

**ACADEMIC PERFORMANCE OF SOUTH INDIAN UNDERGRADUATE
STUDENTS IN RELATION TO THEIR ACHIEVEMENT MOTIVATION,
COGNITIVE STYLE AND SELF-REGULATION**

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Introduction

Over the years, researchers are interested in studying empirically, the character of student's personal characteristics and mental processes underlying their learning and Academic Performance (Blazar & Kraft, 2016). Academic Performance overall refers to how well a student is achieving his or her task and learning, but there are relatively a number of components that determine the level and status of a student's Academic Performance involve grades, attendance, standardized test, extracurricular program, behavior, Individual differences (Von Stumm, Sophie Hell, Benedickt, Chamorro Premuzic, & Tomas, 2011; Yusuf, et al., (2016)). A review of studies about this Academic Performance has been managed by various educators in many countries (Garkaza et al. 2011; Tailab 2013; Sugahara and Boland 2014; Steenkamp and Baard 2009 Cheung and Kan, 2002; Kruck and Lending, 2003). The Academic Performance of students considers their capability to reveal the knowledge they have learned in tests, quizzes, presentations, and final examinations (Barkley, 2004). Similarly, the significance of students' performance is not only evident to the students but also to the universities as it is a measure of the success of their education process (Basri, Alandejani & Almadani, 2018). Studies in the education literature have revealed the elements that may impact students' performance that includes physical facilities and qualified teachers, students' perspectives, ambitions, and self- consciousness (Hijazi and Naqvi 2006; Garkaza et al. 2011; Cosmas et al. 2013; Al- Hadrami and Morris 2014).

Achievement Motivation has been described as the reason why a student accomplishes (Mc Collum, 2005; Blazar & Kraft, 2016), the inspiration behind accomplishment (Vallance, 2004), and a product of the interdependence between student characteristics and instructional exercise (Okolo & Bahr, 1995). In other words, Achievement Motivation has been considered as one learns to realize student's interest, engagement, and determination in learning practices which

in turn establish student learning, schools, and college achievement (Gilman & Hubner, 2006). Achievement Motivation mentions an attempt to perform the heavy task as well as practicable and along with the physical and psychological requirements contributing to personality development and achievement (Murray, 1978).

Achievement Motivation which is power for performance has been found to have an impact on student's academic manners (Harackiewicz, 1997). The student's knowledge of the worth of Academic Performance is linked to the fear of failure, maternal, and peer group pressure for gaining (Butler (1999). Nenty (1988) in a research report that Achievement Motivation is a community-related element which has an excessive relation with, and is the most valid expectation of a student's Academic Performance.

Several researchers concluded that students use different motivational procedures in different learning situations, students found to value both intrinsic and extrinsic remuneration as well (Pintrich & Pajares, 2000; Pietsch, Walker & Champman, 2003; King (2007). Moreover, individual students may tend to have different degrees of achievement require that to do exercise much impact on their performance, and find out the degree of their participation in a classroom exercise (Fink & Brayman, 2006). Student's high achievement orientations are more intrinsically motivated, primarily worried about enlarging their capability, they tend to use internal standards for judging their improvement (King, 2007).

When students are indicating their proficiency to others, they are likely to use a social related standard, which is they tend to analyze themselves against the performance of others attached in the same tasks or to depend on others to assess their performances (Black & Wiliam, 1998). The level of Achievement Motivation may positively or negatively affect student's level of performance. Students from working homes that are set to allow the students with approaching all their needs in colleges, give time for the students to read, rest, and have logical learning objects for the students to use both at home and school have high Achievement Motivation and consequently higher academically (Ethothi,2002).

