

The Effect of the Non-Cognitive Trait; Self-Efficacy as a Predictor of Students' Academic Productivity in Anglo-Saxon Universities in Cameroon

Neba Vernat Neh

Faculty of Education, Department of Educational Psychology, University of Buea, Buea, Cameroon

ABSTRACT

This study investigated into the effect of the Non-cognitive Trait; Self-efficacy as a Predictor of Students' Academic Productivity in Anglo-Saxon Universities in Cameroon. The mixed methods research design was used and the sample was made up of 443 postgraduate students of six faculties in the universities of Buea and Bamenda. In selecting respondents and study sites for the study, a multi-stage sampling technique (purposive, opportunity, simple random and stratified sampling technique) was used. The instruments used for data collection was a closed ended questionnaire and a focus group discussion guide for students. The content validity index was 0.96 and the overall reliability of the instrument was 0.955. Data was analysed quantitatively and qualitatively and descriptive (frequency counts, percentages) and inferential statistics (Chi-Square) were used to analyze quantitative data while qualitative data was analyzed using thematic analysis. Spearman rho test was used to establish the relationship between self-efficacy and academic productivity of university students. The findings indicated that there was a significant, positive and strong relationship between self-efficacy and academic productivity with P-value <0.001, far <0.05. The positive sign of the correlation coefficient ($R=0.506^{**}$) implied that academic productivity significantly increased with increase in self-efficacy. Findings have implications for pedagogic practices as teachers need to establish a friendly relationship with their students and build these officious traits in this latter, since the study indicates that students with these skills enjoy, and engage, in learning effectively and perform highly in their educational tasks. This encourages the active implementation of the student-centered approach to learning in which case the students' needs and interests are catered for, causing them to develop a sense of belonging, ownership and autonomy in their educational activities. Based on the findings, some recommendations were made to the effect that counselors should caution students, and enlighten them on the need to develop their self-efficacy and as well as strengthen their belief that their performances can be improved upon. This will inject in the students an additional effort in their studies.

KEYWORDS: Non-Cognitive Trait, Self-Efficacy and Academic Productivity

How to cite this paper: Neba Vernat Neh "The Effect of the Non-Cognitive Trait; Self-Efficacy as a Predictor of Students' Academic Productivity in Anglo-Saxon Universities in Cameroon"

Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-3 | Issue-6, October 2019, pp.1005-1022, URL: <https://www.ijtsrd.com/papers/ijtsrd29307.pdf>



IJTSRD29307

Copyright © 2019 by author(s) and International Journal of Trend in Scientific Research and Development Journal. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0) (<http://creativecommons.org/licenses/by/4.0>)



Introduction

Many traits, skills, factors and abilities matter for success in life but the underlying dimension and classification of these traits are widely contested across the social sciences (Humphries & Kosse, 2016). Heckman (2008) stipulated that, social scientists like psychologists have often predicted academic success to be dependent on cognitive traits such as intelligence and academic abilities but another very different set of traits, often referred to as non-cognitive traits such as conscientiousness, academic grit, intrinsic motivation, optimism, self-efficacy, goal-orientation and self-control, also have a strong predictive power over academic success and they are critical for later life outcomes, including success in the labour market.

The term 'non-cognitive' embraces a vast terrain of psychological traits, skills, attributes, factors, strategies, attitudes and behaviours which are not cognitive but which act both as determinants and outcomes of behaviour (Ou & Reynolds, 2016). Ou and Reynolds (2016) stated that the

term is placed in inverted commas since it is clear that the boundary between non-cognitive and cognitive psychological domains is blurred, and that many attitudes and psychosocial traits often described as belonging to the non-cognitive domain of functioning involve cognitive traits such as self-beliefs, expectancy of future performance and self-concept.

Self-efficacy is one of the attribute of non-cognitive psychological traits amongst others which may affect students' academic productivity. Bandura (1997) cited in Chemers, Hu and Garcia (2001) defined academic self-efficacy as the belief in one's capability to organize and execute courses of actions required to produce given attainments. Efficacy beliefs influence the particular courses of action a person chooses to pursue, the amount of effort that will be expended, perseverance in the face of challenges and failures, resilience, and the ability to cope with the demands associated with the chosen course (Bandura,

1986). Self-efficacy has been related to persistence, tenacity, and achievement in educational settings (Schunk, 1981; Zimmerman, 1989).

Bandura (1982) stated that persons with high self-efficacy are able to plan effectively and successfully in completion of a task. He added that such persons believe about their capacities and confidently apply them in such a way that they achieve goals and even highly completed tasks. In contrast, a person who avoids complicated tasks, will be unable to plan to achieve goals; neither does he/she believe in his/her capacities to attain his/her goals (he/she being a person with low self-efficacy. High self-efficacy goes with those who understand their capacities and successfully plan their activities while persons with low self-efficacy are unable to perform their assignment (Bandura, 1982).

