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Academic engagement among Nigerian undergraduate students: Roles of academic resilience, achievement motivation and self-efficacy

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ABSTRACT

Previous research showed that resilience, motivation, and self-efficacy contribute to academic engagement, but prior research has not simultaneously examined the impacts of these factors on academic engagement. Literature is also sparse concerning the nature of associations of the current predictor variables with academic engagement. The present study investigated the roles of academic resilience, achievement motivation and self-efficacy in academic engagement. Three hundred and fifty-five (355) undergraduate students in a Nigerian university participated in the study. Four instruments and a socio-demographic questionnaire were used for data collection in the study: Utrecht Work Engagement Scale-Students version (UWES- S), Academic Resilience Scale (ARS-30), Nigerian adaptation of Herman's (1970) Questionnaire Measure of Achievement Motivation, and New General Self-efficacy Scale. Data was analyzed using hierarchical multiple regression. Findings revealed that achievement motivation positively predicted academic engagement, indicating that greater achievement motivation was associated with increased academic engagement. Academic resilience and self-efficacy did not significantly predict academic engagement. It was suggested in this study that educational administrators and policy makers should give attention to student's achievement motivation in efforts to improve academic engagement in the university.

Introduction

Over the years, important observations have been made by educators about the bored, unmotivated, and uninvolved, (disengaged) state of many undergraduates in the academic and social aspects of life (Appleton, Christenson, & Furlong, 2008). The extent of students' engagement varies such that those with the goal of achieving success, put much interest, effort and hardwork in their academic endeavours whereas those with no set goals, lack of confidence, and no driving force are unserious with their academics. Teachers have been blamed for not doing enough to impact the necessary knowledge on students while part of the blame for this apparent decline in the quality of education and moral values is on the students (Famade, 2012). Thus, students seem to have greater part of the responsibility in actualizing success. Also, factors like self-efficacy, academic resilience, self-concept, achievement motivation have been discovered to be associated with academic engagement. Notwithstanding that several studies have been carried out on each of these factors with academic engagement, however not many studies have combined these factors as the present study. Thus, the present study seeks to find out the role of academic resilience, achievement motivation and self-efficacy on academic engagement of Nigerian undergraduates.

Engagement has been characterized as motives that initiate or sustain learning actions (Ainley, 2012). Student engagement according to Bowden, Conduit, Hollebeek, Luoma-Aho and Solem, (2017), consist of four distinct yet interrelated dimensions, namely behavioral engagement, affective engagement, cognitive engagement and social engagement. More so, student engagement has been linked to a range of conventional success factors such as increased retention (Khademi Ashkzari, Piryaei & Kamelifar, 2018); high impact and lifelong learning (Artess, Mellors-Bourne, & Hooley, 2017); curricular relevance (Trowler, 2010); enhanced institutional reputation (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006); increased citizenship behaviours (Zepke, Leach & Butler, 2014); student perseverance (Khademi Ashkzari, Piryaei, & Kamelifar, 2018); and work-readiness (Krause & Coates, 2008). It has also been associated with more subjective and holistic outcomes for students including; social, personal growth and development (Zwart, 2009); transformative learning (Kahu, 2013); enhanced pride, inclusiveness and belonging (Wentzel, 2012); and student wellbeing (Field, 2009). Research on academic engagement remains relevant to the society, in particular, the current modern environment of increasing enrollment in tertiary education (Edwards & Radloff, 2013; Ugwu, Onyishi, & Tyoyima, 2013). A strong relationship has been found between

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engagement and learning thus, academic engagement is the extent to which students participate in academic and non-academic activities; identify with and value the goals of schooling (Audas & Wilms, 2001).

Academic engagement is the extent to which students are motivated to learn and do well in school (Libby, 2004); a psychological process involving the attention, interest, investment, and effort expended by students in the work of learning (Marks, 2000). Thus, students are engaged when they are involved in their work; persist irrespective of challenges and obstacles in order to accomplish their task. Academic engagement of students depicts students' willingness to participate in routine school activities, such as attending classes, submitting required work, and following teachers' directives in class (Chapman, 2003). Zhao and Kuh (2004) from the study on 80,479 first year and senior students using National Survey of Student Engagement (NSSE) revealed that taking part in learning communities has a great impact on students' educational achievement and their engagement with fruitful academic tasks like communication with faculty lecturers, active learning and academic integration.

