proficiency.
H4	There will be an effect on Grit based on Irish Proficiency.
H5	There will be an interaction effect on Self-Efficacy based on Year of Study and Irish Proficiency.
H6	There will be an interaction effect on Grit based on Year of Study and Irish Proficiency.
H7	There will be a linear correlation between Self-Efficacy and Grit.

Methodology

Design

The current thesis design incorporated two dependent variables(DV), **Grit** and **Self-Efficacy**. These variables were established through the Short Grit Scale (Grit-S) and the Generalized Self-Efficacy scale (GSES). The study utilised self-assessed Irish Proficiency as one independent variable(IV2), this was separated into three groups not well, well, and very well. After data collection, these levels were amalgamated into two groups of **Not well and well/very well**, as there was a lack of data in the very well Irish Proficiency grouping. It also asked the frequency individuals used the Irish language outside the education system (daily, weekly, less often, never). This was based off similar grouping by the Central Statistics Office (2023). The options for the levels of Irish Proficiency are explained on the survey to prevent ambiguity (see Table 2) (Appendix B). These explanations are according to the Common European Framework of Reference for Languages (CEFR) (n.d.). A second IV was Year of Study as an independent variable (IV1). This IV was initially divided into First, second, third and fourth year of undergraduate studies, and postgraduate level. However, this was altered to two groups, amalgamating **1st or 2nd year undergraduate students and 3rd or 4th year undergraduate students**. The postgraduates were excluded as there was a lack of data in this group. The data for the IVs was collected through demographic questions. The research focused on Student Primary Teachers. The methodology utilised purposive and snowball sampling. A Microsoft forms survey was presented online and shared on social media. The design collated participants into groups based on the results of their data. The study involved a between groups independent design. The research used descriptive statistics to summarise the results and inferential statistics to make a presumption on Student Primary Teachers. The statistical analysis measured the relationship between Grit and Self-Efficacy for the participants. It also investigated a possible difference in Student Primary Teachers' Grit and Self-Efficacy in relation to their self-assessed Irish Proficiency and Year of Study applicable to each participant.

Table 2*Options for self-assessed Irish Proficiency*

Not well	Well	Very well
basic use of the language communicating familiar topics (e.g., daily life).	Interact with a degree of fluency with native speakers and understand most of complex texts.	Can use language effectively for social, academic and professional purposes. Understanding and expressing oneself fluently.

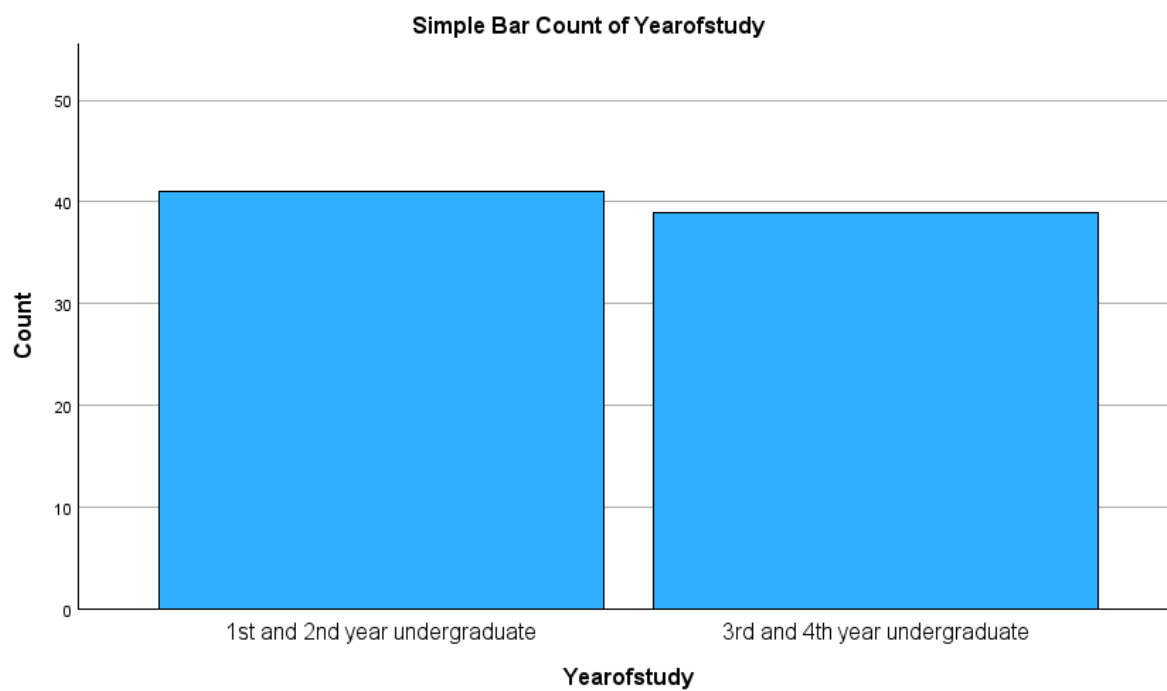
Note. The options are based on the Common European Framework of Reference for Languages (CEFR) (n.d.).

Participants

The participants were Student Primary Teachers. There were originally 96 participants. Two participants were removed from the data as they answered no to being a Primary Teacher Student. 14 participants were removed as they were postgraduate students and there was not enough data to include them. Therefore N=80. The mean age was 21. The participants age ranged from 18 to 23. 61 of the participants indicated their gender as female, 19 as male. The distribution of the participants through their Year of Study is displayed in Figure 1 below (Appendix C). The distribution of the participants' Irish Proficiency is displayed in Figure 2 below (Appendix D). The participants' frequency of speaking Irish outside the education system is displayed in Figure 3 below (Appendix E). As a result of ethical implications, those who did not complete the survey were excluded from the data analysis. The research ensured that the treatment of all the participants conformed with the ethical standards of the Psychological Society of Ireland and the study was approved by the Psychology Ethics Committee (PEC).

Figure 1

Distribution of the participants' Year of Study

**Figure 2**

Distribution of the participants' Irish Proficiency

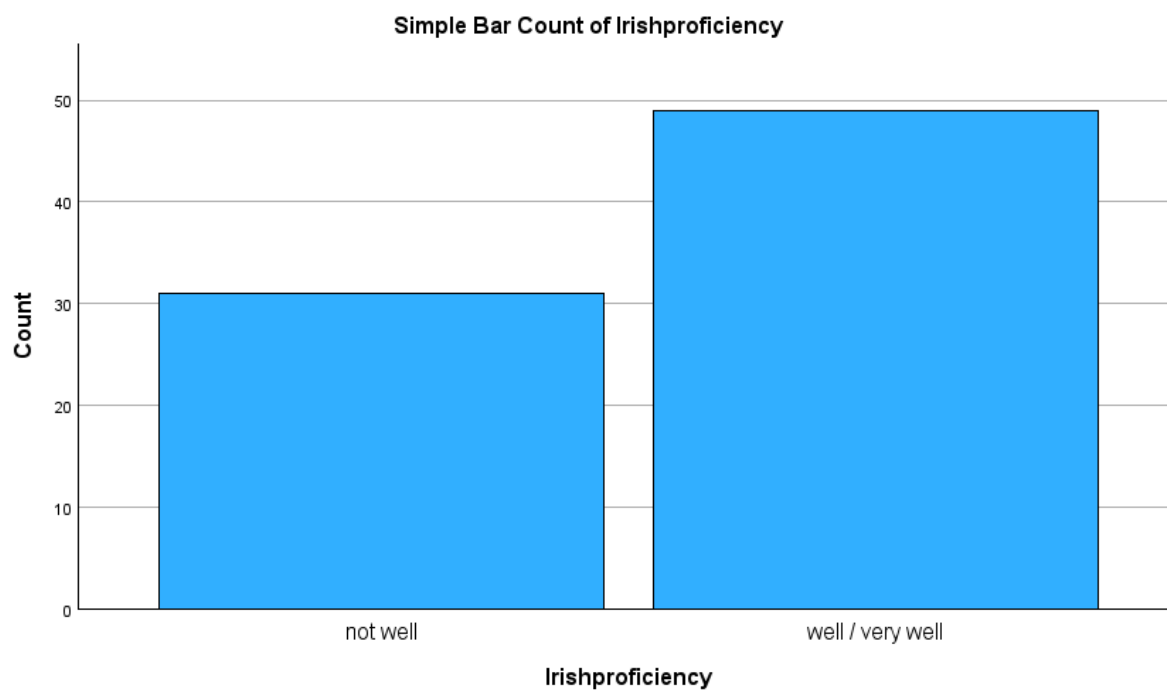
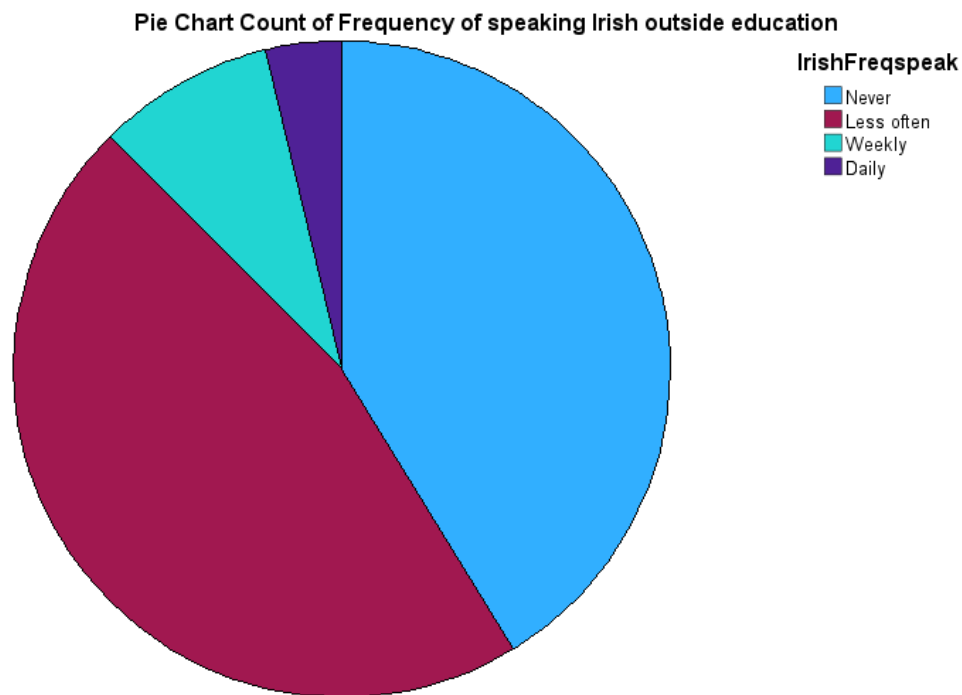