Research studies have recognized a number of connections between Achievement Motivation and Cognitive Style in learning (Messick, 1976). Cognitive Style can mainly be described as the individual difference in modes of recognizing, recalling, and reasoning or as particular ways of understanding, retention, converting and employing information (Goldstein & Blackman, 1978). Cognitive Style importantly influences student learning as mentioned in how learners' processes and assemble information (Freddy et al., 2011). Similarly, Kirton (2003) declares that the differences in Cognitive Styles affect comprehension, learning, problem-solving, decision making, conveying, relational functions, and innovations of the students in important ways. It is observed that Cognitive Style determines the way we look at the environment for facts, think, imagine, evaluate, realize recall, recover, assemble and elucidate information for managing our action. In addition to this, Cognitive Style has five extents i.e. systematic style, intuitive style, integrated style, undifferentiated style, and Split style (Keen, 1973; Mckenney & Keen, 1974; and Botkin, 1974)

Yonker et al., (2016) examined that there was a relationship between Cognitive Styles with analytical thinking. This analytical thinking makes systematic problems that survive in the day-to-day lives of students. Martinsen and Furnham (2019) assert that the application of experiments of students concerning the Cognitive Style and motivation of students has designed different learning positions. Several students can become better at innovative problem-solving and thus the Cognitive Style plays a dominant role for students, mostly self-motivation in finalizing their assignments, project works etc., (Luk, 1998).

Cognitions require Self-regulation behaviors such as organizing and observing time and task progress (e.g., Peeters, Van, Tuijl, Reymen, & Rutte, 2007; Sonnentag, 1998). The most dominant aims of education have become to assist students to gain Self-regulation skills that to better learning (Wolters, 2011). Boekaerts (1996) says that learners increase their chances for a better-paid and more enjoyable career and also the major factors for mediating success in most learning environments (Hartley & Bendixen, 2001; Lehmann, Hahnlein & Ifenthaler, 2014; Zimmerman, 2008). Students who are mentioned as “self-regulated” engaged proactively in the learning process- psychologically, motivational, and intellectually (Zimmerman & Schunk, 1990). The student’s self-active and self-direct efforts to acquire knowledge and skills by implementing specific strategies rather than just passively reacting to their teacher's instructions (Nota, Soresi & Firenze, 2000; Zimmerman, 1998).

During the adolescent period Self-regulation has been constructed in a variety of ways (Creasey & Ladd, 2004). Self-regulation during adolescence requires the capability of the youth to function as a self-determining individual (Patock-Peckham, Cheong, Balhorn, Nagoshi, 2008). The important key factor of liberty is the power to make the suitable decisions. Self-regulated individuals set accessible goals and takes appropriate gestures to reach these aims, utilizing their assets while persist aware of their restrictions (Miller & Byrnes, 2001) and these types of individuals show control over their psychological processes and the capacities to adapt to their environment. Schunk & Zimmerman (1994) described Academic Self-regulation as self-regulated learning, i.e., the motivational and behavioral processes allowing individuals to activate and sustain cognitions, behaviors, and feelings in a systematic way toward the attainment of their learning goals.

In this new educational paradigm, Academic Performance is one of the keys to understand student’s desires and Self-regulated learning strategies they use in order to increase the learning processes. An Individual’s preference for a particular thinking process has two dimensions- Cognitive and Affective (Covington, 1983). The cognitive dimension associated with the use of strategies for reasoning and problem solving received by experience; whereas the affective dimension has to do with how the student’s passion and attitudes influence each other (Zhang et al., 2006). Similarly, Self-regulation is the capacity to act one’s goal in a malleable way and bridges the gap between Academic Performance and its two determinants- Cognitive Capacities and Achievement Motivation also it is a cogitative, judgmental and modifying process and also mostly contained knowledge, beliefs, and learned skills. It also considers as a systematic aim towards the attainment of their achievement (Kuhl, 1992).

This present study aims mainly as a study of Academic Performance of Undergraduate students in relation to their Achievement Motivation, Cognitive Style and Self-regulation.

The Problem

The literature shows prediction of the relationship between Academic Performance and Achievement Motivation has been the primary aim of many investigators across the globe (Steinmayr and Spinath, 2009). Studies on Need for Achievement (n-Ach) and its relationship with academic performance were carried out widely for example., Panda and Jena (2000), Krishnamurty (2001), Browns and (2002), Kour (2004), Tseng (2004), Bansal et al. (2006), Tan et al.(2007), Umadevi (2009), Yusuf (2011), etc.; the studies have reported a significant positive association between n-Ach and schooling/achievement.