However, the present researcher adopts Schaufeli, Salanova, González-Romá and Bakker's (2001) conceptualization of academic engagement as a positive, fulfilling, work-related state of mind characterized by vigor, dedication and absorption. Vigor is the effort expenditure, resilience, and persistence in the face of obstacles (e.g., When I get up in the morning I feel like going to class), whereas dedication refers to enthusiasm, inspiration, and pride in academic learning (e.g., I find my studies full of meaning and purpose) (Phan, 2014). Absorption is the state of being fully concentrated and happily engrossed in one's studies, such that time passes quickly and one finds it difficult detaching oneself from studies (e.g., Time flies when I am studying) (Schaufeli, Martinez, Marques, Salanova, & Bakker, 2002).

Academic resilience and academic engagement

Resilience is commonly used to describe the ability to turn challenges into opportunities and learn from demanding situations (Richardson, 2002; Delgado, Upton, Ransie, Furness, & Foster, 2017). It is the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances (Howard & Johnson, 2000); and the ability to withstand, adapt to and recover from adversity and stress (The U.S Department of Health and Human Service, 2015). Academic resilience is the student's ability to overcome academic setbacks, stress, and study pressure associated with school typical among a population of at-risk students (e.g., African American students) (Morales & Trotman, 2011). Resilience is very important when studying academic engagement among undergraduates and leads to persistence during school stress and possibly good success. Harrington, (2013) defines academic resilience as the ability to persevere despite negative academic experiences. She listed self-confidence, risk taking, optimism, willingness to learn from mistakes, concern about what you can control not what you cannot, a strong network with trusted people; and efforts to build connections on campus, as elements of resilience. Hence, the need for students to possess these elements in order to enhance their engagement in

academics cannot be undermined. The argument has been that the skills, opportunities, and relationships that promote resilience can be provided in schools, but not many studies have examined resilience in schools (academic resilience).

Resilience within the university environment has been viewed as an asset that supports university students' mental health requirements (Hartley, 2012). Academically resilient students have been found to have good interpersonal skills, confidence in their own ability to learn, positive attitude toward school, pride in their ethnicity, and high expectations (Borman & Overman, 2004; Garmezy, 1991). However, in the discussion of academic resilience, Martin and Marsh (2006) noted that many students perform poorly and continue to perform poorly, while a significant number of students manage to turn around their academic misfortunes, and thrive in the face of adversity. Research also shows the focus and development of resilience building as an often "missing link" in the classroom, which may consequently lead to improved academic achievement. For instance, the result of a study conducted in two Australian high schools among 402 high school students in grades 11 and 12, showed that academic resilience had positive correlations with planning, control, self-efficacy, persistence and low anxiety; and predicted three educational outcomes: self-esteem, participation, and enjoyment of school (Martin & Marsh, 2006).

Resilient students maintain high levels of achievement motivation and performance despite stressful events and conditions that place them at risk of performing poorly and even dropping out of school. Reports from the Australian Federal Government Department of Education, Science and Training shows that attrition rates for first-year international undergraduate students ranged between 4% and 22.5%; and the attrition rate for local university students was approximately 19% per annum (Australian Department of Industry, 2013). Moreover, the National Summit on Mental Health of Tertiary Students identified University students as a group that would benefit from resilience training, in order to build positive mental health (Young, Peter, Sercombe, Sachdev, & Naeb, 2013).

Achievement motivation and academic engagement

Motivation is students' energy and drives to learn and work hard at school (Martin, 2010). All students are influenced by a need to achieve to a certain degree (Awan, Noureen, & Naz, 2011) hence, students who hold a high desire for success work hard to achieve (Zenzen, 2002). Motivation is a strong force in achievement, contributes to academic success (Moula, 2010); and is also seen as what keeps one going, and determines where one is going (Slavin, 2006). For instance, individuals who are driven by set goals tend to persist irrespective of the challenges until success is attained. Hufton, Elliott and Illushin (2002) believe that high levels of engagement show high levels of motivation. Achievement motivation could be seen as self-determination to succeed in whatever activities one engages in, (academic work, professional work, sporting events etc (Tella, 2007). Therefore, students who set positive goals do not give room to distractions or failure but rather persist until their goals are attained.