Figure 3

Distribution of the frequency the participants speak Irish outside education



Materials

Participants were invited to partake in the research on social media, through an advertisement (Appendix F). This guided them to a Microsoft form. There was an information sheet (Appendix G), a consent form (Appendix H), and a debrief (Appendix I) throughout the survey. These formatted the reasoning for the research, ensured the participant consented to their data being used in the study and provided further contacts if the participant was affected by the study. The participant was presented with demographic questions (Appendix J) and provided a de-identifying code to implement anonymity.

The **Generalized Self-Efficacy scale (GSES)** (Schwarzer & Jerusalem, 1995) (see Appendix K) assesses the adult population on their ability to respond to environments and issues that may arise. It is a ten item, 4-point likert scale with 1 being, not at all true and 4 being, exactly true. The scale provides statements like “I can always manage to solve difficult problems if I try hard enough” the participant then would select how applicable the statement is to them with the range on the likert scale. The scale is scored by accumulating the results from the ten items presented. Cronbach’s alpha ranges from .75 to .90 (Schwarzer &

Jerusalem, 1995). The Cronbach's alpha of another study using the GSES resulted in a value of .95 (Berdida et al., 2023). The reliability of the scale in the current study is .789.

The second scale utilised in the current research is the **Short Grit Scale** (Grit-S) (Duckworth & Quinn, 2009) (see Appendix L) which measures an individual's determination and enthusiasm towards an objective. The scale considers two subscales which are consistency of interest and perseverance of effort. There are eight items in the scale which are responded to on a 5-point likert scale. Ranging from 1 being, not like me at all, and 5 being, very much like me. An example of a question from the scale is "I am diligent". Some of the questions apply reverse scoring, the totals for each subscale are accumulated together and the average is the total Grit score. The overall Cronbach's alpha is between .73 and .83. While for the separate subscales, consistency of interest it ranges from .73 to .79 and for perseverance of effort it is between .60 and .78 (Duckworth & Quinn, 2009). Another study using the Grit-S produced a Cronbach's alpha of .82 (Omar et al., 2026). The Cronbach's alpha of the scale produced from the present research is .811.

Pilot Study

Pilot testing controlled for any issues which may have arose throughout the data collection process. A Pilot test was initially carried out on 3 participants. This identified issues with the understanding of the question regarding the demographic unique participant code. As a result, the wording of the question was changed to prevent similar issues with data collection. The pilot testing provided an approximate time for completion of the survey which was 7 minutes.

Procedure

The research was advertised on social media, specifically recruiting current Primary Teacher Students. The participants followed a link/QR code to the Microsoft forms. They were presented with an information sheet, agreed to a consent form, and completed demographic questions, including creating a de-identifying code for anonymity. The participants then completed the GSE and Grit-S. Following this, they either confirmed their consent or wished to remove their data from the study. The individuals were provided a debrief at the end of the process. Control procedures in place were the consistency of the online survey for each participant and utilising a reliable and accessible platform for this. The survey asked if the participant was a student primary teacher to ensure a consistent sample were gathered. The data was analysed appropriately with relevant statistical tests.

Results

The current study used IBM SPSS Statistics version 30 to conduct statistical analysis on the data collected. A two-way between-groups multivariate analysis of variance was performed to investigate the main effects and interaction effects of Year of Study (IV1) and Irish Proficiency (IV2) differences on Student Primary Teachers' Self-Efficacy (DV1) and Grit (DV2) combined.

Descriptive Statistics

The participants were divided into groups based on their Year of Study (IV1), with two levels 1st or 2nd year undergraduate students(n=41) and 3rd or 4th year undergraduate students(n=39). They were also divided based on their Irish Proficiency (IV2) with two levels of not well(n=31) or well/very well(n=49) (Appendix M). The total (N=80) Self-Efficacy mean was 30.05 and the standard deviation was 3.36. The total (N=80) Grit mean was 3.17 and the standard deviation was 0.545 (Appendix N). The table 3 below shows the descriptive statistics of the separate groups of Year of Study in relation to Self-Efficacy and Grit (Appendix O).

Table 3

Descriptive statistics of Self-Efficacy and Grit based on Year of Study

	Year of Study	M	SD	N
Total Self Efficacy	1 st and 2 nd year undergraduate	30.049	3.61	41
	3 rd and 4 th year undergraduate	30.051	3.36	39
Total Grit	1 st and 2 nd year undergraduate	3.192	0.526	41
	3 rd and 4 th year undergraduate	3.144	0.571	39

The table 4 below shows the descriptive statistics of the separate groups of Irish Proficiency in relation to Self-Efficacy and Grit (Appendix P).

Table 4

Descriptive statistics of Self-Efficacy and Grit based on Irish Proficiency

	Irish Proficiency	M	SD	N
Total Self Efficacy	Not well	28.94	3.803	31
	Well/Very well	30.76	3.072	49
Total Grit	Not well	3.065	0.518	31
	Well/Very well	3.235	0.557	49

Inferential Statistics

Research question: Is there a significant multivariate effect of Year of Study and Irish Proficiency on Student Primary Teachers' Self-Efficacy and Grit?

The hypotheses are displayed in table 1 below (Appendix A).

Table 1

Hypotheses

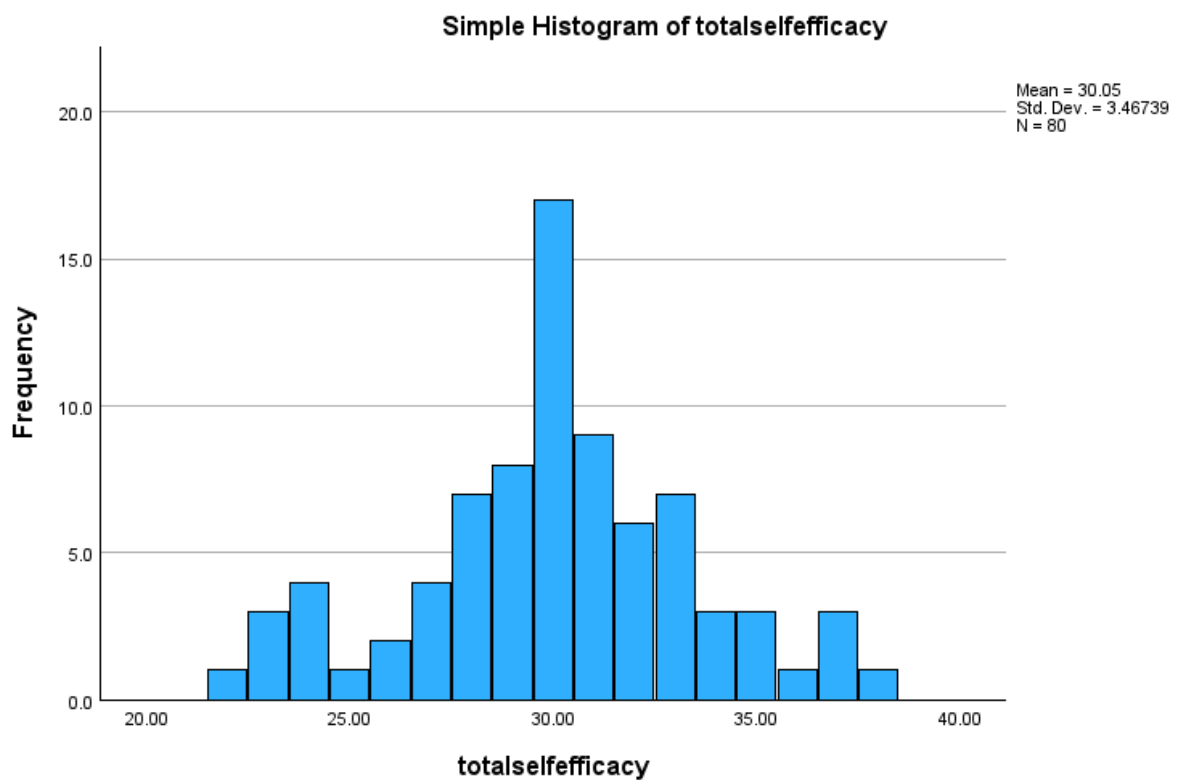
H1	There will be an effect on Self-Efficacy based on Year of Study.
H2	There will be an effect on Grit based on Year of Study.
H3	There will be an effect on Self-Efficacy based on Irish Proficiency.
H4	There will be an effect on Grit based on Irish Proficiency.
H5	There will be an interaction effect on Self-Efficacy based on Year of Study and Irish Proficiency.
H6	There will be an interaction effect on Grit based on Year of Study and Irish Proficiency.
H7	There will be a linear correlation between Self-Efficacy and Grit.

