MOTIVATIONAL FACTORS AND IT'S IMPACT ON STUDENTS' PERFORMANCE IN HIGHER EDUCATION: A REVIEW

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ABSTRACT

The purpose of the paper is to study different motivational factors influencing students in their higher education. In this paper, the author tried to study the influence of motivation on a student in different perspectives like how the motivation of student is connected with their age, teacher's instruction style, teachers motivation. The Author also tried to examine the different motivation theories which are used in assessing student motivation by various authors. From the findings of different papers, it is evident that based on the discipline which he is studying the motivational approach need to be different. The AMS (Academic Motivation Scale) instrument to measure different sub theories of self-determination theory were also studied. The findings from this review paper will help teachers and students to know about different motivational factors involved in higher education which further helps them to understand each other in a continuous and better learning process.

Keywords: Motivation, Higher Education, Teacher's Instruction style, AMS.

INTRODUCTION

The stimuli are needed for a human being in any sector to work by using his at most capabilities. Motivation is defined as the energy or catalyst that triggers a person to make choices, pursue certain purposes, and to focus in a particular direction (Brophy,1983; Obade,2013). Motivation directs individual to attain one's goal. Motivational theories help us to understand what makes an individual gives his best. Akitson postulated that motivation explains three critical issues related to

human behavior. First motivation helps individual to select the best option among possible alternatives. Second motivation helps individual to pay a proper attention to a task in a given situation. Third Motivation determines the persistence of task. The purpose of this paper is to find out different factors of motivation which are influencing students in their higher education. In common there are two kinds of motivation one is intrinsic motivation and another is extrinsic motivation. Intrinsically motivated people don't expect any external stimuli as their self-goal is a motivating factor for them, whereas extrinsically motivated people need external stimuli and that external stimuli is different for different people based on the situation and their personal characteristics.

Motivation in education

Motivation helps a person to do the task with commitment. Motivating students both in an extrinsic and intrinsic way is important to raise their perceptions towards learning (Dahl & Smimou 2011). Extrinsic Motivation works as external stimuli to a student which helps him How to motivate student for learning is always a researchable topic in education and also in psychology (Dahl & Smimou 2011). Richardson, Abraham, and Bond (2012) conducted a meta-analysis in which they reviewed more than ten years of research on the antecedents of university students grades and percentages. Their findings demonstrated that motivational factors were some of the most substantive

correlates of students performance (Obade, 2013). From their findings, it is evident that students performance is directly affected by the way in which they are motivated.

A Relation between student motivation and their age

Leper, Corpus, and Iyengar (2005) have shown that intrinsic motivation diminishes as children progress through school (Hegarty,2010). Barron and Harackiewcz (2001) found that undergraduate students with high-performance goals, which are extrinsic in motivation, can also achieve high outcomes(Hegarty,2010). It supports the view that the lack of intrinsic motivation is not related to poor performance(Hegarty,2010). Gottfried (1985,1990) and Harter (1981) also noted the high levels of intrinsic motivation in young children and documented how this motivation decreases with age. Harter's 1981 study has become the cornerstone of validation of the decline in intrinsic motivation with age. Pintrich (2000) affirms that mastery goals diminish with age whereas performance goals, which become the yardstick of measurement in educational systems, increase with age. Stewart (2005), through a study of undergraduate students, asserted that motivation changes as an individual move through a program and that motivation itself is different across various majors. Hegarty used Preliminary descriptive analysis to present an overall indication of motivation types and levels in graduate

students. Chi-square analysis was also used to investigate whether scale items are independent or homogenous (i.e does an absence of intrinsic motivation indicate the presence of extrinsic motivation or amotivation?)

Teachers instructional style to meet student's needs

SDT researchers arrogated that three types of instructional styles should be adopted in classrooms. First, autonomy support is necessary to satisfy the need for autonomy, the opposite meaning of a controlling style. This style aims to promote students inner motivational resources, such as their interests and values, by using practices such as allowing choice, spending the time to communicate with students, offering encouragements, and providing rationales (Reeve, 2002; Reeve & Jang, 2006). Second, the structure meets students need for competence, this style involves three representative behaviors: presenting clear expectations and directions to students, providing guidance when students need help, and offering informative feedback (Jang, Reeve, & Deci, 2010; Reeve, 2006). Last, involvement is important to satisfy the need for relatedness. Involvement is concerned with social and interpersonal relationships with others such as between students and teachers. This style entails the expression of affection and cares to students, and teachers dedication to time and interests of their students (Skinner & Belmont,1993). Structure meets students need for competence. It refers to the amount of time and quality of information that students receive in order to achieve the expected outcomes (Jang et al.,2010;Reeve,2006).