Self-determination theory (Deci & Ryan, 1985) is concerned with the motivation behind the choices that people make without any external influence or interference; and focuses on the degree

to which individuals' behaviour is self-motivated and self-determined. For example, students who are self-determined to make a first-class grade, focus attention more on academically rewarding activities in order to actualize their goals. Importantly, student engagement manifest through both positive (enjoyment, pride, satisfaction) and negative valences (anger, anxiety, frustration) (D'Errico, Paciello, & Cerniglia, 2016). Positive engagement is central to academic success and achievement (DeCarolis, D'Errico, Paciello, & Palestra, 2019; D'Errico, Paciello, & Cerniglia, 2016); and research has demonstrated that it contributes to student success including attention, immersion and problem-solving (Pekrun & Linnenbrink-Garcia, 2012) whereas negative valences precipitate disengagement, avoidance and withdrawal thus undermining students' intrinsic motivation (Pekrun & Linnenbrink-Garcia, 2012). Studies have shown that achievement motivation is positively related to academic engagement. Moula (2010) linked academic engagement to achievement motivation and viewed motivation as the need or desire to excel in academic work.

Lin (2012) explained the relationship between academic motivation and student engagement by considering academic motivation as a perception and a kind of discipline that positively or negatively affects a person's behaviors. According to Schlechty, (2001) a truly engaged learner, is inspired by the joy of learning and persistence to accomplish the desired goals even in the face of difficulty. Skinner, Kindermann, & Furrer, (2009) considers student engagement to be an outcome of a motivational process hence, without engagement no psychological course is effective in relation to learning and development. Various studies included expectancy and value components of motivation in addition to students' prior achievement (Steinmayr, Weidinger, & Wigfield, 2018), or their intelligence (Spinath, Spinath, Harlaar, & Plomin, 2006; Lotz, Schneider, & Sparfeldt, 2018; Schneider, Lotz, & Sparfeldt, 2018; Steinmayr, Weidinger, & Wigfield, 2018; Weber, Lu, Shi, & Spinath, 2013); as predictors of students' academic achievement (grades or test scores). Besides, few studies combined intelligence and prior achievement with more than two motivational constructs as predictors of school students' achievement (Steinmayr & Spinath, 2009; Kriegbaum, Jansen, & Spinath, 2015). For example, when students are motivated, their seriousness with their studies tends to increase but the reverse is the case when they are not motivated.

Frey, Ruchkin, Martin and Schwab-Stone (2009) found that middle and high school students with high levels of student engagement and academic motivation tend to have much less aggressive beliefs and violence. Another study by Imabong, & Mfonobong, (2013) among senior secondary students in Akwaibom state Nigeria, showed that students who were highly motivated were the most academically engaged, followed by those who were moderately motivated and lastly by those who were lowly motivated. Phan, (2014) in his longitudinal studies of motivation-related attributes of engagement among high school students found that enactive learning experiences and vigor positively influenced absorption and vigor; hence there was also a positive impact of absorption on achievement. Studies by other researchers (e.g., Schneider, Lotz, & Sparfeldt, 2018; Steinmayr & Spinath, 2009; Weber et al.,

2013), suggested the importance of self-concepts and intelligence when predicting students' grades. However finding by Lotz et al. (2018) indicate that it might be even more important to believe in own school-related abilities than to possess outstanding cognitive capacities to achieve good grades.