Normality

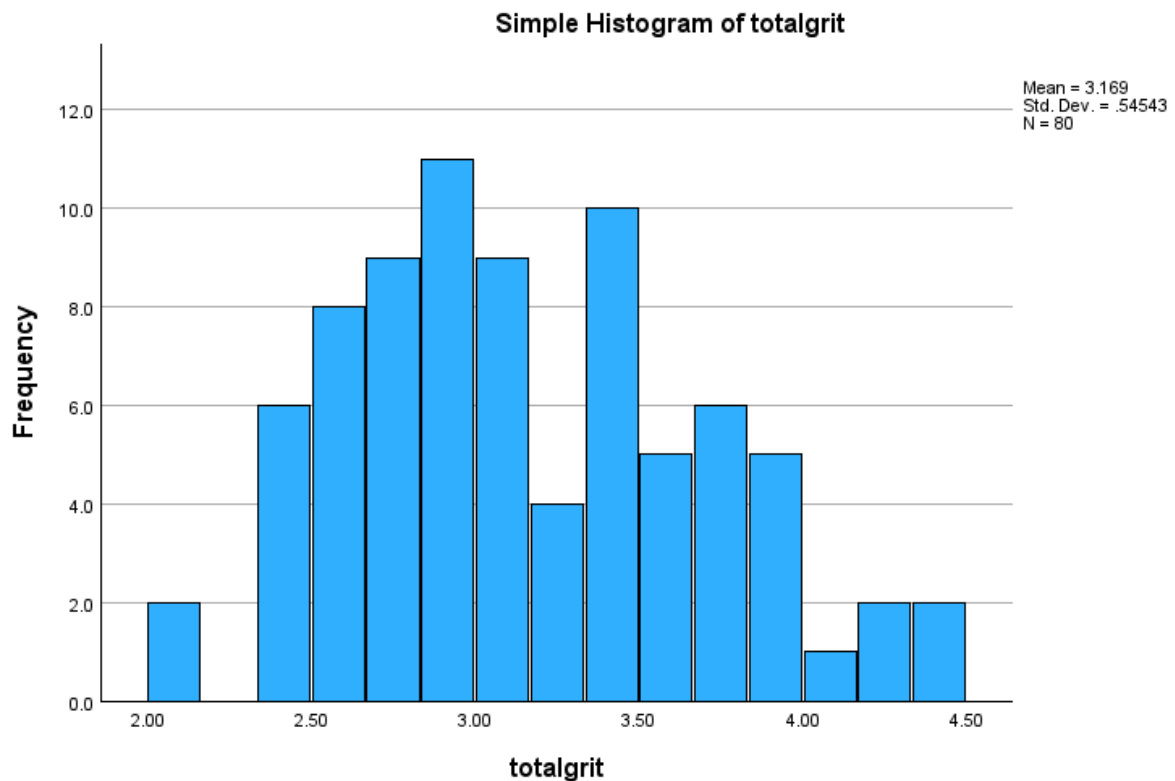
The test for statistical analysis was a 2x2 factorial Two-way MANOVA. The assumption of normal distribution was not met for self-Efficacy. *Kolmogorov-Smirnov*(80)=.119, $p=.007$ (Appendix Q). Figure 4 below illustrates the distribution of the data for Self-Efficacy (Appendix R).

Figure 4

Distribution of the Self-Efficacy data



The assumption of normal distribution was not met for Grit. *Kolmogorov-Smirnov*(80)=.105, $p=.029$ (Appendix Q). Figure 5 below illustrates the distribution of the data for Self-Efficacy (Appendix S).

Figure 5*Distribution of the Grit data*

The multivariate analysis of variance was continued based on the violated assumptions of normal distribution, given that the F test for normality is a robust test.

Multivariate Normality

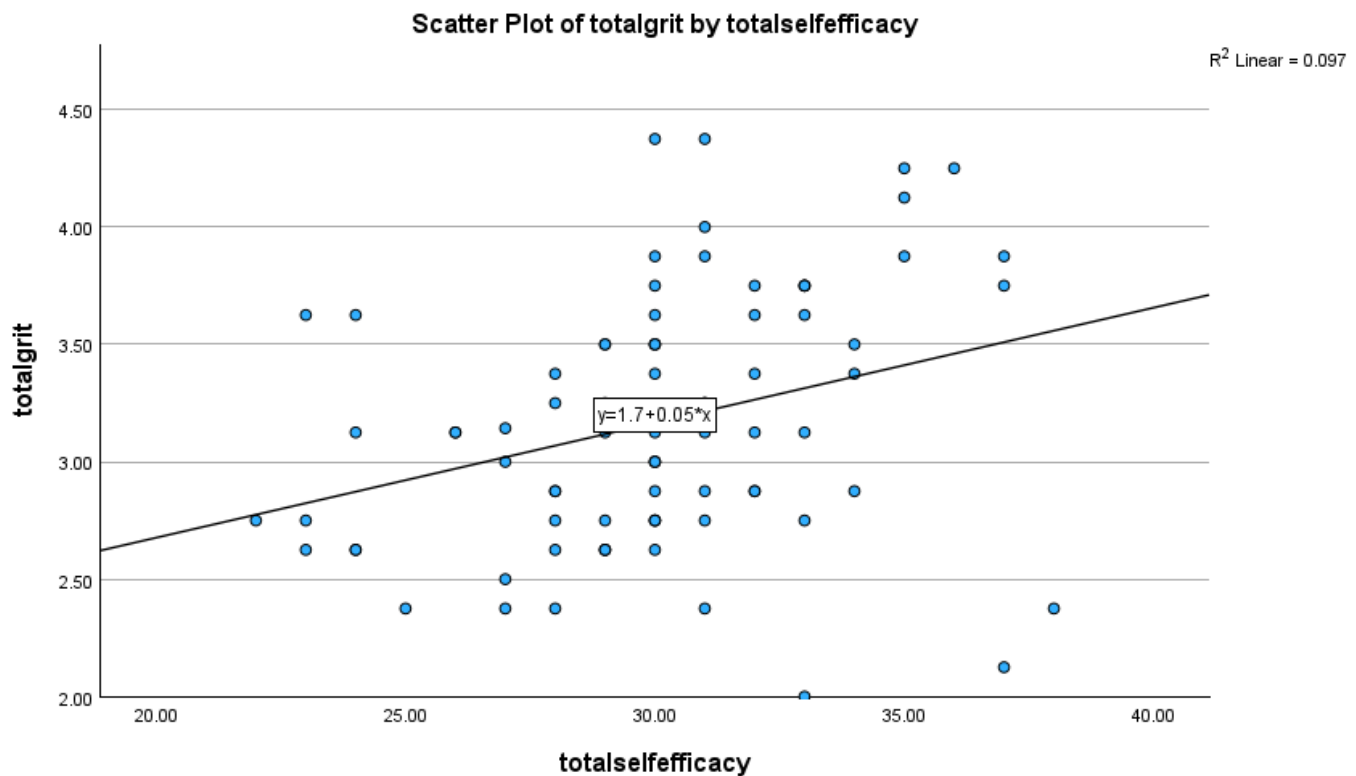
The assumption of Multivariate normality was met shown by *Mahalanobis distance*. The maximum value was 11.151 (Appendix T).

Linearity

Hypothesis 7 stated that there would be a linear correlation between self-Efficacy and Grit. The assumption of Linearity between Self-Efficacy and Grit was met. *Pearson Correlation* = .311, with a 95% confidence interval the true mean lies with 0.098 and .497. This is a positive medium correlation. This supported the hypothesis. $R^2 = 0.097$. This states that 10% of the variance of self-Efficacy can be explained by Grit (Appendix U). The Figure 6 below displays the correlation of the dependant variables Self-Efficacy and Grit (Appendix V).

Figure 6

A scatterplot showing the correlation of Self-Efficacy and Grit



Equal Variance

The assumption of Homogeneity of Variance was met for Self-Efficacy (*Levene Statistic*(3,76)=0.874, $p=.458$) and Grit (*Levene Statistic*(3,76)=0.179, $p=.910$) (Appendix W).