Relation between teachers' motivation and student motivation

When teachers are intrinsically motivated for teaching, students also report high intrinsic motivation for learning (Lam et al., 2009). Furthermore, students who are taught by not only intrinsically motivated teachers, but also intrinsically motivated peers who play a role as teachers are likely to have greater interests and engaged behaviors in the given tasks (Radel, Sarrazin, Legrain, & Wild, 2010). The motivation of the person teaching positively affects the motivation of learners; namely, "social contagion of motivation" exists (Radel et al., 2010, p.578). Even though the majority of studies show that the relations between teachers and students motivation are positive, this conclusion is not unequivocal.

Understanding Motivation factors in higher education

For higher education organizations, they can use analysis of student survival rates to better understand which factors contribute to surviving until graduation. The school can better investigate the relationship with high school GPAs, SAT scores, majors, socio-economic backgrounds, lower division grades and so forth to understand which factors help to promote student success. Lainson in his thesis examined whether any changes

occur based on students progress towards their graduation. He used a framework based upon " *Herzberg's two-factor theory (1959)*",and an "*expanded model*" developed by DeShields, Kara, and Kaynak (2005), Lainson conducted a survey where he collected 535 students data from 3 different universities out of which 1 is public state university in southern California and other two are private liberal art universities. Lainson tested" *maintenance and motivation factors against dependent variables and assessed segmentation by class standing* ". Results of Lainson findings support that students dissatisfaction raises as he is coming closer to graduation and his motivation levels are declining year by year. "*A key exception is that a student's motivation to finish a degree was not diminished, regardless of dissatisfaction or lack of motivation in other areas* ". Lainson mentioned that they are " three key areas of dissatisfaction emerged: " *1. expectations, 2. learning practical skills and 3.value*". Dissatisfied students are more likely to drop out from education or they may transfer to another college. Lainson's Objective is to evaluate factors that contribute to satisfaction and retention by building upon student satisfaction and retention model (SSRM) developed by Keveaney and Young (1997).Building on both Keaveney and Young's SSRM model (1997) and Deshields et al.study (2005), this study introduces a new Student Maintenance and Motivation Model for Satisfaction (SMMMS).This model includes the original extrinsic factors in SSRM and adds several additional intrinsic factors to align more closely to the methodology of Herzberg's two-factor theory. This model was then applied to a study of college students, looking specifically at levels of satisfaction across academic years. Evidence of student's academic year standing affecting satisfaction begins with the first year of their college life. " *The Cooperative Institutional Research Program, run by the Higher Education Research Institute at the University of California at Los Angeles, annually surveys more than 400,000 incoming freshmen* ". Survey data showed that student satisfaction is influenced by students prediction of satisfaction. Most influential is students post- enrollment. The survey found that the most powerful predictor of satisfaction was a "sense of belonging". "*Students who felt connected to campus life were more likely to be satisfied with their choice of college*" (Lainson,2014). In addition, Interaction of faculty members with students has improved students level of satisfaction and also sense of belongingness. Surveys also showed that " *students who indicated making money was a critical reason to attend college were shown to be slightly less likely to report satisfaction than students indicating other reasons, such as gaining an appreciation for ideas* " (Hoover 2010;Lainson 2014). Lainson study explored the correlation between maintenance and motivation factors,

students class standing and retention. The study used a correlational approach to examine quantitative data collected by surveying 535 undergraduate students of three southern California schools. This study analyzed data using convenience sampling on student perceptions of maintenance and motivation factors. Thel research question of the study is as follows: " *What is the relationship between students class standing and their level of satisfaction and motivation?* ". The researcher focused on a hypothesis that establishes the link between class standing and motivation and hygiene factors. A student is more likely to persist if he or she is close to graduating. From the interpretations of the study it was clear that Seniors were less motivated to study hard, achieve good academic grades, to obtain knowledge from attending classes, and to develop social relationships with other students. Seniors were also more likely to be frustrated by university policies and procedures. Herzberg never measured how likely a person was to feel motivated to work under the condition of "working to survive, "regardless of the employer; he only examined if and how motivation occurred within the context of the employer. Providing a treat or, as Herzberg says, "kicking the dog" is simply incentivizing the recipient to move, not to be motivated (Herzberg,1987). This reality is why pay/compensation has remained a maintenance factor and not a motivator, even though this point remains contentious for many critics of Herzberg.