Self-efficacy and academic engagement

Self-efficacy according to Bandura (1997) refers to the beliefs about one's capabilities to learn or perform behaviors at designated levels. Eccles and Wigfield, (2002) elaborated Bandura's description by defining self efficacy as an individual's confidence in his or her ability to organize and execute a given course of action, to solve a problem or accomplish a task. Students who are engaged, are more likely to persevere through academic challenge, which results in higher self-belief (Chipchase, Davidson, Blackstock, Bye, Colthier, & Krupp, *et al.*, 2017; Kuh 2001; Schaufeli, Salanova, González-Romá, & Bakker, 2002). Self-efficacy beliefs provide the underpinning for motivation, well-being, and achievement; and 'are rooted in the core belief that one has the power to effect changes by one's actions' (Bandura, 2004; P. 622). For instance, students' belief in their capabilities to master academic activities, positively affects their aspirations, level of interest in academic activities, and their academic accomplishments. Self-efficacy in the academic context is an individual's self-evaluation of his/her capability and/or chances for success in the academic settings (Robbins, Lauver, Davis, Langley, & Carlstrom, 2004). Students with high levels of self-efficacy demonstrate positive social behaviors, both directly and indirectly (Bandura 2006); and prefer deep learning to superficial learning (Liem, Lau, & Nie, 2008).

Self-efficacy theory (Bandura, 1977) posits that efficacy is the major determinant of effort, persistence, and goal setting. For instance, a person's belief in his/her capabilities determines the goal he/she sets, the level of effort and persistence he/she puts in towards the actualization of set goals. Self-efficacy has been found to consistently predict academic achievement (Bong, 2008) due to its effect on effort and persistence; and because students who demonstrate greater sense of self-efficacy are more likely to put the necessary effort and persist longer when facing academic challenges (Schunk & Zimmerman, 2006). Anthony and Artino, (2012) in a meta-analysis of 100 empirical studies showed that self-efficacy in 9 psychological studies was vigorous and main component of college students' academic performance and attainment. More importantly, self-efficacy is effective in reaching objectives (Greene, Miller, Crowson, Duke, & Akey, 2004) and in increasing academic success (Turner, Midgley, Meyer, Gheen, Anderman, Kang, & Patrick, 2002). Self-efficacy has also been found to be negatively related to academic engagement. That is to say that peoples' extent of academic engagement is not dependent on the belief in their capability.

From the foregoing, it has been observed that many factors like students personal characteristics (prior ability, self-confidence, motivation, academic self-concept, anxiety, study skills, loneliness, and homesickness); tend to contribute to the extent of students involvement and dedication in their academic pursuit. Today in Nigeria, every academic session

many students are admitted into various courses of study. Some of these students have already set their goals, have interest in the course admitted and have the motivation to learn and graduate with good results; whereas others lack the interest, confidence and ability in their course of study, and hence perform poorly resulting in their spending more than the required duration for the programme. Several studies have investigated academic engagement with each of these variables separately but the present study seeks to find out whether students' extent of involvement in their academics is dependent on their ability to bounce back in the midst of stress (resilience), and/or their set goals (achievement motivation) and/or their beliefs in their capacity to achieve good success (self-efficacy). It is therefore hypothesized that: (a) Academic resilience will significantly play a role in academic engagement among Nigerian undergraduate students (b) Achievement motivation will significantly play a role in academic engagement among Nigerian undergraduate students (c) Self-efficacy will significantly play a role in academic engagement among Nigerian undergraduate students.

Method

Participants

The sample consisted of 355 undergraduate students (200 males and 155 females) who were selected from the University of Nigeria, Nsukka using simple random techniques. They were drawn from five faculties - Arts, Biological Sciences, Engineering, Physical Science and Veterinary Medicine. The age bracket of students was from 16 to 35 years with an average age of 25.5 years. The students were approached by the researcher and a research assistant in their various departments to seek their consent to participate in the study. Those who volunteered to participate in the study were given the instruments which took about 25 minutes to fill.

Instruments

The Utrecht Work Engagement Scale-Student Version (UWES-S) developed by Schaufeli, and Bakker (2003) was used to measure vigor, dedication and absorption in academics in this study. It contains 9 items rated on a four-point response format '1 = never, 2 = always, 3 = often, 4 = sometimes' with Cronbach's alpha of .73, .76 and .70 for vigor, dedication and absorption respectively; and .84 for the total 9-items scale. Sample items include: item 3, When I get up in the morning, I feel like going to class; item 4, I find my studies full of meaning and purpose, item 8, when I am studying, I forget everything else around me. The total scores on all the items (calculated by the sum of the scores of each respondent on the 9 items); were used as indicator of engagement in the present research. Higher scores indicate higher academic engagement; hence UWES-S-9 has adequate reliability and validity (Schaufeli et al., 2002; Ugwu, Onyishi, & Tyoyima, 2013).