Similarly, earlier studies have revealed that motivation could Influence student's learning and performance (Zusho, et al., 2003). A longitudinal study by Liu and Hou (2017) has examined that intrinsic motivation significantly encourages Academic Performance. Other studies have also expressed that Achievement Motivation was significantly connected to Academic Performance (Awan et al., 2011; Amrai et al., 2011; Izuchi and Onyekuru, 2017). Meanwhile, Glynn et al. (2009) reported that intrinsic motivation and self-efficacy had a strong influence on students' performance. Korantwi-Barimah, et al. (2017) in their study amongst university students revealed a positive significant correlation between them- i.e., Academic Self-concept, Motivation, and Academic Performance. It is also highlighted in a study that motivational components played vital roles in Academic Performance (Gbollie &David, 2014) and from previous studies, there were evident that students' motivation was imperative in teaching and learning as a whole.

In studies regard to Achievement Motivation, the finding is in fulfilment with many researchers such as Affum-Osei, Adom, Barnie, and Forkuoh (2014), Muhammad, Bakar, Mijinyawa and Halabi (2015) and many others examined that Achievement Motivation has a great influence on students' Academic Performance and can also predict students' academic the performance which they concluded that academic achievement increases with the increase in Achievement Motivation while the study by Bakar, Tarmizi, Mahyuddin, Elias, Luan and Ayub (2010) indicated a negative significant correlation between Achievement Motivation and students' academic achievement. The studies by Onete, Edet, Udey, and Ogbor (2012), and Veena & Shastri (2013) were of the opinion of the absence of significant difference in Achievement Motivation between high and low achievers. As regards learner autonomy, the detection is related to the studies by Farhad and Roghayyeh (2016), Iji and Wuave (2014), Negari and Donyadary (2013) and many other researchers argued the opinion that a significant a positive correlation exists between learners autonomy that the learners assumed the liability of their learning.

Recently, many cognitive researchers would accept that study on Cognitive Styles has come to an impasse (Sternberg & Zhang, 2001). In their review, although individual differences in cognitive functioning do exist, their influence is often overwhelmed by other elements, such as general capabilities and cognitive requirements that all human minds have in common

(Schneider & Stern, (2010). The contradiction of the present situation is that interest in building a coherent theory of Cognitive Styles better at a low level among researchers in the cognitive sciences; however, investigators in numerous applied fields have found that Cognitive Style can be a better predictor of an individual's achievement in a specific situation than general competence or situational components (Davis & Cochran, 1990). In the field of industrial and organizational psychology, Cognitive Style is examined fundamental components determining both individuals and administrative behavior (e.g., Streufert & Nogami, 1989; Sadler-Smith & Badger, 1998; Talbot, 1989) and an analytical variable in Individual selection, internal conveying, career guidance, counseling, and dispute management (Hayes & Allinson, 1994). In the field of education, researchers have declared that Cognitive Styles have predictive strength for academic achievement beyond general capabilities (e.g., Sternberg & Zhang, 2001).

Previous research on Self-regulation emphasizes a positive relationship between Self-regulation and Academic Performance and the results of the earlier research in science education (Akyol et al., 2010), primary education (Eshel and Kohavi, 2003; Kitsansas et al., 2009; Ocak and Yamaç, 2013), math education (Arsal, 2009), and higher education (Lindner and Harris, 1992; Vrugt and Oort, 2008) showed a positive correlation. However, there are less number of studies, to the researcher's best knowledge from the survey of studies, which explore the relationship between Self-regulation and Academic Performance (Arsal, 2009).

In this modern era, achievement is considered a key element for both the progress of individuals, communities, and society (Mouzakitis, 2017). The whole education system spins in and around student's achievement in their education and the learning of students at the school and college level is depending upon different psychological, physical, economic, cultural, social factors and socio-economic status (Chandra & Azimuddin, 2013). Thus the present study has identified this as a research gap and the following questions were proposed.

- Do the undergraduate students have a better level of Academic Performance?
- Is the Academic Performance of Undergraduate students directly related to Achievement Motivation, Cognitive Style, and Self-regulation?
- Do Achievement Motivation, Cognitive Style, and Self-regulation predict Academic Performance of Undergraduate students?