Increase in dissatisfaction of senior students will decrease their motivation which affects their academic achievements and performance in placement drives, which enforces them to slowly disconnect them from college related activities and in future also this gap will remain and they will not attend for alumni meets. Dissatisfied seniors may not only feel trapped, but may also " *become punitive-not through leaving, but in attitude and actions related to alumni issues, future recommendations and negatively perceived brand awareness* ". In essence these students are crying " Help! I'm a senior. Get me out of here," with an increased singular motivation to finish even as they are disconnecting motivationally from the university family with potentially negative, long-term consequences.

Assessing Student Motivation using Expectancy Value theory

Expectancy value theory was used as an assessment tool for knowing students sentiment towards sustainable engineering. Assessing students' motivation to engage in sustainable engineering was the first effort to measure engineering students' attitudes toward SE using the three sub-scales of expectancy value theory and assessing correlations in these attributes with students' participation in various learning experiences to measure engineering students' attitudes toward SE using the three sub-scales of expectancy value theory and assessing correlations in these attributes with students' participation

in various learning experiences.(McCormick et al 2013).Many researchers have addressed the point of quality teaching in higher education. In marketing quality of product is always measured with the help of customer satisfaction, in the same way management of educational institutions should treat their students as customers as they are the main stake holders Bensimon (1995). Ames and Archer (1988) found that classroom climate will have an impact on motivational variables and if students are connected with classroom climate they will show long term involvement in learning. Autonomous motivation of the students have an impact on producing desirable outcomes .Fordham findings support that a positive relation exists between student's intrinsic motivation and their knowledge of curriculum (Dahl & Smimou,2011). Pintrich (2003) underlined the importance of scientific oriented research on student motivation. Pintrich in his research attempted to find out about expectations of students from the classroom, i.e what is the main aspect which motivates student to come to classroom, are they aware of their own motivational factor ? he also studied the how motivation leads to cognition (Dahl & Smimou,2011). Leper and Corpus (2005) studied the association between age of a student and their motivational orientations with the help of their academic outcomes. Leper and Corpus also supports that decline in intrinsic motivation as one becomes older in age and extrinsic motivation increases

as one becomes older there by he concluded that "*intrinsic motivation has a positive correlation with the academic outcome*" (Dahl & Smimou,2011). Darren and Kamal specifically worked on student's perception on teaching quality and he stresses on the point that student will percept positively on teaching quality of his instructors only when they have positive opinion on educational institution. Student's outcome depends on the quality of education provided by the institution and the most important factor is their motivation itself (Dahl & Smimou, 2011). Bean and Metzner (1985) mentioned that students achieving high grades may drop out from college if they have passed through low levels of utility, satisfaction and high levels of stress.

Student Motivation in Engineering Courses

Attrition of students is one of the raising problem in educational institutions during the first two years. Attrition of students in undergraduate level is high when they are in first two years (Suresh,2006; Vogt,2008; Mamaril & Usher,2013). Classroom Strength in service courses are large generally more compared to other courses. Students in these classes have pointed out that likened with other classes have course load to a greater extent and they do not have fundamental interaction with educators (Suresh,2006; Mamaril & Usher,2013). Research on Student motivation in engineering courses helps instructors to better understand the

relationship between student academic outcomes and their aim to persist in engineering (Mamaril & Usher,2013). Mamaril and Usher have found the relationship between constructs of motivation like self efficacy, task value, achievement goals to achievement and persistence using measures providing clear activities and tasks in engineering. Mamaril examined students engineering self efficacy, he proposed that "*student's continued matriculation in engineering programs may be due (in part) to their self-efficacy - the belief they hold about their capabilities*". "*social cognitive theory is based on the view that personal factors, behavioral factors, and environmental factors are interconnected and affect one another*"(Bandura,1997). Bandura's research showed that the individuals belief on their own capabilities to achieve desired outcomes acts as a primary motivator in various situations of once life. "*Self-efficacy helps determine the amount of effort people exert in an activity, and their persistence and resilience in the face of adversity*" (Pajares,1996). Students who have interest in engineering and who have believe on their own capabilities are motivated to complete the task with more efficiency (Bandura,1997).Table 1 shows the examples of items used by Mamaril and Usher in their survey.