The Academic Resilience Scale (ARS-30) was developed by Cassidy, (2016) based on responses describing a significant academic challenge. The scale consists of 30 items rated along a 5-point Likert scale from likely (1) to unlikely (5), which measures perseverance, reflecting and adaptive help-seeking;

and negative affect and emotional response. It has high internal reliability ($\alpha = .86$). High scores on the AR-30 indicate high resilience. Sample items include: When I make plans, I follow through with them; I have self-discipline etc.

The Achievement Motivation Scale used in this study was originally developed by Herman (1970) but was adapted for Nigerian use by Eyo (1986). The instrument contains twenty nine (29) items, made up of components such as Aspiration Level (AL), Upward Mobility (UM), Persistence (P), Task Tension (TT), Time Perception (TP), Time Perspective (TS), Partner Choice (PC), Recognition (RB), and Achievement Behavior (AB) that are separately scored with a three point response pattern (1, 2, 3). The scale has good internal consistency. Sample items include: item 9, In school I think perseverance is....; item 11, In school the standard I set for myself with regard to my studies are....; item 4, To prepare yourself a long time for an important task...., etc.

The New General Self-Efficacy (NGSE) Scale developed by Chen, Gully and Eden (2001) was used in the present study to assess the capabilities of students in academics. The scale (NGSE) contains 8-items which measure participants' perceived level of self-efficacy. The items were directly scored such that higher scores indicate higher self-efficacy while lower scores indicate lower self-efficacy. Inter-item correlations ranged from .32 to .86 with internal consistency reliability estimate of Cronbach Alpha = .91 (Gully & Eden, 2001). Sample items include: item 2, When facing difficult tasks, I am certain that I will accomplish them; item 6, I am confident that I can perform effectively on many different tasks etc. Cronbach alpha of .836 was reported for the present study.

Procedure

The researcher conducted a pilot study in order to validate the instruments to the target population. The cronbach alpha technique was then used to test the reliability to ensure their consistency in measuring what they are designed to measure. The students were approached by the researcher and research assistant in their various departments seeking their consent to participate in the study. Those who volunteered to participate were given the instruments which took about 25 minutes and the properly completed questionnaires were analyzed using Statistical Package for the Social Sciences (SPSS). Pearson Correlation was used to ascertain the relationship among variables while Hierarchical Multiple Regression Statistical Analysis was used to analyze the data and the interpretation was made.

Study Design

Descriptive research design was used in the study to ascertain the roles of these independent variables (academic resilience, achievement motivation and academic self-efficacy) on the dependent variable (academic engagement).

Results

Table 1: Mean standard deviations and correlations among the study variables.

Variables	M	SD	1	2	3	4	5	6
1 Academic Engagement	25.77	3.85	1					
2 Gender	.44	.50	.014	1				
3 Age	.67	.75	-.024	.117*	1			
4 Resilience	110.46	13.72	-.07	-.01	.09	1		
5 Achievement motivation	44.26	6.13	.16**	-.03	.04	.01	1	
6 Self-efficacy	27.90	6.63	-.00	.01	.07	.11*	-.12*	1

* $p < .05$, ** $p < .01$,

Table 2: Hierarchical multiple regression showing the predictive effects of demographics, resilience, achievement motivation and self-efficacy on academic engagement of students

Variable	Step 1 B	Step 2 B	Step 3 B	Step 4 B
<i>Controls</i>				
Gender	.13	.12	.17	.17
Age	-.13	-.10	-.14	-.15
<i>Predictors</i>				
Resilience		-.02	-.02	-.02
Achievement motivation			.10**	.11**
Self efficacy				.02
Adjusted R^2	-.01	-.00	.02	.02
ΔR^2	.00	.01	.03	.00
ΔF	.15	1.65	9.67**	.30