Method

The purpose of the present study is to find out the significant predictors of Academic Performance among the selected variables viz, Achievement Motivation, Cognitive Style, and Self-regulation. The survey is identified as the essence of most commonly used descriptive methods in educational research, as questioning individuals on a topic or topics and then describing their responses (Jackson, 2011). Considering the nature of the study, the investigator has adopted the Normative Survey Method.

Participants

The population of the present study includes all students studying in undergraduate programmes from all the Arts and Science Colleges of the Thiruvananthapuram District of Kerala (India). There are 51 colleges in Thiruvananthapuram.

For the present study, the sample has been drawn using Multi-stage cluster sampling, one or more clusters are chosen at random and everyone within the chosen cluster is sampled (Steel, 2011). The procedure of multi-stage cluster sampling technique in the study is given below.

Table:1
Multi –stage cluster sampling

| Stage | Category | Number |
|--------|---------------|--|
| First | Taluks | Selected 2 out of 6 Taluks of Thiruvananthapuram District |
| Second | Colleges | Selected 10 colleges 4 Government and 6 Govt. Aided colleges from Thiruvananthapuram Taluks and Nedumangadu Taluk |
| Third | Programmes | Selected 1 programme randomly |
| Fourth | Batch/Classes | Any 2 batches from the selected programme. All students of these selected batches were taken as sample/participants. |

A sample of 428 students was selected from the colleges. After data screening for finding out outliers, 28 entries were removed and thus the final sample was 400 students.

Measures

1- Academic Performance Assessment- Percentage in the intermediate school (Grade 12) was taken as the index of Academic Performance.

Achievement Motivation Scale – adapted scale (Muthee.J.M & Immanuel -2 Thomas, 2009):

The Achievement Motivation Scale developed by (Muthee.J.M & Immanuel Thomas, 2009) consists of 40 statements. It was developed in 5-point Linkert scale format, with options Completely Agree, Mostly Agree, to some extent, Mostly Disagree and Completely Disagree. The same scale is revalidated for the present study.

The scale was given to seven experts and considering their deliberations, the items were finalized for the development of the scale. Finally, 2 statements from the original scale were removed and 38 statements were retained. Cronbach alpha evaluation for the scale was found to be 0.749 designating that the scale has satisfactory internal consistency reliability.

3- Cognitive Style Inventory – adapted scale (Lorna P. Martin, 1998)

The Cognitive Style Inventory developed by (Lorna P. Martin, 1998) consists of 40 statements. It was developed in 5-point Linkert scale format, with options. Strongly Agree, Agree, Undecided, Disagree and Mostly Disagree. The same scale is revalidated for the present study. The statements pool was given to seven experts the modification of statements was done considering the opinions of the experts in the field of both psychology and Education. All 40 statements were retained. The adapted Cognitive Style consists of 40 statements and is designated in Linkert form with the five points as continuum.

Self- Regulation Questionnaire – adapted (Brown, Miller & Lawendowski, 1999) -4

Self-regulation Questionnaire developed by (Brown, Miller & Lawendowski, 1999), consists of 63 items. It was developed in 5-point Linkert scale format, with options Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree. Self-regulation Questionnaire was modified by the investigators considering the opinions of the selected seven experts in the field of both psychology and Education. Finally, 5 statements were removed and 58 statements were retained. Cronbach alpha computed for the scale was found to be 0.91 indicating that the scale has satisfactory internal consistency reliability.

Procedure

The investigator collected the data by means of four tools [Academic Performance (Plus two marks), Achievement Motivation, Cognitive Style and Self-regulation] as Google form. At the same time, the investigator met the college authorities, got the approval and distributed the link to the heads of the department to post the same in different WhatsApp groups of selected undergraduate students of the selected colleges. Statistical Techniques of the data was undertaken using SPSS- 23rd Version. Descriptive Statistics, Karl Pearson's Product Moment Correlation and Multiple Regression.