Equality of covariance matrices

The assumption of homogeneity of covariance was met. (using *Box M test* $p=.895$) (Appendix X).

Multivariate Tests

Multivariate tests indicate there is no significant difference for Year of Study on either of the dependent variables. *Pillai's Trace*(2,75)=245, $p=.784$. There was an 8.7% chance of getting a significant result with the test chosen (*Observed Power*) (Appendix Y).

Multivariate tests indicate there is no significant difference for Irish Proficiency on either of the dependent variables. $Pillai's Trace(2,75) = 3.059, p = .053$. There was a 58% chance of getting a significant result with the test chosen (*Observed Power*) (Appendix Y).

Conclusion

Given the results of the multivariate tests did not show Multivariate Significance, this indicated the test results were not significant, and the analysis was stopped.

A significant difference was not found for any of the variables in the multivariate analysis of variance.

H1: There was no significant effect on Self-Efficacy based on Year of Study.

H2: There was no significant effect on Grit based on Year of Study.

H3: There was no significant effect on Self-Efficacy based on Irish Proficiency.

H4: There was no significant effect on Grit based on Irish Proficiency.

H5: There was no significant interaction effect on Self-Efficacy based on Year of Study and Irish Proficiency.

H6: There was no significant interaction effect on Grit based on Year of Study and Irish Proficiency.

H7: There is a linear positive medium correlation between Self-Efficacy and Grit.

A Multivariate analysis of variance test was chosen because of a linear medium correlation between the two dependent variables. Results showed that there was no significant difference when the dependent variables Grit and Self-Efficacy were grouped for the MANOVA.

Discussion

Overview of the findings

The statistical analysis utilised a Two-way between-groups Multivariate Analysis of variance to test for a significant difference between participants' Irish Proficiency and Year of Study in terms of their overall Self-Efficacy and Grit. The hypotheses 1 and 2, analysing the main effect of Year of Study (IV1) on the dependent variables separately, Self-Efficacy and Grit were not significant. This contradicts the findings of Zhang et al. (2024), which indicate that experience may be the most influential factor on Teachers' Self-Efficacy. The results of the current research may vary from this literature, as the current study gathered Primary Teacher Students rather than qualified teachers. The hypotheses 3 and 4, analysing the main effect of Irish Proficiency (IV2) on the dependent variables separately, Self-Efficacy and Grit were not significant. This contradicts the findings of Fathi et al. (2024), which found that Self-Efficacy and Grit both directly correlated with language achievement. The contradictions between this research and the current study may be explained by the current study analysing the research in an Irish setting, incorporating Irish language proficiency, compared to the research on English language learners in Iran. The findings also differ from Barry (2021), which found that Self-Efficacy is essential in Irish language education. This may be explained as the research used a different methodology of a within-groups quasi-experimental design compared to the current research, which used self-report measures for Irish Proficiency. Similarly, hypotheses 5 and 6, looking at the interaction effects of IV1 and IV2 on the dependent variables, were not significant. Hypothesis 7 was supported as there was a moderate linear correlation between Self-Efficacy and Grit. This hypothesis is supported by previous literature, including Alhadabi and Karpinski (2019), which used self-report measures for the positive psychology variables like the current research. Therefore, the findings of the study indicate to the research question that there are no significant multivariate effects of Year of Study and Irish Proficiency on Student Primary Teachers' Self-Efficacy and Grit. However, there is a linear correlation between Self-Efficacy and Grit.

Strengths

One strength of the current research is that it incorporates the Irish language and uses an Irish sample of Student Primary Teachers. This sampling contributes to research as it is a gap in the literature on the area of second language education and positive psychology traits. Barry (2021) illuminates the need for more research on the Irish language in this area. The

research also employs an effective empirical research design which utilises the Short Grit Scale (Duckworth & Quinn, 2009) and Generalized Self-Efficacy Scale (Schwarzer & Jerusalem, 1995), which are both shown to be reliable. The quantitative design reduced the chance of objectivity bias and allow for replicability of the research. Similarly, the data collection used an advantageous design with an online survey, which is efficient, accessible and promotes anonymity. Another advantage of the research is the statistics used in the data analysis. Instead of conducting multiple Two-Way ANOVAs, the research used a more appropriate test, a Multivariate Analysis of Variance to examine the variables involved in the study. This reduced the risk of a Type 1 error, which involves finding a significant result when there is not one.

Limitations

Despite the strengths of the study, there are limitations to the research. One limitation is the small sample size that was used. There was a total of 80 participants due to the removal of the participants who were not Primary Teacher Students ($n=2$) and those that were postgraduate students ($n=14$). The unexpected results may be due to the small sample size not providing an accurate depiction of the population. This may have reduced the statistical power, which can affect the ability to detect significant results. The amalgamation of some of the levels for the independent grouping variables could be a possible weakness in the research. Although it allowed the data analysis to be conducted with adequate participants in each group, it could prevent the results finding significant effects. Another obstruction to the research is the lack of male participants; there were only 19 male participants in the research. The self-report measures regarding the students' level of Irish language proficiency may have the implication of potential bias. Participants may not have provided an accurate representation of their proficiency in the language.

Theoretical implications

The results of the current research are inconsistent with Bandura's Social Cognitive theoretical framework. The theory portrays that Self-Efficacy is impacted by the environment and behaviours of individuals (Graham, 2022). However, Year of Study and Irish Proficiency were not found to influence the participants' Self-Efficacy in the current research. Similarly, the Expectancy value framework illustrates that a person's motive to a task is established according to its importance and the individual's perception of success. This would imply that students in later years of their degree would hold more importance, likewise with their Irish

Proficiency level however, this is not portrayed in the study (Graham, 2022). Fathi et al. (2024) illuminate Grit's similarity to Self-Efficacy which is supported by hypothesis 7 in the current research which found a positive moderate linear correlation between the two variables. Wang et al. (2021) insinuate that the broaden and build theory postulates Grit as a positive psychology variable which is associated with development. Given its similarity to Self-Efficacy the influence of other elements on students' Grit was hypothesised however, Grit was not found to be impacted by Year of Study or Irish Proficiency. Some of the benefits of bilingualism are displayed through Peace-Hughes (2022), highlighting the advantages to further language learning and greater employment opportunities. The current research adds to the literature for language education and bilingual individuals.

Practical implications

During the current research process, a new action plan for Irish language education was implemented in Primary schools (Department of Education and Youth, 2025). Aiming for Irish to be taught less like a subject and to experience the language, striving to support teachers and students. This is important to those learning the language in preparation to teach the language to future students. Research for the implementation of the new plan by Burke et al. (2025) utilised focus groups of Student Primary Teachers. The findings acknowledge the importance of teachers being competent in Irish to teach pupils the language. This current research indicates that the participants' Year of Study and Irish Proficiency did not influence their Grit and Self-Efficacy, which provides practical implications to educational policies, Second language education and Irish language policies as the role of a Primary teacher in the revitalisation of the Irish language is essential as indicated by Dunne (2019) illustrating that 97% of final year Student Primary Teachers involved in the study acknowledged this.

Future Research

Building on the outlined weaknesses of the research stated above more male participants should be examined in relation to the research. The consideration of postgraduate students and the original levels of the grouping variables, Year of Study (IV1) and Irish Proficiency (IV2), should be implemented in future research with a larger sample size to analyse these variables in relation to the dependent variables of Self-Efficacy and Grit. The assumptions of normal distribution for the dependent variables were not met in the current data analysis. Future research should take this into account when conducting analysis. The data analysis of a MANOVA in the current research may have impacted the results. Other

research established that Self-Efficacy and Grit both correlated with second language achievement (Fathi et al., 2024), contrary to the present research. The use of different analyses may provide different results than the current research and should be explored in future research. Further studies could incorporate qualified teachers as participants to analyse the differences between experience level beyond the Year of Study. The use of scales specific to the Primary teaching profession may also be considered for example, the Teachers' Sense of Efficacy Scale (TSES) (Tschannen-Moran & Hoy, 2001).

Conclusion

This study has demonstrated that there were no significant effects of Year of Study and Irish Proficiency on Grit and Self-Efficacy for Student Primary Teachers. These unexpected findings illuminate the possible limitations of the research stated above, which should be addressed in future research. The conclusions support the initial hypothesis that there is a linear correlation between Self-Efficacy and Grit for Student Primary Teachers. Overall, the research highlights the need for further studies incorporating Irish language education and Irish samples and advises guidance on the strengths and weaknesses for replicability. The thesis contributes to the field of educational psychology, educational policies and guidelines.

