



LEARNING ACHIEVEMENT OF UNDERGRADUATE STUDENTS IN RELATION TO THEIR GRIT AND EMOTIONAL INTELLIGENCE

¹Dr. Ankita Roy, ²Dr. Dadhi Baman Tali

¹Lecturer in Education, ²Assistant Professor in Education

¹P.G Department of Education,

Salipur Autonomous College, Salipur

Odisha, India.

²Department of Education

Ravenshaw University, Cuttack, Odisha

Abstract: Traditionally, Intelligence Quotient (IQ) has been regarded as the sole predictor of learning achievement, i.e. better the IQ, the better will be the academic performance. However, researches over the years have revealed that IQ is not the only significant predictor of academic success or learning achievement. Hence, there are other non-cognitive measures of learning achievement. Two such non-cognitive factors that this study assumes to affect learning achievement are Grit and Emotional Intelligence. Hence, the investigator has undertaken the present study which is titled as “**Learning Achievement of Undergraduate students in relation to their Grit and Emotional Intelligence**” in an attempt to find out the relationship among Grit and Emotional Intelligence to the Learning achievement of undergraduate students in liberal and professional courses and to find out the contribution of Grit and Emotional Intelligence to the learning achievement of the students of undergraduate level in liberal and professional courses. Thus, the Causal-Comparative Method was adopted for the present study. For the collection of data, Adapted Grit Scale and the Emotional Intelligence Scale developed by Anukool Hyde, Sanjyot Pethe and Upinder Dhar in 2002 were administered on 60 students of undergraduate liberal course and 60 students of undergraduate professional courses of Ravenshaw University, Cuttack, Odisha. The collected data were analysed using the Product moment coefficient of correlation (r) and Regression Equation. The results of the study revealed that grit and Emotional Intelligence are positively related to the learning achievement of the undergraduate liberal course students. Similarly, Grit is positively related to the learning achievement of Undergraduate students of professional courses whereas emotional intelligence is negatively related to learning achievement of undergraduate professional course students. Further grit and emotional intelligence were found to be the predictors of learning achievement of undergraduate liberal course students. In the case of undergraduate professional course students, grit was not found to be a predictor of learning achievement but emotional intelligence was found to be predictor of learning achievement.

Key words: Learning Achievement, Grit and Emotional Intelligence, Undergraduate Students.

I. INTRODUCTION

Since the time an individual starts formal learning, his/her academic performance continues to be the single best marker of students' effective learning. An individual with better academic performance and better grades is considered to be having a higher intelligence quotient. This relation between I.Q and academic performance has been supported largely by the traditional intelligence tests designed to predict the academic achievement of the children and adolescents (Ackerman & Kanfer, 2025). Further, assessment and evaluation were designed to measure the academic success of the learners in terms of their success or failure in cognitive domains.

However, the superlative emphasis on IQ was viewed sceptically in a longitudinal study conducted by Lewis Terman in the 1920s. The study was conducted on Gifted children over the years and results showed that IQ alone could not predict success in life. The study found that those with higher IQs were not necessarily successful in later lives. Terman also found that factors like confidence and persistence play important role in various aspects of life success. Further, the previous concept of IQ as narrowly linked to language and maths skills was also noted by Gardner and other psychologists like Salovey and Sternberg. They strongly believed that the idea of IQ predicting success in academics was narrow and it was less likely to predict success in life outside academics (Goleman, 1995). Thus, a question arises why there is difference in achievement or success amongst individuals with similar levels of IQ as in Terman's study. This point to the direction that perhaps there exists other significant predictors of academic achievement or persistence. However, recently, researches have been increasingly supporting the view that apart from IQ, there are other non-IQ skills and abilities which can determine the learning outcomes and academic achievement of the learners. In other words, studies point out the significant role played by the factors over and beyond IQ in deciding educational attainments (Malanchini et al., 2024 ; Sultanova et al., 2024). Studies use the term non-cognitive skills and abilities to denote such non-IQ factors (Malanchini et al. 2024). Studies also mention these factors as socioemotional skills (Lechner, Anger & Rammstedt, 2019). The non-cognitive skills include a number of personal traits and motivations, preferences, interpersonal skills, social abilities and skills and values (Indeed, 2025; Lechner, Anger & Rammstedt, 2019),