Social cognitive psychologists highlighted the effects of self-efficacy on students' learning and achievement of academic goals (Shunk, 1989). Students with high self-efficacy are confident to understand a lesson, to solve educational problems, and to select most difficult courses (Zimmerman, 1989). Bandura (1982) found that students with high self-efficacy are able to complete a complex task and believe that they can understand and solve a mathematic problem as contrasted to students with low self-efficacy. Students with high self-efficacy study most advanced fields and it helps in the selection of special (optional) courses (Zajacova, Scott, Lynch, & Espenshade, 2005).

Academic productivity is used interchangeably with academic performance, and academic success, which is indispensable in every formal educational institution (Kpolovie, Joe, & Okoto, 2014). Academic performance of student is the ability of the student to study and remember facts and being able to communicate his knowledge orally or in written form in daily life (Udoh, 2005 in Udoh, 2012). Academic performance of students is the centre around which the whole education system revolves. The success and failure of any educational institution is measured in terms of academic performance of students. Not only the schools, but parents also have very high expectations from students with respect to their academic performance, as they believe that better academic results may lead to better career options and future security (Narad, & Abdullah, 2016).

Kpolovie et.al (2014) opined that academic productivity is the outcome of education, the extent to which a student, teacher or institution has achieved their educational goals. Kpolovie et.al (2014) added that academic productivity of an individual is influenced by various factors such as personality, intellectual ability, and environment. Academic productivity is a measurable index that depicts a student's cognitive, affective and psychomotor domains in an educational setting (Kpolovie et.al, 2014). Farooq, Chaudhry, Shafiq & Berhanu (2011) confirmed that academic success has a great influence on a student's self-esteem, motivation, and perseverance in higher education. Poor academic productivity or high failure rates may result in unacceptable levels of attrition, reduced graduate throughput, increased cost of education and this also reduces admission opportunities for high education students seeking higher degrees (Farooq et.al, 2011).

Steinmayr, Meibner, Weidinger & Wirthwein (2014) stated that academic performance has to do with what a learner is able to accomplish by execution of class work in the school. Stiggings (2001) sees academic performance as something a learner do or achieve at school, college or university, in class, in a laboratory or field work. Stemler (2012) defines academic performance as a student's ability to apply the acquired academic knowledge successfully and argues that being in possession of academic knowledge does not guarantee successful application and use of the knowledge. According to Ayan and Garcia (2008), academic performance is defined in terms of grades. According to the Cambridge University Reporter (2003) academic performance is defined in terms of examination performance. Academic performance refers to what the student have learned or what skills the student has acquired and is usually measured through assessments like standardized tests, performance assessments and portfolio assessments (Santrock, 2006).

Statement of the problem

When most people think of success, they picture cognitive abilities and as such most students are required to take some form of assessment to predict their performance forgetting the fact that success goes far beyond assessment of cognitive abilities. Non-cognitive traits have a significant influence on student's productivity since when students have officious believes, the tenacity, and persistence to push through challenges they persist in task despite obstacles.

It has been observed that assessments in school settings focus solely on students' academic ability though the assessment mechanism varies by institution; it generally involves a combination of test scores. While these are important academic indicators, they fail to account for the "whole student," and focus primarily on academic and intellectual evaluations without fostering or assessing non-cognitive traits like self-efficacy, persistence and conscientiousness which help students navigate the varied landscape of academics. With too much heavy emphasis on cognitive traits (intelligent test) and ignoring the non-cognitive trait of self-efficacy, most students are bound to fail or have poor academic productivity which makes most students to end up repeating classes and this goes a long way to put a burden on parents, make students feel they are not good enough to be in the university and their belief about their productivity in courses often lead to low self-efficacy and thus school dropout. This may even go a long way to dampen their self-confidence for future activities related to academics. It is against this backdrop that the study sought to investigate the effect of the Non-cognitive trait; Self-efficacy as a predictor of students' academic productivity in Anglo-Saxon universities in Cameroon.

Objective of study

The objective of the study was to investigate the effect of self-efficacy on students' academic productivity in Anglo-Saxon universities in Cameroon.

Research question

What is the effect of self-efficacy on the academic productivity of students in Anglo-Saxon universities in Cameroon?

Hypotheses

- **Ho:** There is no significant relationship between self-efficacy and the academic productivity of students in Anglo-Saxon universities in Cameroon.
- **Ha:** There is a significant relationship between self-efficacy and the academic productivity of students in Anglo-Saxon universities in Cameroon.

Significance of the study

This study could help out the teachers in the university to understand the nature of self-efficacy and especially the importance of factors that contributed toward the development of self-efficacy beliefs. It might help the teachers to use such strategies or techniques such as credible communication, feedback, guide the student through task and motivate them to make their best effort to complete the given task. It could also help the teachers to introduce cooperative learning strategies among students in which students work together and help one another as it has a dual outcome of improving self-efficacy, persistence and academic achievement. Also teachers would be aware that not only cognitive traits should be assessed to conclude on student performance but non cognitive factors could equally be assessed and high usage of cognitive test should equally be minimized in school settings since they measure only cognitive factors.