Results

Section-A: Descriptive Statistics

Table: 2

The descriptive statistical scores such as Mean, Standard error of mean, Standard deviation, Variance, Skewness, and Kurtosis.

| Variable | N | Mean | Std. Error of Mean | Std. Deviation | Variance | Skewness | Kurtosis |
|----------------------|-----|-------|--------------------|----------------|----------|----------|----------|
| Academic Performance | 400 | 79.42 | 0.506 | 10.12 | 102.33 | -0.548 | -0.31 |

It is clear from the table 2 that mean and standard deviation of Academic Performance of Undergraduate students are 79.42 and 10.12 respectively.

Table: 3

The descriptive statistical scores such as Mean, Standard error of mean, Standard deviation, Variance, Skewness, and Kurtosis

| Variable | N | Mean | Std. Error of Mean | Std. Deviation | Variance | Skewness | Kurtosis |
|------------------------|-----|--------|--------------------|----------------|----------|----------|----------|
| Achievement Motivation | 400 | 117.72 | .1818 | 3.636 | 13.22 | .918 | 4.297 |

It is evident from the table 3 that mean and standard deviation of Achievement Motivation of Undergraduate students are 117.72 and 3.636 respectively.

Table: 4

Descriptive statistical scores of Cognitive Style of Undergraduate students

| Variables | N | Mean | Std. Error of Mean | Std. Deviation | Variance | Skewness | Kurtosis |
|------------------|-----|--------|--------------------|----------------|----------|----------|----------|
| Cognitive Styles | 400 | 161.68 | .417 | 8.34 | 69.560 | -.038 | -.044 |

It is evident from the table 4 that mean and standard deviation of Cognitive Style of Undergraduate students are 161.68 and 8.34 respectively.

Table: 5

The descriptive statistical scores such as Mean, Standard error of mean, Standard deviation, Variance, Skewness, and Kurtosis

| Variable | N | Mean | Std. Error of Mean | Std. Deviation | Variance | Skewness | Kurtosis |
|-----------------|-----|--------|--------------------|----------------|----------|----------|----------|
| Self-regulation | 400 | 185.25 | .228 | 4.564 | 20.83 | 4.422 | 2.401 |

It is evident from the table 5 that mean and standard deviation of Self- regulation of Undergraduate students are 185.25 and 4.564 respectively.

Section- B: Correlation

Table: 6

Correlation between the variable Academic Performance, Achievement Motivation, Cognitive Style and Self-regulation

| Sl. No | Pairs | Correlations (r) | p-value |
|--------|---|------------------|---------|
| 1 | Academic Performance and Achievement Motivation | -0.122* | .015 |
| 2 | Academic Performance and Cognitive Style | -0.063 | 0.208 |
| 3 | Academic Performance and Self-regulation | -0.074 | .140 |
| 4 | Achievement Motivation and Cognitive Style | 0.195** | 0.000 |
| 5 | Achievement Motivation and Self-regulation | 0.162** | 0.001 |
| 6 | Cognitive Style and Self-regulation | 0.227* | 0.000 |

Sub-Section- (i)

Related Objective: To find out the relationship between Academic Performance and Achievement Motivation of Undergraduate students.

The product moment correlation coefficient between, the scores of Academic Performance and Achievement Motivation of Undergraduate students is found out as negligible relation ($r = -0.122$, $p < 0.05$). The correlation is a negative relationship. At the same time the correlation coefficient is statistically significant. Thus, it is interpreted there is a negligible negative correlation between the variables Academic Performance and Achievement Motivation of Undergraduate students.

Sub-Section- (ii)

Related Objective: To find out the relationship between Academic Performance and Cognitive Style of Undergraduate students.

The coefficient of correlation between Academic Performance and Cognitive Style of Undergraduate students is negative and negligible ($r = -0.063$, $p > 0.05$), and statistically not significant. The result shows that there is no relationship between Academic Performance and Cognitive Style of Undergraduate students.

Sub-Section- (iii)

Related Objective: To find out the relationship between Academic Performance and Self-regulation of Undergraduate students.

The coefficient of correlation between Academic Performance and Self-regulation of Undergraduate students is negative and negligible ($r=-0.074$, $p>0.05$); also statistically not significant. The result shows that there is no relationship between Academic Performance and Self-regulation of Undergraduate students.

Sub-Section- (iv)

Related Objective: To find out the relationship between Achievement Motivation and Cognitive Style of Undergraduate students.