The non-cognitive factors have caught the attention of researchers in the recent decades as important contributors to the learning achievement or the school success in totality. Hence, there is a cumulative drive towards the non-cognitive skills that deliver better academic attainment of the learners. The importance of such skills has been found to be comparable to the cognitive skills and would help in building a wholesome personality that education tries to aim at. These skills are also considered as those important personality characteristics and abilities that are essential for a person to function efficiently in the 21st century global world (Khine & Areepattamannil, 2016). Some examples of non-cognitive factors include perseverance, resilience, social skills, self-regulation etc. Additionally, a balanced personality would no doubt assist in better academic achievement as well as in bettering one's social life. Two such non-cognitive factors that this study assumes to affect academic achievement are Grit and Emotional Intelligence.

Grit has been defined as an individual's passion and perseverance for pursuing long term goals together with powerful motivation to achieve their objectives. "The gritty individual approaches achievement as a marathon; his or her advantage is stamina.". Grit entails working strenuously toward challenges, maintaining effort and interest over years irrespective of failure (Duckworth, Peterson, Matthews & Kelly, 2007, p. 1087-1088).

The concept of Emotional intelligence has been pioneered by Salovey and Mayer (1997) who have defined it as a subset of social intelligence and involves the ability to comprehend one's own and other's feelings and emotions that helps them to discriminate between them and guide their actions and thinking. The concept of Emotional intelligence was brought to the focus of the public by Daniel Goleman, through his book, Emotional Intelligence: Why It Can Matter More than IQ. In his book he has claimed that IQ as a factor contributes only 20% to the success. This claim has propelled the researchers to find out the other factors that contribute to the remaining 80% of a person's success.

II. RATIONALE OF THE STUDY

The traditional association between intellectual ability and achievement has been well studied. However, Intellectual ability has been found to be inadequate in predicting all aspects of academic attainments (Duckworth, 2006). Therefore, this provides scope to further research in this area.

Researches over the years have brought to the forefront that IQ is not the only significant factor that determines academic achievement of the students. In fact, a number of non-cognitive aspects have been found to be significant factors that tend to affect the learners in academic achievement. It is also found that people of similar levels of IQ achieve differently when it comes to achievement in academics (Browne, 2017; Duckworth et al., 2007). Researches have pointed towards non-cognitive traits like perseverance and grit to impact learning achievement of the learners. Studies by Perkins and Duckworth (2013) have found relationship between grit and academic achievement. Moreover according to Duckworth et al, (2007) found that students who were not gifted at first or have been seen to perform average earlier could achieve exceptionally by dint of their commitment and sustained efforts. Further those with gifted abilities earlier were reported to have achieved less despite their abilities Thus, this points to the question that is intellectual ability the only measure of success or there is grit playing a role in it? Hence, the study will be undertaken to find how grit plays a role in determining the academic achievement of undergraduate students.

Moreover, in the modern world, education is expanding with ever growing competition to achieve. In such a scenario, it is crucial that learners control their emotions and take decisions and choose their career paths appropriately. Also. It is equally important that parents and educators focus on the emotional health of the learners (Lawrence & Deepa, 2013). The emotional health is crucial for better performance (Chew, Zain & Hassan, 2013). As noted above, amongst the non-cognitive factors of academic success, emotional intelligence occupies an important role. Studies have found that success in academics can be predicted by emotional intelligence (Bereded, Abebe & Negasi, 2025; Quilez- Robres et al. 2023) A person with emotional intelligence can find stability and peace within himself/herself and build a good intra relationship with his/her self. Such persons can focus more on their progress in every field of life in general and on their academics in particular.