References

- Alhadabi, A., & Karpinski, A. C. (2019). Grit, self-efficacy, achievement orientation goals, and academic performance in University students. *International Journal of Adolescence and Youth*, 25(1), 519–535.
<https://doi.org/10.1080/02673843.2019.1679202>
- Barry, S. (2021). Irish language self-efficacy beliefs: Mediators of performance and resources. *Australian Journal of Applied Linguistics*, 4(3), 103–118.
<https://doi.org/10.29140/ajal.v4n3.526>
- Berdida, D. J. E., Lopez, V., & Grande, R. A. N. (2023). Nursing students' perceived stress, social support, self-efficacy, resilience, mindfulness and psychological well-being: A structural equation model. *International Journal of Mental Health Nursing*, 32(5), 1390–1404. <https://doi.org/10.1111/inm.13179>
- Burke, P., Ní Dhiorbháin, A., Ó Duibhir, P., Nic Craith, D., Ó Breacháin, C., Ahern, P., Ní Dhubhghaill, E., & English, A. (2025). *Teaching and Learning Irish in English-Medium Schools Perspectives of Children, Young People, Parents, Teachers, Principals and Student Teachers*. (Report No. 2). Department of Education and Youth.
https://assets.gov.ie/static/documents/a6e5745a/Consultation_Report_2_Irish_in_English-Medium_Schools.pdf
- Cai, Y., Zhu, L., & Xing, K. (2024). Self-efficacy mediates but does not moderate the relationship between grit and L2 achievement. *Innovation in Language Learning and Teaching*, 1–15. <https://doi.org/10.1080/17501229.2024.2425803>
- Central Statistics Office. (2023, December). *Census of Population 2022 Profile 8 - The Irish Language and Education*. CSO. <https://www.cso.ie/en/releasesandpublications/ep/cpp8/censusofpopulation2022profile8-theirishlanguageandeducation/irishlanguageandthegaeltacht/>
- Common European Framework of Reference for Languages (CEFR). (n.d.). *Global scale - Table 1 (CEFR 3.3): Common Reference levels*. The Council of Europe.
<https://www.coe.int/en/web/common-european-framework-reference-languages/table-1-cefr-3.3-common-reference-levels-global-scale>

- Department of Education and Youth. (2025). *Is féidir liom, is féidir linn... Action Plan for Irish in English-Medium Schools*.
https://assets.gov.ie/static/documents/ba8bc46a/IrishInSchoolsReportEnglish_s_P.pdf
- Duckworth, A. L., & Quinn, P. D. (2009). Development and validation of the Short Grit Scale (Grit-S). *Journal of Personality Assessment*, *91*(2), 166-174.
<https://doi.org/10.1080/00223890802634290>
- Dunne, C. M. (2019). Primary teachers' experiences in preparing to teach Irish: views on language proficiency and promoting the language. *Studies in Self-Access Learning Journal*, 21–43. <https://doi.org/10.37237/100103>
- Fathi, J., Pawlak, M., Saeedian, S., & Ghaderi, A. (2024). Exploring factors affecting foreign language achievement: The role of growth mindset, self-efficacy, and L2 grit. *Language Teaching Research*. <https://doi.org/10.1177/13621688241227603>
- Graham, S. (2022). Self-efficacy and language learning – what it is and what it isn't. *Language Learning Journal*, *50*(2), 186–207.
<https://doi.org/10.1080/09571736.2022.2045679>
- Omar, Y. M., Abdelmageed, A., Shaker, O., Oransa, S., Nasr, M., Senbel, A. A., Messak, M., Aboheif, S., & El-Gilany, A.-H. (2026). The interplay of grit, resilience, and burnout among medical students during exams: a cross-sectional study in Mansoura university, Egypt. *Scientific Reports*, *16*(1), 1–8. <https://doi.org/10.1038/s41598-026-35125-0>
- Peace-Hughes, T. (2022). Minority language education: Reconciling the tensions of language revitalisation and the benefits of bilingualism. *Children & Society*, *36*(3), 336–353.
<https://doi.org/10.1111/chso.12537>
- Schwarzer, R., & Jerusalem, M. (1995). *General Self-Efficacy Scale (GSE)* [Database record]. APA PsycTests. <https://doi.org/10.1037/t00393-000>
- Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: capturing an elusive construct. *Teaching and Teacher Education*, *17*(7), 783–805. [https://doi.org/10.1016/S0742-051X\(01\)00036-1](https://doi.org/10.1016/S0742-051X(01)00036-1)

Waddington, J. (2023). Self-efficacy. *ELT Journal*, 77(2), 237–240.

<https://doi.org/10.1093/elt/ccac046>

Wang, Y., Derakhshan, A., & Zhang, L. J. (2021). Researching and Practicing Positive Psychology in Second/Foreign Language Learning and Teaching: The past, current status and Future Directions. *Frontiers in Psychology*, 12.

<https://doi.org/10.3389/fpsyg.2021.731721>

Zhang, X., Admiraal, W., & Saab, N. (2024). Factors affecting teachers' self-efficacy in teaching in primary education. *Teachers and Teaching*, 1–13.

<https://doi.org/10.1080/13540602.2024.2389384>

Appendices

Appendix A- Hypotheses.

Table 1

Hypotheses

H1	There will be an effect on Self-Efficacy based on Year of Study.
H2	There will be an effect on Grit based on Year of Study.
H3	There will be an effect on Self-Efficacy based on Irish Proficiency.
H4	There will be an effect on Grit based on Irish Proficiency.
H5	There will be an interaction effect on Self-Efficacy based on Year of Study and Irish Proficiency.
H6	There will be an interaction effect on Grit based on Year of Study and Irish Proficiency.
H7	There will be a linear correlation between Self-Efficacy and Grit.

Appendix B- Irish Proficiency levels.

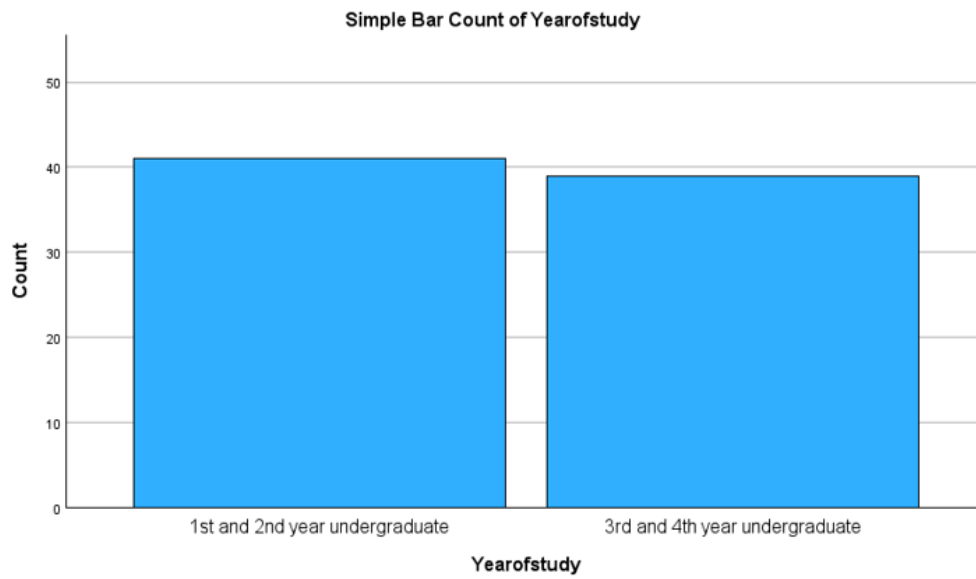
Table 2

Options for self-assessed Irish Proficiency

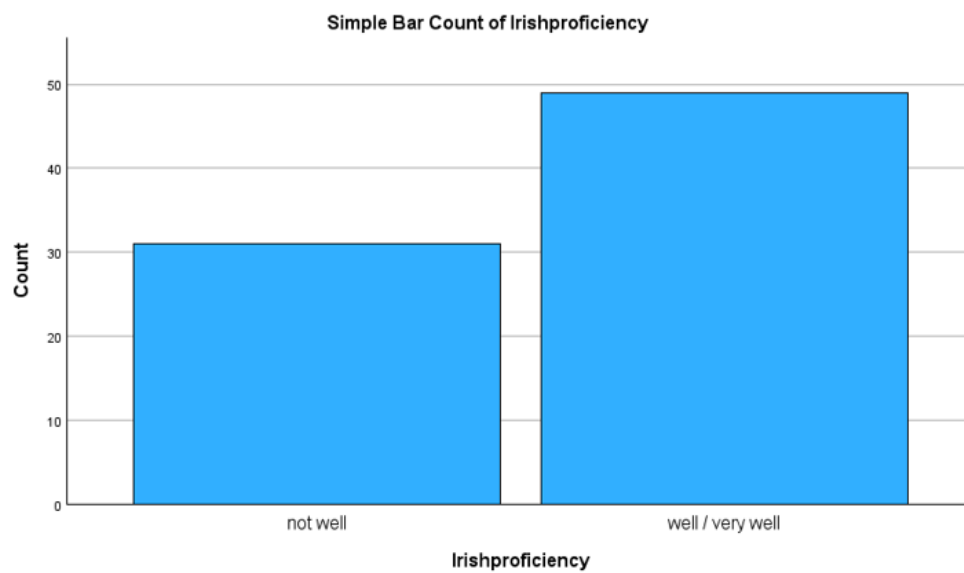
Not well	Well	Very well
basic use of the language communicating familiar topics (e.g., daily life).	Interact with a degree of fluency with native speakers and understand most of complex texts.	Can use language effectively for social, academic and professional purposes. Understanding and expressing oneself fluently.