Table 1 SELF-EFFICACY SCALE AND EXAMPLES (Mamaril & Usher,2013)

Scale	Example
General engineering self-efficacy	I can complete my course work if I do not quit (Mamaril & Usher,2013)
Engineering skills self-efficacy	I can invent new designs

Mamaril and Usher examined the association between self-efficacy and academic achievement using student's academic achievements obtained in service courses. Academic persistence and professional persistence were measured. Research findings support that self-efficacy and academic achievement are positively related. Mamaril used Independent-samples t tests to test the significance between gender and self-efficacy, his findings support that gender differences and engineering skills self-efficacy are significant. Men scored much higher in engineering self-efficacy and MSE self-efficacy engineering compared to women. So, self-efficacy in engineering is different for men and women (Vogt, Hocevar, Hagedorn,2007; Jones, Paretti, Hein, Knott,2010;Mamaril 2013).Research findings proved that "*women seem to report a lack of self-efficacy related to specific areas of skill, knowledge, or ability*" (Baker, Krause, Yaser, Roberts, Kurpius, 2007; Mamaril 2013). Mamaril's and Usher's findings support that who have better engineering self-efficacy have performed better in their academics .

Non-Traditional College Student Motivation and Success

Tales of unaccomplished dreams in the form of unfinished college degrees abound. These stories are rampant among nontraditional students who typically experience higher attrition rates from college when compared to their traditional counterparts (National Center for Education Statistics, NCES, 2002; Obade,2013). Horn defined Non-traditional students as "*undergraduates who have at least one or more of the following characteristics: delayed college enrollment after graduating high school, working full time while enrolled, financially independent, attend college part-time, have dependents, obtained a general education development certificate (GED) rather than a standard high school diploma, or single parenthood*" (Obade, 2013). University students who are older than 24 years and who is pursuing his graduation and whose marital status is married are also called as non-traditional students (Kasworm & Pike, 1994; Obade,2013), hence they are often also called adult learners (Merriam, Caffarella, & Baumgartner, 2007; Obade, 2013). Non-traditional students are distinct from traditional students has they might have negative pressures of life (Levin,2007;Obade,2013).These students are entering post secondary institutions with a heavier role burden based on their 'adult' life experiences than traditional students and thus have different sets of needs. Perhaps the most distinctive feature of non-traditional students is that they simultaneously combine their college education with other significant role, such as caring for dependents and full time employment (Deutsch & Schmertz,2011;Obade, 2013).In fact, non-traditional students, when compared to traditional students, are twice as likely to leave college without earning a degree (NCES,2002; NCES,2011; Radford, Berkner,Weeless, & Sepherd,2010; Obade,2013). Within a five year period, among the non-traditional students who had enrolled to obtain a bachelor's degree (rather than certificates), only 31 % had earned one after five years, compared with 54% of traditional students(NCES,2002). Obade mentioned that it is essential that higher education stake holders should promote the factors which are essential for students success in college. Student motivation has gained prominence as a viable explanation for student college success (Robbins et al.,2004),yet studies of non-traditional students motivation are limited(Obade,2013). Obade examined the role of achievement motivation in predicting non-traditional student success using the "*expectancy -value theory of achievement motivation*" (Eccles et al., 1983) and achievement goals theory (Dweck, 1986; Maehr, 1989; Nicholls, 1984). Better understanding of the achievement motivation factors of non-traditional students will enable colleges to respond to the needs of these students more appropriately and help them

succeed. Bean and Metzner argued that "*although environmental variables (e.g., hours of employment, family responsibilities) and academic variables (e.g., GPA) are both important, environmental factors supersede academic outcomes when it comes to influencing non-traditional students intent to leave or stay in college*". Obade considered three motivational factors namely balance self-efficacy, subjective task value, and achievement goals are included as mediators between non-traditional student status and college success outcomes.