** $p < .01$, * $p < .05$

The result of the hierarchical multiple regression in Table 1 in which academic engagement was the criterion variable indicated that the demographic variables (i.e., gender and age), entered in Step 1 of the equation as controls, collectively accounted for an insignificant 1% variance in academic engagement among students. Neither Gender nor age significantly predicted academic engagement. Resilience entered in Step 2 of the equation accounted for an insignificant 1% variance observed in academic engagement also. However, achievement motivation entered in step 3 of the equation and accounted for a significant 3% variance observed in academic engagement of students. This variance was such that academic motivation positively predicted academic engagement. This prediction suggests that for each one unit increase in achievement motivation, academic engagement of students increased by .10 units. Self-efficacy entered in Step 4 of the equation did not account for any significant variation in academic engagement of students.

Discussion

The aim of this study was to investigate the roles of academic resilience, achievement motivation and self-efficacy on academic engagement among students of a Nigerian university. Result revealed that academic resilience did not significantly play a role in academic engagement among Nigerian undergraduates. Thus, the first hypothesis which stated that academic resilience would significantly play a role in academic engagement among Nigerian undergraduate students was not supported. This finding is consistent with Martin and Marsh (2006) position that many students perform poorly and continue to perform poorly, while a significant number of them manage to turn around their academic misfortunes, and thrive in the face of adversity. This implies that students' level of commitment to academics has less dependence on the persons' ability to bounce back

after adversity and stress.

As predicted by the second hypothesis, the result revealed that achievement motivation significantly played a role in academic engagement among Nigerian undergraduates. This finding is in line with the study by Imabong and Mfonobong (2013) which showed that students who were highly motivated were the most academically engaged, followed by those who were moderately motivated and lastly by those who were lowly motivated. Motivation, according to Martin (2010) is the energy and drives to learn and work hard at school. The result is also in line with Moula's (2010) finding linking academic engagement to achievement motivation. Skinner, Kindermann and Furrer (2009) consider student engagement to be an outcome of a motivational process hence, without engagement no psychological course is effective in relation to learning and development. That is to say that when students' set goals to achieve success, it drives and increases their interests and level of seriousness in academics such that they tend to ignore distractions in order to actualize such goals. The result implies that when students' set goal, it helps them seriously engage in their studies; whereas their ability to bounce back from adversity and belief in their capabilities tend to breed over confidence thereby making them slack in their academic pursuit.

The third hypothesis was not supported as the findings revealed that self-efficacy did not significantly play a role in academic engagement among undergraduate students. The finding is contrary to Schunk and Zimmerman (2006) assertion that students who demonstrate greater sense of self-efficacy are more likely to put the necessary effort and persist longer when facing academic challenges. Burton and Powling (2005) had established a significant relationship between self-efficacy and academic engagement. This is to say that students who believe they can complete a task will have more

interest and stronger commitment until the task is accomplished. However, the result agrees with Dörnyei's (2000) finding that students even those with high levels of self-efficacy, have difficulty in comprehending the whole unless they are actively engaged in the learning. In other words, a student's belief in his/her capabilities does not determine his/her seriousness in academic pursuit; hence both students with high and/or low self efficacy can be seriously engaged in their academics.

The limitations of this study include the homogeneity of the sample which may not allow for generalizability of the findings to the larger population of students. Another limiting factor is the rigorous nature of using self-report measures (questionnaire) and fatigue resulting from several items of the questionnaire being completed by the participants. The researcher suggests that future researches should use more larger sample of the population for better generalization and involve other methods of data collection like interviews and qualitative method.

Conclusion

This study investigated the role of academic resilience, achievement motivation and self-efficacy on academic engagement among undergraduate students. Findings of the study revealed that achievement motivation played a positive and significant role in the extent to which students are engaged in their academics unlike academic resilience and self-efficacy. Motivation is the energy and drives to learn and achieve success; and although students encounter a lot of challenges in their academic pursuits, but when goals are set by students, it drives them into full engagement in their studies which eventually results in good academic success.

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