Note. The options are based on the Common European Framework of Reference for Languages (CEFR) (n.d).

Appendix C- Distribution of participants' Year of Study.

Figure 1*Distribution of the participants' Year of Study*

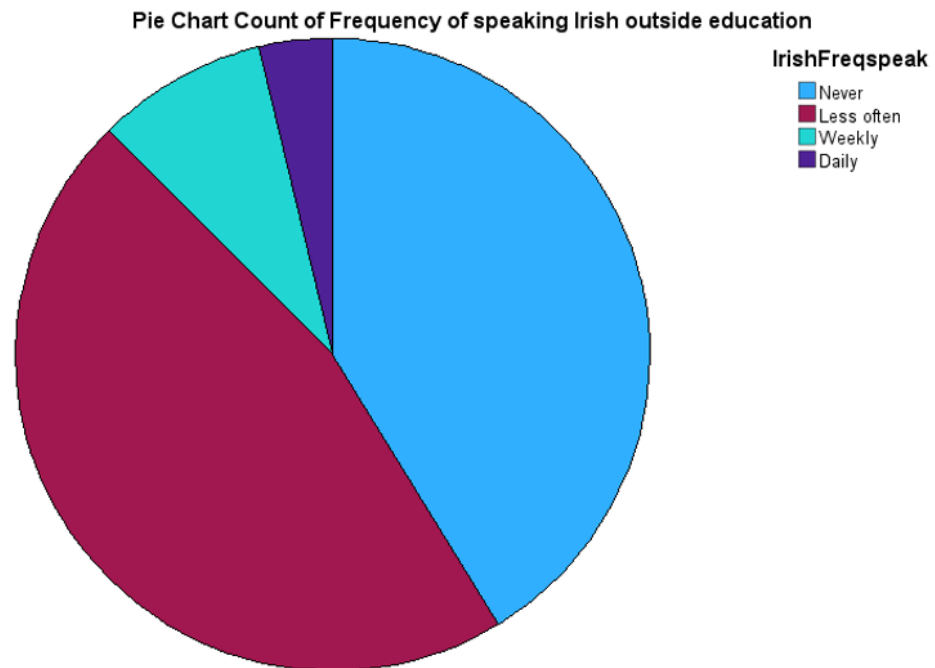
Appendix D- Distribution of participants' Irish Proficiency.

Figure 2*Distribution of the participants' Irish Proficiency*

Appendix E- Distribution of the frequency of Irish speaking outside education.

Figure 3

Distribution of the frequency the participants speak Irish outside education



Appendix F- Advertisement.

An investigation of the effect of Irish Proficiency and year of study on Student Teacher's Self-Efficacy and Grit

**LOOKING FOR STUDENT
PRIMARY TEACHERS TO TAKE
PART IN THIS STUDY**



It will take approx. 7 minutes.

THANK YOU!

The advertisement features a light blue background with decorative elements like clouds and swirls. The text is centered and uses a mix of bold and regular fonts. A QR code is prominently displayed in the center, with a blue arrow pointing to it from the right. Below the QR code, there is a blue button with the text 'THANK YOU!'.

Appendix G- Information sheet.

Major Research Project

Emily Fortune

When you submit this form, it will not automatically collect your details like name and email address unless you provide it yourself.

Information Sheet

Title of project: An investigation on Student Primary Teacher's Self-Efficacy and Grit considering the effect of Irish Proficiency and year of study.

1. You are being invited to take part in the research on Student Primary Teacher's Self-Efficacy and Grit and their association to Irish Proficiency and year of study. This project is being undertaken by Emily Fortune for the major research project as part of the BSc (Hons) in Applied Psychology, IADT.

Before you decide whether you wish to take part, it is important for you to understand why this research is being done and what it will involve. Please take time to read this information carefully and discuss it with someone you trust. If there is anything that is unclear or if you would like more information please ask, our contact details are at the end of this information sheet. Thank you for reading this.

What is the purpose of the project? The study is aiming to investigate the relationship between student Primary teachers Grit level referring to their strenght and courage, and their self-efficacy relative to their belief in themselves to perform/achieve in different environments. The research will also consider demographic differences relative to the participants like year of study and their proficiency of Irish Language. The research overall examines the relationship of the specific positive psychology traits above, in a language learning setting.

Who is/Why are you being invited to take part? The research is gathering participants who are currently Student Primary Teachers.

What is involved? If you agree to participate in the current online survey, you will be asked general demographic questions about your age, gender, the Irish language and your year of study. There will also be two short questionnaires on your self-efficacy and Grit. It will take approximately 7 minutes based off prior pilot testing of the survey.

Do I have to take part? You are free to decide whether you wish to take part or not. If you do decide to take part, you will be asked to sign a consent form that lets us know you have read this information sheet and understand what is involved in the research. You are free to withdraw from this study at any time and without giving reasons. The survey will not impact your future studies as a student.

What are the disadvantages and risks (if any) of taking part? There are no prevalent risks associated with the current survey. However, you can decide to not answer any sections or questions in the survey if you do not want to.



2. **What are the possible benefits of taking part?** There may not be any direct benefits to the participants. However, the information we get from the study will aim to acknowledge and develop the research on Student Primary Teachers positive psychology traits and their association to their degree and language learning specific to the Irish language.

How will my information be used? The responses you provide to the online survey will be combined with data collected from the other participants. This data will then be used in the thesis for the BSc (Hons) in Applied Psychology in the Dun Laoghaire Institute of Art, Design & Technology. The data collected will be anonymised. If you wish to view the thesis you can request this through the IADT library, alternatively you can contact the researcher Emily Fortune, N00222071@student.iadt.ie or Supervisor Dr Irene Connolly, Irene.Connolly@iadt.ie. The research may be published in an academic journal or written about in media. This can also be requested as stated above.

How will my data be protected? The research will safeguard all the participants information provided during and after the study. This process will adhere to the GDPR regulations in place. The data you provide to the research will be de-identified by using a code with your second and third letters of your address and the last three digits of your Eircode. This will ensure the participants are anonymised. Under the EU General Data Protection Regulation (GDPR) the legal basis for collecting data for scholarly research is that of public interest. The regulations regarding the protection of your data will be followed. Only data which is needed for analysis will be collected. By giving your consent to take part in the study you are consenting to the use of your data as detailed in this information sheet. The data will be retained by the researcher for at least one year, and may be retained for up to 7 years if the results of the study are published in certain capacities (e.g. in a journal article). There is also a possibility that the fully anonymised dataset may be submitted to a journal and made available to other researchers and academics worldwide for verification purposes, but if this occurs it will be ensured that you are not identifiable from the data. As the supervisor on this project, I, Dr Irene Connolly am responsible for ensuring that all datasets will be stored in accordance with GDPR regulations and those which are not submitted to a journal will be fully deleted on or before date 7 years from data collection. The data will be accessible to the researcher, Emily Fortune, the supervisor, Dr Irene Connolly and a statistics lecturer in IADT. The data will be kept on a password locked laptop securely. In the event of a data breach the data protection officer in IADT will be informed immediately. The data will be coded making it anonymous for the participants. The long-term arrangements, ensure that the data will be securely disposed of, or placed in a repository if it is required to keep it. You will find contact information for IADT's Data Protection Officer, and more information on your rights concerning your data at <https://iadt.ie/about/your-rights-entitlements/gdpr/>



3. **Who has reviewed the study?** This study has been approved by the IADT Psychology Ethics Committee.

What if you have any questions or there is a problem? If you have a concern about any aspect of this study, you may wish to speak to the researcher(s) who will do their best to answer your questions. You should contact Emily Fortune, N00222071@student.iadt.ie or their supervisor Dr Irene Connolly, Irene.Connolly@iadt.ie.

Thank you for giving the your time to read the information sheet.

Date 13/01/2026

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Appendix H- Consent form.

Major Research Project

* Required

Consent Form

Title of Project: An investigation on Student Primary Teacher's Self-Efficacy and Grit considering the effect of Irish Proficiency and year of study.

Name of Researcher/s: Emily Fortune

4. 1. I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions.
2. I understand that my participation is voluntary and that I am free to withdraw at any time.
3. I understand that data collected about me during this study will not be identifiable when the research is published.
4. I am over 18 years of age.
5. I agree to take part in this study.

*

I agree

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Major Research Project

* Required

Confirmation of Consent for Data Use

11. Having completed the questionnaire *

I consent to the researchers using my answers for their research

I wish to have my answers removed from the research

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Appendix I- Debrief form.

Debriefing Form

Title of Project: An investigation on Student Primary Teacher's Self-Efficacy and Grit considering the effect of Irish Proficiency and year of study.
Name of Researcher/s: Emily Fortune

15. **Thank you very much for taking part in this research study.** This study is designed to investigate the relationship between student Primary teachers Grit and self-efficacy. The research considers demographic differences of the participants like year of study and their proficiency of Irish Language. The relationship of the specific positive psychology traits are examined, in a language learning setting.