The review of related literature further reveals the importance of grit and emotional intelligence in predicting the academic success of the students. Therefore, the present study “Learning Achievement of Undergraduate Students in Relation to their Grit and Emotional Intelligence” has been undertaken

Objectives of the study

The objectives of the study are stated as below:

1. To find out the relationship between grit and learning achievement of undergraduate students in liberal and professional courses.
2. To find out the relationship between emotional intelligence and learning achievement of students of undergraduate students in liberal and professional courses
3. To find out the impact of grit and emotional intelligence on the learning achievement of the students of undergraduate level in liberal and professional courses

Hypotheses

After going through the researches, the following research hypotheses are formulated:

H₁: There will be positive correlation between grit and learning achievement of students of undergraduate level in the liberal and professional courses.

H₂: There will be positive correlation between emotional intelligence and learning achievement of students of undergraduate level in liberal and professional courses.

H₃: Grit and Emotional Intelligence will be positive predictor of learning achievement of undergraduate students of liberal and professional courses

III. METHODOLOGY OF THE STUDY

The aim of the present study is to determine the relationship between grit and emotional intelligence with learning achievement of undergraduate students of liberal and professional courses. Hence, according to the objectives and hypotheses, the causal comparative research method was employed for getting a picture of the learning achievement of undergraduate students and the nature of grit and emotional intelligence.

3.1 Population and sample

For the present study, the target population was all the undergraduate students. However, in most researches, the researchers deal with the accessible population which is the population of subjects accessible to the researcher for drawing a sample. In this study, all the undergraduate students of liberal and professional courses studying in Ravenshaw University of Cuttack in Odisha, was the accessible population of this study.

The sample for the study was selected in different phases.

In the first phase, the investigator made a list of students enrolled in different liberal and professional courses in Ravenshaw University.

In the second phase, three departments from liberal course and three departments from professional courses were selected purposively.

In the third phase, 20 students from each department i.e. 60 students from liberal and 60 students from professional courses were selected on the basis of stratified random sampling technique. Finally, 120 students of undergraduate liberal and professional courses were included in the sample.

3.2 Tools used for data collection

For the present study, two types of tools have been used.

- Adapted Grit Scale
- Emotional Intelligence scale

3.2.1 Adapted Grit Scale

The investigator has used adapted version of the Grit scale which was primarily developed by A.L. Duckworth, M. D. Mathews, C. Peterson and D.R Kelly (2007). This scale has been used to measure the grit of the undergraduate students of liberal and professional courses. The details are given below.

3.2.1.1 Development of the grit scale

Originally, the grit scale is developed by A.L. Duckworth, M. D. Mathews, C. Peterson and D.R Kelly (2007). This grit scale consisted of 17 items all. The items were distributed among three components of Consistency of Interest, Perseverance of effort and Ambition with Six, Six and Five items respectively. The scale is a 5-point Likert scale with the responses ranging from 'very much like me' to 'not like me at all'. However, since the tool has been developed in a foreign context, the investigator has adapted grit scale to Indian context in the present study. This has been done by changing some of the vocabulary and jargons for easy comprehension of the participants of the present study. Moreover, review of literature has revealed positive correlation between Grit and Persistence. Persistence also counts important when it comes to learning achievement of students. Hence, besides the three components in the original version of the grit scale the investigator added another component i.e. Persistence and five more items from the persistence scale developed by TicuConstantin, Andrei C Holman and Hojbotă Ana Maria in 2011. The responses were also modified and range from 'Very Much', 'Mostly', 'Somewhat', 'Not Much' and 'Not At All'. As a result, the adapted grit scale consists of 22 items distributed into four components of Consistency of Interest, Perseverance of efforts, Ambition and Persistence. The scale is a 5-point Likert Scale and the responses range from 'Very much' to 'Not At All'. Thus, the initially adapted version of grit scale was ready for try out.