Academic Motivation Scale to Measure Self-determination

Academic Motivation Scale (AMS) is an instrument used to measure self - determination. Self-determination theory describes three levels of academic motivation- that are intrinsic motivation, extrinsic motivation and amotivation. AMS instrument has been used reliably to study and measure motivation levels in students at different levels.*" Self-determination theory identifies two causes of desire to study; the need for recognition, praise and/or money (extrinsic motivation) and the need to fulfil and interest (intrinsic motivation) "* (Deci et.al,1991).Students who are intrinsically motivated show greater interest towards learning and it is known as deep learning style. Students who are extrinsically motivated does not show much interest towards learning compared

to intrinsically motivated students as these students are referred as *'surface learners'*. Rowe (2001) found that first year engineering students are extrinsically motivated to do engineering and their academic success is through surface learning style. The students who are intrinsically motivated are independent and they follow the approach of self-developmental learning. Course Curriculums of the universities should be in such a way that courses must be designed which promotes interest towards learning. Savage and Birch have recorded a quantifier of student motivation before entering the department by designing a questionnaire and conducted a pilot study, researcher also used informal conversations, and after collecting the data assessment was done based on the student responses. Students who state their responses in generic terms are awarded '1', Examples of recorded statements are *"I have been interested in electronics since an early age" , "I would like to study electronics because I feel it is a fast moving industry". A student's statement would be awarded a rating of "2"* ,if students have quoted an example in their responses it will give an appropriate idea about student's knowledge. The statements for which it can be awarded as *"2" are "I have been learning C and C++" & "I have built some digital electronic projects*". Responses can be awarded as 3 if interest is provided with an evidence which supports their response.

The rating was done based on their responses it is decided based on which statement got highest rating ,15 statements were assessed twice, there is time gap of more than 6 months for the first assessment and second assessment. The similar kind of assessment was done for the second time, during the second assessment also students rated the personal statements exactly the same. From findings it was evident that students understood the value of own learning and still they expect someone to guide them in a proper direction so that they can achieve the desired results. Savage and Birch found that students are not confident in class room discussions, Seven questions from the questionnaire found responses are varied with the student's year of study that is student from first year responded differently and student from 2nd year responded differently. Informal conversations with first year students revealed that if students have option to choose their electives for course work they would achieve better results, this enhances their motivation. From the data collected it was evident that " *no significant differences in motivation levels between the different years of study*".Savage and Birch found that motivation and student performance are not correlated. Interesting findings are though students are intrinsically motivated before joining the institution, as institution has not given opportunity for choosing their subjects based on their interest it ruined their interest of deep learning style which negatively affected

their performance. " However, the pre-University motivation rating was uncorrelated with the response to the extrinsic motivation questions (Pearson correlation coefficient of 0.072) and was only correlated with the response to the intrinsic motivation questions with a coefficient of 0.13. This gives indicates that the personal statement may not be a very accurate instrument in assessing students for admission to the department. " (Savage & Birch, 2008).Personal statements may not help to infer student's motivation. Riderer (2015) thesis work examined the relationship between the "*levels of motivation as measured on a continuum of self-determination of science, technology, engineering and mathematics students at sub-urban, single campus community in los-angels*". The study inquired the relationship between student's motivation level , gender, ethnicity. Data was collected using a AMS-C questionnaire, The data was analyzed using statistical methods: multiple linear regression, pearson-correlation, independent sample t-test and MANOVA. It is evident from the analysis that "*gender and ethnicity are predictors for several of the self-determination motivation continuum's levels but none of the motivation levels are predictors of the overall academic success of community college STEM students*" (Riderer, 2015). Motivation levels of students and their academic grades are not significant ." *Significant differences between motivational levels across*