The coefficient of correlation between Achievement Motivation and Cognitive Style of Undergraduate students is negligible ($r=0.195$, $p<0.01$), but statistically significant. The result shows that there is a negligible positive relationship between Achievement Motivation and Cognitive Style of Undergraduate students.

Sub-Section- (v)

Related Objective: To find out the relationship between Achievement Motivation and Self-regulation of Undergraduate students.

The product moment correlation coefficient between, the scores of Achievement Motivation and Self-regulation of Undergraduate students are found out as negligible relation ($r=0.162$, $p<0.01$). The correlation is a positive negligible relationship. At the same time, the correlation coefficient is statistically significant. Thus, it is interpreted there is a negligible positive correlation between Achievement Motivation and Self-regulation of Undergraduate students.

Sub-Section- (vi)

Related Objective: To find out the relationship between Cognitive Style and Self-regulation of Undergraduate students.

The product moment correlation coefficient between, the scores of Cognitive Style and Self-regulation of Undergraduate students are found out as low relation ($r=0.227$, $p<0.01$). Result shows that, there is a positive low relationship. At the same time, the correlation coefficient is statistically significant at 0.01 level. Thus, it is interpreted there is a positive low correlation between the variables Cognitive Style and Self-regulation of Undergraduate students. An increase in Cognitive Style leads to a corresponding increase in Self-Regulation of Undergraduate students.

Section-C: Regression

Table: 7

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------|----------|-------------------|----------------------------|
| 1 | .137* | .019 | .011 | 10.06 |

a. Predictors: (Constant), Achievement Motivation, Cognitive Style, Self-regulation

b. Dependent Variable: Academic Performance

Table: 8

ANOVA^b

| Model | Sum of Squares | Df | Mean Square | F |
|------------|----------------|-----|-------------|-------|
| Regression | 763.505 | 3 | 254.502 | 2.515 |
| Residual | 40066.920 | 396 | 101.179 | |
| Total | 40830.424 | 399 | | |

a. Predictors: (Constant), Achievement Motivation, Cognitive Style, Self-regulation

b. Dependent Variable: Academic Performance

Table: 9

Coefficients^a

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | Sig. |
|-------|------------------------|-----------------------------|------------|---------------------------|--------|------|
| | | B | Std. Error | Beta | T | |
| 1 | (Constant) | 141.042 | 24.518 | | 5.753 | .000 |
| | Achievement Motivation | -.299 | .142 | -.108 | -2.104 | .036 |
| | Cognitive Style | -.037 | .063 | -.031 | -.596 | .552 |
| | Self-regulation | -.110 | .114 | -.050 | -.961 | .337 |

a. Dependent Variable: Academic Performance

A multiple regression analysis was computed to identify whether Achievement Motivation, Cognitive Style and Self-regulation predict Academic Performance of Undergraduate students or not. From the tables (Tables 7, 8, & 9), it is found that the model is significant ($F_{(3,3967)} = 2.515, p > 0.05, R^2 = 0.019$).

However, the result of the study showed that Beta coefficients, the study found that Achievement Motivation ($\beta = -0.108, p < 0.05$) is a significant negative predictor of Academic Performance of Undergraduate students. The Beta value of -0.108 indicates that a change in one standard deviation in the Achievement Motivation results in a -0.108 standard deviation decrease in the Academic Performance.

Similarly, the study found that Cognitive Style ($\beta=-0.031$, $p>0.05$) is not a significant predictor of Academic Performance of Undergraduate students.

Correspondingly, the study showed that Self-regulation ($\beta=-0.050$, $p>0.05$) is not a significant predictor of Academic Performance of Undergraduate students.