3.2.1.2 Try Out and Revision

After adapting the original Grit Scale, the tool had been subject to expert evaluation and tried out in order to ensure the appropriateness and worth of the items to fulfil the objectives of the study and to test the content validity and face validity of the tool. The tool had been given to the technical expert for suggestions regarding the adequacy of the directions, participants' information, arrangement of the items, response options and the overall appearance of the tool. The tool had also been reviewed by language expert for any grammatical errors, punctuation errors, ambiguity of sentences or errors in the formation of sentences. The adapted grit scale had been given to content expert to confirm the validity of the tool and to eliminate the social or contextual shortcomings of the tool. On the basis of the comments of the experts, some items were corrected, modified and removed. After the correction, the tool consisted of 21 items distributed into the four components viz, Consistency of Interests, Perseverance of Efforts, Ambition and Persistence. After this, in order to test the content validity and face validity of the tool, it was tried out. For this, the investigator selected ten undergraduate students of Ravenshaw University, Cuttack, Odisha. Among the five students belonged to the liberal course and five students belonged to the Professional course from the sampling frame. After the try out, revision was made in the tool as per responses made by the participants. The final version of the grit scale consists of 20 items in all. Further, these items are distributed into four components of Consistency of Interests, Perseverance of Efforts, Ambition and Persistence. Consistency of interest and perseverance of efforts have six items each whereas ambition and persistence have five and three items respectively. The final adapted Grit scale was ready for administration on the selected sample.

3.2.2 Emotional Intelligence scale

In the present study, the Emotional Intelligence scale developed by Anukool Hyde, Sanjyot Pethe and Upinder Dhar in 2002, was used as a measure of the Emotional Intelligence of the sample. This is a standardized tool. It consists of 34 items, distributed into 10 dimensions or components such as, Self-Awareness, Empathy, Self-Motivation, Emotional Stability, Managing Relations, Integrity, Self-Development, Value-Oriented, Commitment and Altruistic Behaviour .

3.3 Procedure Adopted for Data Collection

After the selection of the sample i.e. 120 undergraduate students of liberal and professional courses, the investigator visited the departments of Science, Commerce and Arts stream and the departments of BBA, ITM and Computer Science of Ravenshaw University, Cuttack, Odisha. The investigator also met the Heads of the Department and the faculty members of the respective departments and settled with them the time and day of administrating the tests. As per the schedule, the investigator explained the purpose of the questionnaires to the students and collected the data for the present study by administrating the Adapted Grit Scale and Emotional Intelligence Scale on the students.

3.4 Statistical Techniques Used

The scores were analysed using IBM SPSS version 20 and interpreted through appropriate statistical techniques

- i. Product Moment Correlation was computed in order to study the relationship between Grit and Learning Achievement and the relationship between Emotional Intelligence and Learning Achievement.
- ii. Multiple Regression was computed to determine the impact of Grit and Emotional Intelligence on the Learning Achievement

IV. DATA ANALYSIS AND INTERPRETATION

Table 1: Coefficient of correlation between Grit and Learning achievement of Liberal course Students.

Variables	N	Coefficient of Correlation 'r'	Significant Level (2-tailed)
Grit Vs. Learning Achievement	60	0.073	0.580

It is evident from table 1 that the obtained value of coefficient of correlation (0.073) of Grit and Learning achievement of Undergraduate students of liberal course shows a weak positive correlation. It means that grit is positively related to learning achievement of Undergraduate liberal course students. Hence,

Hypothesis no. 1 (H_1) which earlier stated that “There will be positive correlation between grit and learning achievement of students of undergraduate level in the liberal course”, is retained.

Table 2: Coefficient of correlation between Emotional Intelligence and Learning achievement of Students of Liberal course.

Variables	N	Coefficient of Correlation ‘r’	Significant Level (2-tailed)
Emotional Intelligence Vs. Learning Achievement	60	0.044	0.738

It is evident from table 2 that the obtained value of coefficient of correlation (0.044) of Emotional Intelligence and Learning achievement of Undergraduate students of liberal course shows a weak positive correlation. It means that emotional intelligence is positively related to learning achievement of Undergraduate liberal course students. Hence, Hypothesis no. 2 (H_2) which earlier stated that “There will be positive correlation between grit and learning achievement of students of undergraduate level in the liberal course”, is retained

Table 3: Coefficient of correlation between Grit and Learning Achievement of Students of Professional course.