genders and ethnicities were discovered" (Riderer, 2015). Female students scored high in both extrinsic motivation and intrinsic motivation compared to males. Teachers instructional practices such as facilitating students and counselling them have positive effect on their motivation and outcomes. There is a significant relation between teachers motivation and students motivation. Considering the significant relations between teachers and students motivation, researchers have proposed that teachers instructional styles may play a role as mediators between teachers and students motivation. The premise of SDT (Self determination theory) is that people are active organisms who develop their behaviors and goals, which mean that people are intrinsically motivated to do actions(Ahn). Within SDT, there are five sub-theories: " *Cognitive Evaluation theory (CET), Organismic Integration Theory (OIT),Causality Orientation Theory (COT), Basic psychological need theory (BPNT), and Goal Contents theory (GCT)*" (Deci & Ryan,1985; Deci & Ryan ,2000). BPNT "*addresses the concept of human beings needs (i.e., autonomy , competence and relatedness) at the psychological level and how those needs relate to intrinsic motivation and psychological well-being*". Cognitive Evaluation Theory(CET) addresses intrinsic motivation. " *Intrinsic motivation refers to engaging in an activity for its own sake* ". People who have intrinsic

motivation are doing an activity to attain innate satisfaction from the activity per se (Ryan & Deci, 2000 a). Organismic Integration Theory (OIT) is focused on extrinsic motivation, " *which is the pursuit of an activity to obtain outcomes outside of the activity*". For instance, The principle of OIT is that not all behaviors are intrinsically motivated, but rather some behaviors are motivated by interacting with environmental and contextual factors. SDT researchers divide extrinsic motivation into four types ,spread along a continuum from most to least externally controlled; these are "*external regulation, introjected regulation ,identified regulation , and integrated regulation*". Furthermore, some studies grouped external and introjected regulations together, labelling it as non-autonomous (or controlled) extrinsic motivation; the first level is external regulation, where behavior is guided by external control. At this level, the reason why people behave is to obtain rewards or avoid punishment. Such regulations occurs in the most controlling context and people's interests are not regarded. The second level, introjected regulation ,is still controlling but less than external regulation. People engage in activities because they either want to avoid the feeling of guilt or attain the feeling of approval. Because feeling guilt or approval is derived from the feeling of pressure, this introjected regulation is barely autonomous(Ryan & Deci,2000 a). Identified regulation is less controlling and more autonomous than the previous level.

According to this regulation, people perform acts when they think they are valuable or important to achieve their goals (Ryan & Deci,2000a).Thus, identified regulation is somewhat close to intrinsic motivation, even though the personal importance is not from intrinsic value but from utility value (Eccles,2005). The last level of extrinsic motivation is integrated regulation, which is the most autonomous and the least controlling form. At this level, people engage in activities because the activities have been incorporated into their sense of self. Integrated regulation is very similar to intrinsic motivation because the cause of behaviors is from an individual's internal need. self-determination theory has defined five detailed types of motivation intrinsic, integrated, identified, introjected, and external motivation, these 5 are clubbed into two major categories of motivation named as autonomous and controlled motivation (e.g., Ryan & Deci,2000a;Vallerand,1997). Autonomous motivation is a sum of intrinsic motivation, integrated motivation and identified regulation. Controlled motivation consists of introjected and external regulation. BPNT elaborates that if teachers satisfy students basic psychological needs, students are intrinsically motivated for learning (Deci & Ryan,2000; Ryan , 1995).

Research Gap

1. Studies have largely focused on intrinsic motivation, but not on extrinsic motivation.

2. Study mentioned that dissatisfaction occurs to a student and his motivation levels decrease as he or she is close to graduation but why these changes occur are not identified properly.

3. No single set of factors can fully account for why some students fail in college and why others succeed.

4. There is a limited research on student motivation.

The Implication from Review of Literature

1. Universities are focusing on recruiting and marketing efforts, Universities must implement strategies to prevent dissatisfaction and to improve motivation.

2. Increase in dissatisfaction of senior students affects their relationships with alumni and participate in future events.

3. Colleges and Universities may need to reconsider how they monitor, measure, and manage student/ customer relationships.

Conclusion and Suggestion

As the paper is a review paper the research data which supports the findings are missing. The author tries to examine the findings practically in future research. The Literature on the extrinsic motivation of students is very limited. Researchers can focus on this area which is challenging and which brings productivity to universities. The research on Students should be an interesting area for young researchers in india but unfortunately, the papers which

brings support to students in the Indian context are missing.

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