The regression equation is

$$\text{Academic Performance (Y)} = 141.04 + (-0.299) \text{ Achievement Motivation}$$

Discussion

The present study provided an exploratory investigation to identify the predictors of Academic Performance among the selected variable viz. Achievement Motivation, Cognitive Style and Self-regulation. The finding of the study shows that Undergraduate students have an average level of Academic Performance. But the present result is contradicting by Qasim (2015) which shows Undergraduate students have low level of Academic Performance. At the same time, studies shows that Undergraduate students have an high level of Academic Performance are, Abdullah (2000), Arshad et al., (2015), Gbollie & Keamu(2017), Kassarning et al.,(2018), Razak et al.,(2019). McClelland (1985) explained Achievement Motivation has a scope to which individuals differ in their need to seek to attain honor, such as physical pleasure, approval from others, and affection of personal mastery. Achievement Motivation plays an important role in academic and adjustment related outcomes among high ability adolescents (Wilcox, 2011). Similarly, Undergraduate students have an average level of perceived Achievement Motivation. This finding is supported by result of Stranska (2014); Sarangi (2015) study shows that Undergraduate students have low level of Achievement Motivation.

The capability to manage and control emotions, perceptions, actions, and realizations is very important while students learning. The Cognitive Style also the meta-cognitions that controlled are highly relevant to creativity (Isaksen & Treffinger, 2004; Osburn & Mumford, 2006). Findings of the present study examine Undergraduate students have an average level of Cognitive Style, but Shi (2011) shows that Undergraduate students have high level of Cognitive Style, but Simuth & Schuller (2013), Ramlah & Jantan (2014) studies result showed Undergraduate students have low level of Cognitive Style. In an educational context, Self-regulatory activity examines motivation which allows a learner to start and support focused goal-directed activities while ignoring distractions (Corno, 1994; Schunk, Meece, & Pintrich, 2014; Zimmerman, 2011). Present study shows that, Undergraduate students have average level of Self-regulation which is contradict to Kitsantas (2002), and Colok (2010). At the same time, Uredi & Uredi (2005); Camahalam (2006), and Adiguzel et al., (2017) studies showed that undergraduate students have low level of Self-regulation.

➤ **Academic Performance and Achievement Motivation:** The present study shows that there is a negative but negligible relationship between the variables Academic Performance and Achievement Motivation which is supported by (Gottfried et al., (2007), Baker et al., (2010), Elias et al., (2010), Yahaya et al., (2010), and Sartawi et al., (2012)). At the same time,

the obtained result is contradicted to previous studies Gardner (2006), Adsul & Kamble (2008), Ardasheva (2010), Yusuf (2011), Amrai et al(2011), Linder (2011), Nicolaou & Xistouri(2011), Weiland &Sazilah(2012), Affum et al (2014), Sikhwari (2014), Mijinyawa&Halabi (2015), Azizollah et al (2016), Gupta & Mili(2016), Gbollie & Keamu (2017), and Sharma & Sharma (2018).

➤ **Academic Performance and Cognitive Style:** The present study revealed that there is no significant relationship between Academic Performance and Cognitive Style of Undergraduate students. Result of the present study is contradicted by Snyder (2000), Mokhtarian (2003), Homayooni et al(2006), Zhang & Sternberg(2006), Ruhland et al.,(2007), Umadevi (2009), Baker et al.,(2010), Awan et al.,(2011), Bhatti & Bart (2013), Akpan & Umobong(2013), Kumar (2014), Emmanuel (2014), Zroohangiz et al(2014), Singh (2017), Yazici (2017), Sharma & Pooja(2018), Balasubramaniam & Sivakumar (2018), and Asikhia (2019).

➤ **Academic Performance and Self-regulation:** A significant number of researchers found that relationship between Academic Performance and Self- regulation of Undergraduate students is almost positive. Joo et al., (2000), Zimmerman (2002), Cobb (2003), Eshel & Kohavi(2003), Kosnin (2007), Sung & Yang(2009), Kitsansas et al (2009), Aktan (2012), Ocak & Yamac (2013), Invan (2013), Memis & Arican(2013), Sahranavard et al., (2018) but the present study shows that there is no significant relationship between Academic Performance and Self-regulation.

➤ **Achievement Motivation and Cognitive style:** Result of the present study revealed that there is a significant positive but negligible relationship between Achievement Motivation and Cognitive Style of Undergraduate students. The present study is supported by (Mahmoodi et al., (2014); and Kumar, 2014).