Variables	N	Coefficient of Correlation ‘r’	Significant Level (2-tailed)
Grit Vs. Learning Achievement	60	0.002	0.987

It is evident from table 3 that the obtained value of coefficient of correlation (0.002) of Grit and Learning achievement of Undergraduate students of liberal course shows a weak positive correlation. It means that grit is positively related to learning achievement of undergraduate professional course students. Hence, Hypothesis no. 1 (H_1) which earlier stated that “There will be positive correlation between Grit and learning achievement of students of undergraduate level in the Professional course”, is retained

Table 4: Coefficient of correlation between EI and Learning achievement of Students of Professional course.

Variables	N	Coefficient of Correlation ‘r’	Significant Level (2-tailed)
Emotional Intelligence Vs. Learning Achievement	60	-0.102	0.438

It is evident from table 4 that the obtained value of coefficient of correlation (-0.102) between Emotional Intelligence and Learning achievement of Undergraduate professional students negatively related. It indicates that the emotional intelligence is inversely related with the learning achievement of Undergraduate professional course students. This may due to work load and lesser time to cope up within the course or the introduction of CBCS pattern of syllabus. Hence, Hypothesis no. 2 (H_2) which earlier

stated that “There will be positive correlation between emotional intelligence and learning achievement of students of undergraduate level in the Professional course”, is rejected.

Discussion of Results

From the above analysis and interpretation, it is concluded that Grit and Learning Achievement of the undergraduate students of liberal and professional course were positively related. The results are supported by the research studies conducted by **Mason (2018)** which found that students who scored high on the Grit scale also obtained higher academic marks in comparison to the students whose scores were lesser. The study conducted by **Lee & Sohn (2017)** also found that grit was associated with higher grades and the relationship was mediated by conscious practice. The results are also supported by the study conducted by **Strayhorn (2013)**, who concluded that grit is positively correlated to grades in college for and 24% of the variance in college grades was explained by grit, background and other academic factors. The study also suggested that Grit scores offered predictive validity more than the traditional estimates of academic success namely school GPA and American College Test scores.

Moreover, the analysis also reveals that there is a positive correlation between Emotional Intelligence and Learning Achievement of the undergraduate students of liberal course. The result is supported by the studies conducted by **K.Ramana & Devi (2018)** which concluded that a positive correlation between Emotional Intelligence and Academic existed, **Ghosh (2014)** who concluded a positive relationship existed between emotional intelligence and academic achievement, **Roy, Sinha & Suman (2014)** who found that there was low positive correlation between emotional intelligence scores and high and average level of academic achievement motivation. Hence, it was concluded from the study that higher the emotional intelligence of the students higher is their motivation for academic achievement and better will be their academic achievement.

However, the analysis also reveals that there is a low negative correlation between Emotional Intelligence and Learning Achievement of undergraduate students of professional course.

Table 5: Model summary of Grit and Emotional Intelligence as constant variable on learning achievement of undergraduate students of liberal Course

Model	R	R square	Adjusted R Square	Std. error of the Estimate
1	0.065 ^a	0.004	-0.031	9.78529

a. Predictors: (Constant): Emotional Intelligence of undergraduate students of liberal course, Grit of undergraduate students of liberal course

Model summary table 5 shows that the obtained multiple correlation coefficient ‘R’ is 0.065 which shows a weak positive correlation between learning achievement and independent variables (Emotional Intelligence of undergraduate students of liberal course, Grit of undergraduate students of liberal course). The obtained R square value is 0.004 which indicates that 0.4% of the variation in dependent variable Learning Achievement of undergraduate students of liberal course, resulted due to independent variables Grit and Emotional Intelligence.

Table 6: Model summary of Grit and Emotional Intelligence as independent variables, predicting about dependent variable Learning Achievement of undergraduate students of liberal course

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	23.392	2	11.696	0.122	0.885 ^b
Residual	5457.858	57	95.752		
Total	5481.250	59			

a. Dependent Variable: Learning achievement of undergraduate Students of liberal course

b. Predictors: (Constant): Emotional Intelligence of undergraduate students of liberal course, Grit of undergraduate students of liberal course

The table 6 shows that 'F' statistics was carried out in order to find out the overall significance test, assessing whether the group of independent variables when used together reliably or significantly predict the dependent variable. The value of regression ANOVA, F (2, 57) is found to be 0.122. The 'p' value associated with the 'F' value was higher at both cases at 0.05 and 0.01 level of significance. Hence, the regression model was not found to be a significant predictor of the learning achievement of undergraduate students of liberal courses, in other words emotional intelligence and grit were not found to have significant effect on the learning achievement of undergraduate students of liberal courses. Thus, it was found that independent variables i.e. Grit (G1) and Emotional Intelligence (EI1) cannot reliably predict the Learning achievement (LA1) of the undergraduate students of liberal course.