Withdrawal information

If you have any questions about this study, or if you would like to withdraw your data from the study, please contact the researcher or supervisor at N00222071@student.iadt.ie and Irene.Connolly@iadt.ie In your email let them know your unique ID code, of the second and third letters of your address combined with the last 3 digits of your eircode. If you submit a request for data removal, all data collected from you will be securely deleted. You will be able to remove your data from the study until February 14th when the data will be combined and analysed. Data removal will not be possible after that date. Please keep a copy of this information in case you wish to remove your data after leaving this screen.

Data protection

Your data will be treated according to GDPR regulations. You can contact IADT's Data Protection Officer at dp@iadt.ie, and more information on your rights concerning your data at <https://iadt.ie/about/your-rights-entitlements/gdpr/>

Support resources If you have been affected by the content of this study in any way, the organisations below may be of assistance.
 Pieta House: 1800 247 247, Samaritans: 116 123

Thank you again for taking the time to participate in this research. If you have any questions about this study, please contact the researcher or supervisor at N00222071@student.iadt.ie and Irene.Connolly@iadt.ie

Appendix J- Demographic questions.

Participant Code and Demographic Information

5. Please provide us with an anonymised code which we can use to identify your data if you later wish to have it removed from our dataset. Please do so by answering the following two questions:

- o The second and third letters of a parent/guardians name (e.g., **MI**)
 - o Your favorite sport (e.g., **football**)
- e.g., MIfootball**

Enter your answer

6. Gender: I identify as: (e.g., male)

Enter your answer

7. What age are you?(answer in numbers e.g., 20)

Enter your answer

8. Are you currently a Student doing a Primary School Teaching degree? (If no, then thank you for you time and please click out of the survey).

Yes

No

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9. What year of study are you in?

First year of undergraduate degree

Second year of undergraduate degree

Third year of undergraduate degree

Fourth year of undergraduate degree

Postgraduate degree

10. What would you assign your Irish Language Proficiency as from the statements below? (Level/ ability to use Irish).

Very well: *Can use language effectively for social, academic and professional purposes. Understanding and expressing oneself fluently.*

Well: *Interact with a degree of fluency with native speakers, and understand most of complex texts.*

Not well: *basic use of the language communicating familiar topics (e.g., daily life).*

Very well

Well

Not well

Answer:

11. How frequently do you speak Irish outside the education system? 

- Daily
- Weekly
- Less often
- Never

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Appendix K- Generalized Self-Efficacy Scale (GSES).

Major Research Project

Generalized Self-Efficacy Scale

Answer the following statements regarding the extent to which they are applicable to you. There are no right or wrong answers. Only tick one answer for each question.

9. Question 

	Not at all true	Barely true	Moderately true	Exactly true
I can always manage to solve difficult problems if I try hard enough.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If someone opposes me, I can find means and ways to get what I want.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is easy for me to stick to my aims and accomplish my goals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident that I could deal efficiently with unexpected events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thanks to my resourcefulness, I know how to handle unforeseen situations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I can solve most problems if I invest the necessary effort.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can remain calm when facing difficulties because I can rely on my coping abilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I am confronted with a problem, I can usually find several solutions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I am in a bind, I can usually think of something to do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No matter what comes my way, I'm usually able to handle it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Appendix L- Short Grit Scale (Grit-S).

Major Research Project

Short Grit Scale 

Answer the following statements regarding the extent to which they are applicable to you. There are no right or wrong answers. Only tick one answer for each question.

10. Question 

	Not like me at all	Not much like me	Somewhat like me	Mostly like me	Very much like me
New ideas and projects sometimes distract me from previous one.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Setbacks don't discourage me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have been obsessed with a certain idea or project for a short time but later lost interest.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am a hard worker.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often set a goal but later choose to pursue a different one.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I have difficulty maintaining my focus on projects that take more than a few months to complete.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I finish whatever I begin.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am diligent.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Appendix M- Between-Subjects Factors.

Between-Subjects Factors

		Value Label	N
yearofstudy	1.00	1 st and 2nd year undergraduate	41
	2.00	3rd and 4th year undergraduate	39
Irishproficiency	1.00	not well	31
	2.00	well / very well	49

Appendix N- Descriptive statistics.

Descriptive Statistics

	yearofstudy	Irishproficiency	Mean	Std. Deviation	N
totalselfefficacy	1 st and 2nd year undergraduate	not well	29.1111	3.95398	18
		well / very well	30.7826	3.20449	23
		Total	30.0488	3.60521	41
	3rd and 4th year undergraduate	not well	28.6923	3.72793	13
		well / very well	30.7308	3.01407	26
		Total	30.0513	3.36349	39
	Total	not well	28.9355	3.80294	31
		well / very well	30.7551	3.07226	49
		Total	30.0500	3.46739	80
totalgrit	1 st and 2nd year undergraduate	not well	3.1389	.49610	18
		well / very well	3.2345	.55544	23
		Total	3.1925	.52592	41
	3rd and 4th year undergraduate	not well	2.9615	.55053	13
		well / very well	3.2356	.56935	26
		Total	3.1442	.57105	39
	Total	not well	3.0645	.51828	31
		well / very well	3.2351	.55699	49
		Total	3.1690	.54543	80

Appendix O- Descriptive statistics of Self-Efficacy and Grit based on Year of Study.

Table 3*Descriptive statistics of Self-Efficacy and Grit based on Year of Study*

	Year of Study	M	SD	N
Total Self Efficacy	1 st and 2 nd year undergraduate	30.049	3.61	41
	3 rd and 4 th year undergraduate	30.051	3.36	39
Total Grit	1 st and 2 nd year undergraduate	3.192	0.526	41
	3 rd and 4 th year undergraduate	3.144	0.571	39

Appendix P- Descriptive statistics of Self-Efficacy and Grit based on Irish Proficiency.

Table 4*Descriptive statistics of Self-Efficacy and Grit based on Irish Proficiency*

	Irish Proficiency	M	SD	N
Total Self Efficacy	Not well	28.94	3.803	31
	Well/Very well	30.76	3.072	49
Total Grit	Not well	3.065	0.518	31
	Well/Very well	3.235	0.557	49

Appendix Q- Normal Distribution.

Tests of Normality

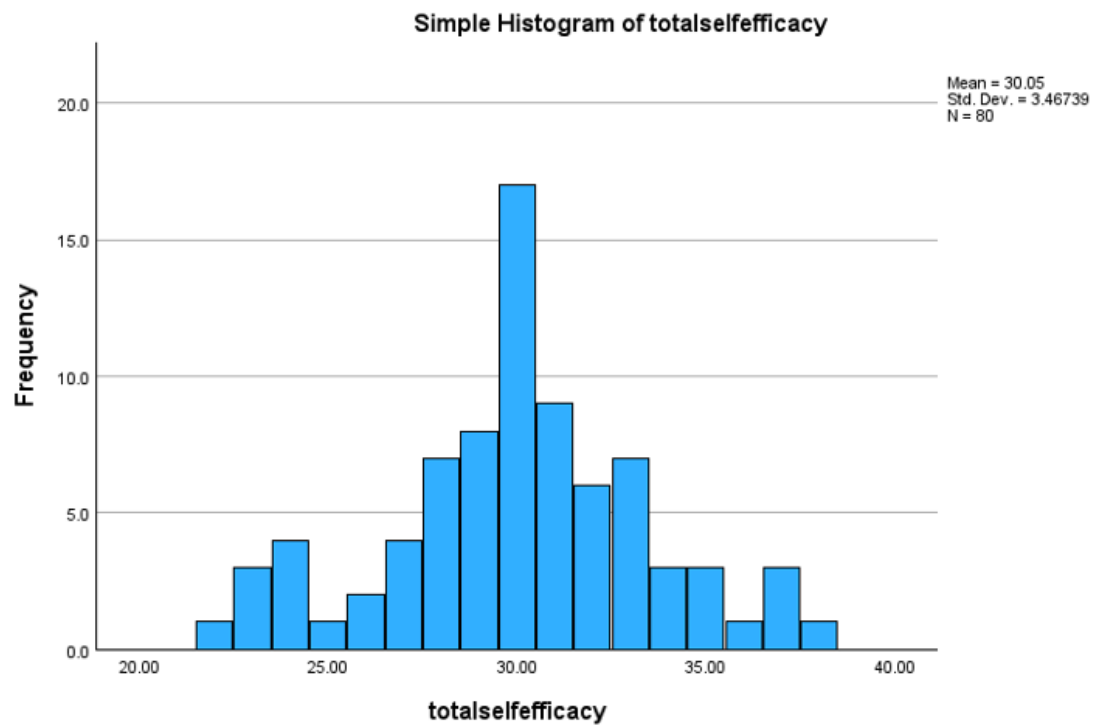
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
totalselfefficacy	.119	80	.007	.972	80	.079
totalgrit	.105	80	.029	.976	80	.142