➤ **Achievement Motivation and Self-regulation:** Self-regulated learner engages in metacognitive processes when consciously thinking about and evaluating the regulatory cognitive processes (McCormick, 2003). Significant number of researchers found that relationship between Achievement Motivation and Self- regulation of Undergraduate students is positive. The finding regarding the relationship between Achievement Motivation and Self-regulation is positive but negligible relationship, which is supported by (Jabbari, Khodapanahi, & Heydari, 2003; Mousavinejad, 1997; Pintrich & De Groot, 1990; Shih, Chang, Chen, & Wang, 2005).

➤ **Cognitive Style and Self- regulation:** The present study revealed that there is significant positive and low relationship between Cognitive Style and Self-regulation of Undergraduate students. The present study is supported by (Das, 2014).

➤ **Achievement Motivation, Cognitive Style and Self-regulation of Undergraduate students Predict Academic Performance:** Studies show that Achievement Motivation is a negative predictor of Academic Performance. The finding regarding the Achievement

Motivation is the negative predictor of Academic Performance is supported by Gottfried et al., (2007); Baker et al., (2010); Elias et al., (2010); Yahaya et al., (2010) and Sartawi et al., (2012). According to their findings Achievement Motivation is a negative predictor of Academic Performance of Undergraduate students. The findings from Sharma & Sharma (2018); Yusuf (2011); Gupta & Mili (2016); Sikhwari (2014) are different from what the present study reveals. According to their study Achievement Motivation is the predictor of Academic Performance.

Conclusion

Education is not the only way to achieve in the working world; much attempt is made to recognizing, assessing, and motivates the progress of students in schools and colleges (Bell (2017). Parents care about their student's Academic Performance since they have the opinion that good academic outcomes will provide more career positions and secure employment. As we know, Academic Performance can be explained largely formed by factors such as individual initiative, effort, and merits (Timothy & Mueller, 2007). Yusuf, et al., (2016) says that Academic Performance assessable and perceptible behavior of a student within a certain period comprises the totality of scores obtained by a learner through a spectrum of academic activities such as class test, class practice, mid-semester, mock examination and end of the semester examinations and the rest.

In an educational context, Achievement Motivation plays an important role. It is a combination of psychological forces which initiate direct and sustain behavior towards the successful attainment of some goal which provides a sense of significance (Muthee & Thomas, 2009). McClelland (1985) said that those who are achievement inspire set goals they can attain with their own attempt, capabilities and represent well both in education and other areas of human behavior. In fact, Cognitive Style of learners is very important to know about the individual difference in modes of perceiving, remembering and thinking or as particular ways of understanding, storing, modifying and utilizing information (Kogan, 1970). Ausburn (1978) described Cognitive Style as interpretations, predictable or elements governed and linked cognitively to information assets and it's processing in recognition, thinking, problem-solving, and imagery with a quantitative and qualitative variation. The Cognitive Style also the meta-cognitions that controlled are highly relevant to creativity (Isaksen & Treffinger, 2004; Osburn & Mumford, 2006). At the same time, Cognitive Style assembles the assets related to the perception of situations and also to balancing and control of the psychological process in learning circumstances which assimilate by learners (Messick, 1996).

Self-regulatory activity and motivation allow a learner to start and support focused goal-directed activities while ignoring distractions (Corno, 1994; Schunk, Meece, & Pintrich, 2014; Zimmerman, 2011). A self-regulated learner engages in metacognitive processes when consciously thinking about and evaluating the regulatory cognitive processes they are using. This involves analyzing the effectiveness of certain plans to complete a learning task, monitoring development, and modifying strategies if and when required (Baker & Brown). In research educational psychology, motivation is regarded as an internal part that students lead to task along with the goals they held which leads to their success/failure (Leondari& Gonida,

2007). In fact, what is of great importance for the success of students in the education context is to understand the origin of students' motivation (Rashidi & Javanmardi, 2012)

This study is an attempt to find out the relationship between Academic Performance, Achievement Motivation, Cognitive Style and Self-regulation of Undergraduates students. Result of the study demonstrates that there is a negative relationship among Academic Performance, and Achievement Motivation. At the same time, Cognitive Style and Self-regulation also have a significant relationship but there is no relationship between Academic Performance and Cognitive Style and Academic Performance and Self-regulation. Moreover, Achievement Motivation is a negative predictor of Academic Performance of Undergraduate Students.

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