Table no. 7: β Coefficient between Independent Variables (Grit and Emotional Intelligence) and Dependent variable (Learning Achievement) of undergraduate students of liberal course.

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	73.082	14.590		5.009	0.000
1 Grit	0.061	0.167	0.051	0.364	0.717
Emotional Intelligence	0.020	0.104	0.027	0.192	0.849

a. Dependent Variable: Learning achievement of undergraduate students of liber courses

In the table 7, the beta coefficients of the independent variables have been reported. The table shows the individual contribution of the independent variables. It can be observed that the contribution of grit in predicting learning achievement is not found to be significant at 0.05 level of significance ($t = 0.364$, $p = 0.717 > 0.05$). The unstandardized regression coefficient (0.061) indicates that an increase in 1 score of grit results in an increase of 0.061 or 0.06% of learning achievement of undergraduate students of liberal course. Further, the standardized beta coefficient for grit is 0.051. this signifies that an increase in 1 unit of standard deviation in grit results in an increase of 0.051 unit of standard deviation in the learning achievement of undergraduate students of liberal courses.

It can be observed that the contribution of emotional intelligence in predicting learning achievement is not found to be significant at 0.05 level of significance ($t = 0.192$, $p = 0.849 > 0.05$). The unstandardized regression coefficient (0.061) indicates that an increase in 1 score of emotional intelligence results in an increase of 0.020 or 0.02% of learning achievement of undergraduate students of liberal course. Further, the standardized beta coefficient for emotional intelligence is 0.027. This signifies that an increase in 1 unit of standard deviation in grit results in an increase of 0.027 unit of standard deviation in the learning achievement of undergraduate students of liberal courses.

Thus, Hypothesis No.3 (H₃) which stated that "Grit and Emotional Intelligence will be the predictor of learning achievement of undergraduate students of liberal courses" is retained.

Table 8: Model summary of Grit and Emotional Intelligence as constant variable on Learning achievement of undergraduate students of professional course

Model	R	R square	Adjusted R Square	Std. error of the Estimate
1	0.095 ^a	0.009	-0.026	7.64251

a. Predictors: (Constant): Emotional Intelligence of undergraduate students of professional course, Grit of undergraduate students of professional course

Model summary table 8 shows that the obtained multiple correlation coefficient 'R' is 0.095 which shows a weak positive correlation between learning achievement and independent variables (Emotional Intelligence of undergraduate students of professional course, Grit of undergraduate students of professional course). The obtained R square value is 0.009 which indicates that 0.9% of the variation in

dependent variable Learning Achievement (LA1) of undergraduate students of liberal course, resulted due to independent variables Grit (G1) and Emotional Intelligence (EI1).

Table 9: Grit and emotional intelligence as independent variables, predicting about dependent variable learning achievement of undergraduate students of professional course

ANOVA ^a					
Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	30.342	2	15.171	0.260	0.772 ^b
Residual	3329.258	57	58.408		
Total	3359.600	59			

a. Dependent Variable: Learning achievement of undergraduate students of professional course

b. Predictors: (Constant): Emotional Intelligence of undergraduate students of liberal course, Grit of undergraduate students of professional course

The table 9 shows that 'F' statistics was carried out in order to find out the overall significance test, assessing whether the group of independent variables when used together reliably or significantly predict the dependent variable. The value of regression ANOVA, F (2, 57) is found to be 0.260. The 'p' value associated with the 'F' value was higher at both cases at 0.05 and 0.01 level of significance. Hence, the regression model was not found to be a significant predictor of the learning achievement of undergraduate students of professional courses, in other words emotional intelligence and grit were not found to have significant effect on the learning achievement of undergraduate students of professional courses.