a. Lilliefors Significance Correction

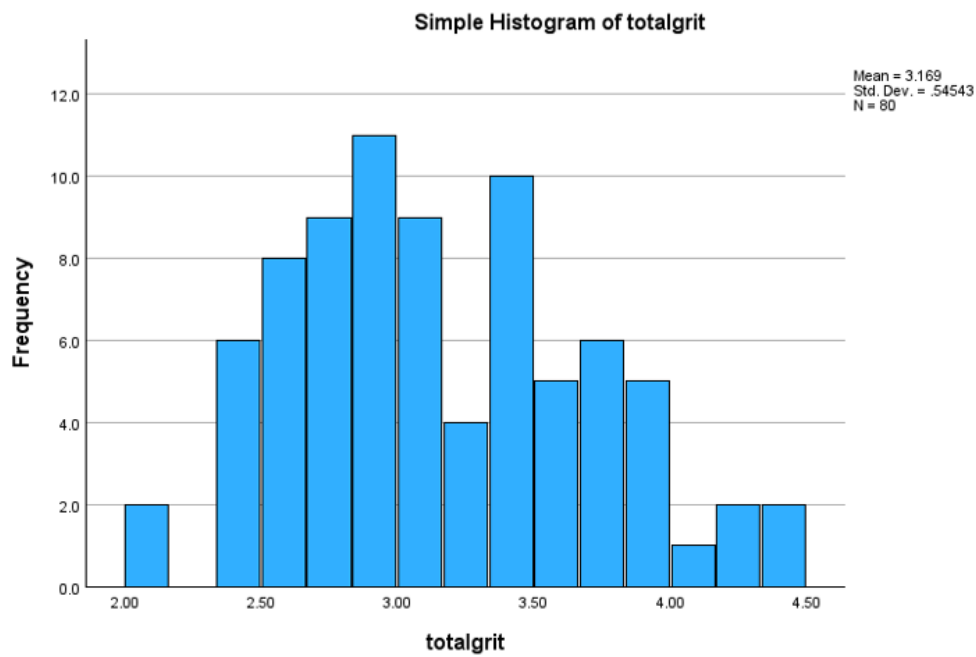
Appendix R- Distribution of Self-Efficacy data.

Figure 4

Distribution of the Self-Efficacy data



Appendix S- Distribution of Grit data.

Figure 5*Distribution of the Grit data*

Appendix T- Mahal. Distance.

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	48.00	55.56	52.40	1.321	80
Std. Predicted Value	-3.329	2.394	.000	1.000	80
Standard Error of Predicted Value	3.072	10.734	5.025	1.703	80
Adjusted Predicted Value	45.39	59.49	52.34	1.967	80
Residual	-50.253	45.747	.000	27.033	80
Std. Residual	-1.835	1.671	.000	.987	80
Stud. Residual	-1.911	1.717	.001	1.007	80
Deleted Residual	-54.487	48.329	.056	28.137	80
Stud. Deleted Residual	-1.945	1.740	.001	1.013	80
Mahal. Distance	.007	11.151	1.975	2.225	80
Cook's Distance	.000	.103	.014	.018	80
Centered Leverage Value	.000	.141	.025	.028	80

a. Dependent Variable: ID

Appendix U- Correlation.

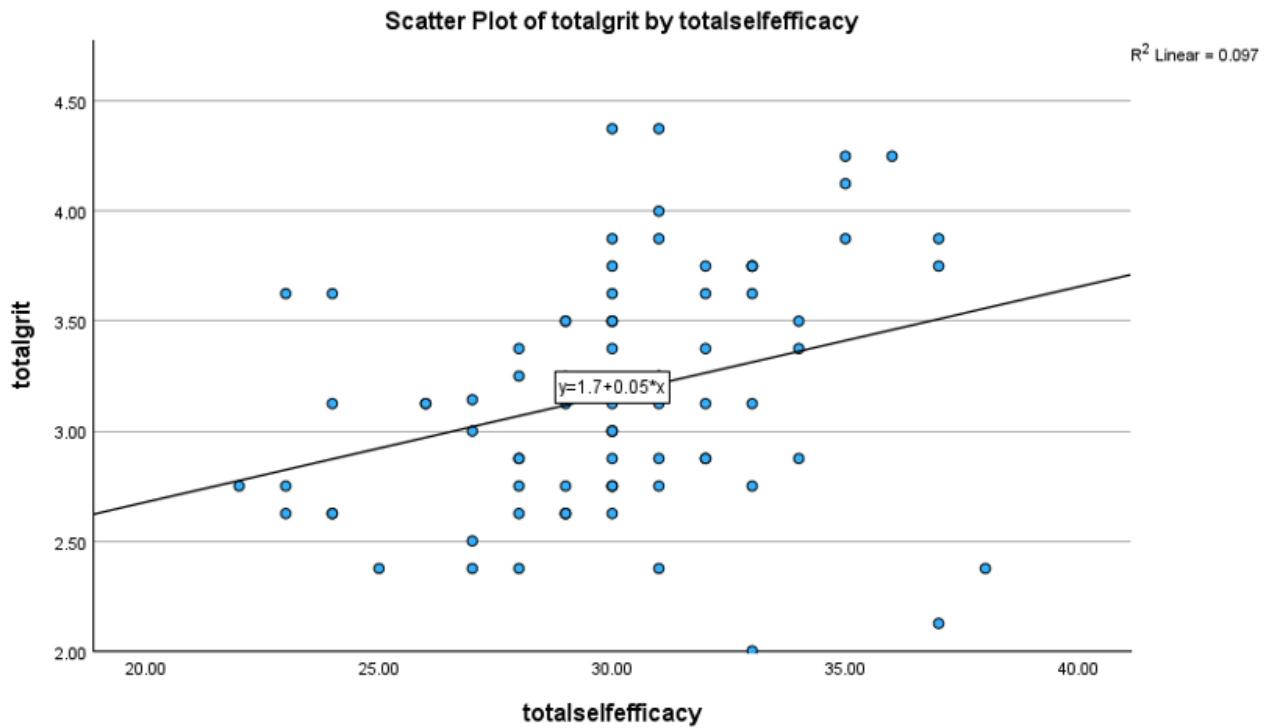
Confidence Intervals				
	Pearson Correlation	Sig. (2-tailed)	95% Confidence Intervals (2-tailed) ^a	
			Lower	Upper
totalselfefficacy - totalgrit	.311	.005	.098	.497

a. Estimation is based on Fisher's r-to-z transformation.

Appendix V- Scatterplot of Grit and Self-Efficacy.

Figure 6

A scatterplot showing the correlation of Self-Efficacy and Grit



Appendix W- Levene's test.

Levene's Test of Equality of Error Variances^a

		Levene Statistic	df1	df2	Sig.
totalselfefficacy	Based on Mean	.874	3	76	.458
	Based on Median	.696	3	76	.557
	Based on Median and with adjusted df	.696	3	73.923	.557
	Based on trimmed mean	.899	3	76	.446
totalgrit	Based on Mean	.179	3	76	.910
	Based on Median	.100	3	76	.960
	Based on Median and with adjusted df	.100	3	73.292	.960
	Based on trimmed mean	.172	3	76	.915

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + YOS + IP + YOS * IP

Appendix X- Box's M test.

Box's Test of Equality of Covariance Matrices^a

Box's M	4.475
F	.471
df1	9
df2	26008.126
Sig.	.895

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design:
Intercept +
YOS + IP +
YOS * IP

Appendix Y- Multivariate tests.

Multivariate Tests ^a									
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^c
Intercept	Pillai's Trace	.989	3241.992 ^b	2.000	75.000	<.001	.989	6483.985	1.000
	Wilks' Lambda	.011	3241.992 ^b	2.000	75.000	<.001	.989	6483.985	1.000
	Hotelling's Trace	86.453	3241.992 ^b	2.000	75.000	<.001	.989	6483.985	1.000
	Roy's Largest Root	86.453	3241.992 ^b	2.000	75.000	<.001	.989	6483.985	1.000
YOS	Pillai's Trace	.006	.245 ^b	2.000	75.000	.784	.006	.489	.087
	Wilks' Lambda	.994	.245 ^b	2.000	75.000	.784	.006	.489	.087
	Hotelling's Trace	.007	.245 ^b	2.000	75.000	.784	.006	.489	.087
	Roy's Largest Root	.007	.245 ^b	2.000	75.000	.784	.006	.489	.087
IP	Pillai's Trace	.075	3.059 ^b	2.000	75.000	.053	.075	6.118	.575
	Wilks' Lambda	.925	3.059 ^b	2.000	75.000	.053	.075	6.118	.575
	Hotelling's Trace	.082	3.059 ^b	2.000	75.000	.053	.075	6.118	.575
	Roy's Largest Root	.082	3.059 ^b	2.000	75.000	.053	.075	6.118	.575
YOS * IP	Pillai's Trace	.007	.246 ^b	2.000	75.000	.783	.007	.492	.087
	Wilks' Lambda	.993	.246 ^b	2.000	75.000	.783	.007	.492	.087
	Hotelling's Trace	.007	.246 ^b	2.000	75.000	.783	.007	.492	.087
	Roy's Largest Root	.007	.246 ^b	2.000	75.000	.783	.007	.492	.087

a. Design: Intercept + YOS + IP + YOS * IP

b. Exact statistic

c. Computed using alpha = .05