Thus, it was found that independent variables i.e. Grit and Emotional Intelligence cannot significantly predict the Learning achievement of the undergraduate students of liberal course.

Table 10: β Coefficient between Independent Variables (Grit and Emotional Intelligence) and Dependent variable (Learning Achievement) of undergraduate students of professional course

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	76.088	10.875		6.996	.000
1 Grit	0.093	0.129	0.101	0.716	0.477
Emotional Intelligence	0.026	0.075	0.049	0.342	0.733

a. Dependent Variable: Learning achievement of undergraduate students of liberal courses

In the table 10, the beta coefficients of the independent variables have been reported. The table shows the individual contribution of the independent variables. It can be observed that the contribution of grit in predicting learning achievement is not found to be significant at 0.05 level of significance ($t = 0.716$, $p = 0.477 > 0.05$). The unstandardized regression coefficient (0.061) indicates that an increase in 1 score of grit results in an increase of 0.093 or 0.09% of learning achievement of undergraduate students of professional course. Further, the standardized beta coefficient for grit is 0.101. This signifies that an increase in 1 unit of standard deviation in grit results in an increase of 0.101 unit of standard deviation in the learning achievement of undergraduate students of professional courses.

It can be observed that the contribution of emotional intelligence in predicting learning achievement is not found to be significant at 0.05 level of significance ($t = 0.342$, $p = 0.733 > 0.05$). The unstandardized regression coefficient (0.026) indicates that an increase in 1 score of emotional intelligence results in an increase of 0.026 or 0.02% of learning achievement of undergraduate students of professional course. Further, the standardized beta coefficient for emotional intelligence is 0.049. This signifies that an

increase in 1 unit of standard deviation in grit results in an increase of 0.049 unit of standard deviation in the learning achievement of undergraduate students of professional courses.

Thus, Hypothesis No.3 (H₃) which stated that “Grit and Emotional Intelligence will be the predictor of learning achievement of undergraduate students of liberal courses” is retained.

Discussion of Results

From the above analysis and interpretation, it is concluded that Grit positively predicts the learning achievement of undergraduate liberal course students. The results are supported by the research studies conducted by **Duckworth (2016)** who found that grit was a predictor of educational attainment of adults. In the study, grit was also a predictor of the GPA of high-achieving adolescents and undergraduates, **Reraki et al. (2015)** who found that grit partially mediated the relationship between academic motivation, and academic achievement, **Suzuki, et al. (2015)** whose study found that grit was a significant predictor of the academic achievement. Hence, the study confirmed grit being important for academic achievement. **Strayhorn (2013)** who found that Grit scores offered predictive validity more than the traditional estimates of academic success namely school GPA and American College Test scores.

The analysis and interpretation also revealed that emotional intelligence was a positive predictor of learning achievement of undergraduate liberal and professional course students. The findings are supported by the studies conducted by **Chew, et al. (2013)** who found that the scores of Emotional intelligence was a good predictor of overall Continuous Assessment results and also of overall Final examination result. The EI was significantly related to final year marks. Thus, it may be concluded that students with high emotional achievement had a better performance in not only the continuous assessments but also in the final professional examinations. **Maraichelvi, et al (2013)** who concluded that Emotional Intelligence in its four specified domains namely Intrapersonal Awareness, Interpersonal Awareness, Intrapersonal Management and Interpersonal Management separately as well as totally was found to be positively associated with academic performance of the selected respondents. **Bhadouria (2012)** whose study found out the correlation between emotional intelligence and academic achievement. Moreover, teaching emotional and social skills at school not only positively influenced academic achievement during the year when these were taught but also leave long term impact in achievement. Findings of this paper present that academic achievement without emotional intelligence does not ensure future success and absence of emotional intelligence also indicate the weak personality and ability to build healthy relations. **Parker, et al (2004)** who concluded that academic success was strongly associated with several dimensions of Emotional Intelligence.

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