More so, this study could equally help the university students to prepare for life since he or she must have seen the relevance of high self-efficacy since beliefs about self-efficacy have a significant impact on the definition of goals, and compliance through the influence they exert on individually choice, motivation, resilience, and on emotional reactions. These, on the other hand, would influence the effort and persistence in performing a given task and thus making him or her to take responsibility of their action and success in every aspect of life

Literature review

Theoretical review

Albert Bandura's (1997) Self-efficacy theory

The Self-efficacy theory lies at the centre of Bandura's social cognitive theory since self-efficacy is a construct of social cognitive theory which emphasizes the role of observational learning and social experience in the development of the human personality. Bandura's (1977) social learning theory, though renamed as social cognitive theory in 1986, has given path to self-efficacy. Self-efficacy is the belief in one's own ability to successfully accomplish some-thing (Bandura, 1994).

Bandura's self-efficacy theory tells us that people generally will only attempt things they believe they can accomplish and won't attempt things they believe they will fail. People with a strong sense of efficacy believe they can accomplish even difficult tasks. They see these as challenges to be mastered, rather than threats to be avoided (Bandura, 1994). Efficacious people set challenging goals and maintain strong commitment to them. In the face of impending failure, they increase and sustain their efforts to be successful. They approach difficult or threatening situations with confidence that they have control over them. Having this type of outlook reduces stress and lowers the risk of depression (Bandura, 1994). The theory introduces the idea that the perception of efficacy is influenced by four factors: mastery experience

(performance accomplishments), vicarious experience, verbal persuasion, and somatic and emotional state (physiological feedback) (Bandura, 1994, 1997) which will be looked upon below.

Mastery experiences: Bandura (1997) stated that mastery experiences are first and foremost source of self-efficacy. He said mastery experience is the most significant source of the interpretation of results of one's own prior achievements. He believed that judgments of one's ability are formed or revised when university students interpret the outcomes of the academic tasks completed by them. The feelings of success can raise their confidence level and they can use their skill to do similar tasks in future but the sense of failure may work oppositely. However nothing is more powerful than having a direct experience of mastery to increase self-efficacy.

Mastery experience is linked to this study in that it helps students master their academic task and as such develop self-confidence to try new task. Mastery experience help students to overcome difficult task and such students develop a strong sense of self-efficacy thus improvement of academic productivity. Having a success, for example in mastering a task or controlling an environment, will build self-belief in that area whereas a failure will undermine that efficacy belief in students. For a university student to have a resilient sense of self-efficacy, it requires experience in overcoming obstacles through effort and perseverance thus enhancement of students' academic productivity.

Vicarious experiences: The second source of self-efficacy according to Bandura (1997) comes from our observation of people around us; university students build their efficacy beliefs by observing others especially people they consider as role models. Thus models can play an influential role in the formation of the beliefs of self-efficacy since seeing people similar to ourselves succeed by their sustained effort raises our beliefs that we too possess the capabilities to master the activities needed for success in that area. Using vicarious experiences university students are most likely to modify their beliefs following a model's success or failure to the degree that they feel similar to the model.

Vicarious Experiences is link to the study in that in a school setting, when students see their mates performing better than them, it serves as their source for making informative comparisons. Students publicly label, rank, and discuss with one another how smart their classmates are." Thus, students' self-appraisals of their own intellectual abilities are related closely to the appraisals that their classmates have of them. Additionally, students compare their progress with that of others on similar tasks, and a person "low in ability chooses a task that will discriminate between low-ability levels".

When low-achieving students see those who are similar to themselves achieve successes, the low achievers believe they have the capability of mastering similar activities. Simply stated, they convince themselves that if other, similar, students can do it, "they too have the capabilities to raise their performance"

Again, vicarious experiences come from our observation of people around us, especially people we consider as role models. An "A" grade attained by a role model of university

students in a difficult assignment may encourage other students to complete the task. Again, if university student see people similar to themselves succeed, their sustained effort raises other students beliefs that they too possess the capabilities to master the activities needed for success in that area and as such academic productivity will be enhanced. Vicarious experiences enable university students to copy a model student who is successful in a course and as such will want to be like the student. The student copying good learning attributes from the model will equally perform well in courses that models have equally succeed in thus improvement in academic productivity.

Verbal/Social persuasion (influence): Influential people in our lives such as parents, teachers, managers or coaches can strengthen our beliefs that we have what it takes to succeed. The feedback that university students receive from others on their abilities and accomplished tasks is another source of self-efficacy. The beliefs of their academic capabilities can be firm and improved by the encouragement from parents, teachers, and peers. At times they may depend on their parents, teachers, peers and other significant people to evaluate and judge the tasks completed by them or about their skills and abilities. Usher and Pajares (2006) revealed that being persuaded that we possess the capabilities to master certain activities enable people to put in effort and work harder. According to Usher and Pajares (2006) positive feedback from parents, teachers and peers is a reliable source of increasing and strengthening student self-efficacy belief.

Social persuasion is related to this study in that individuals depend on the feedback of others when evaluating their own ability to perform a task. Students depend on evaluative feedback, judgments, and appraisals from others that are important to them. It is in the classroom setting that students have numerous opportunities for teacher feedback that can be either positive or negative. That, in turn, either can help build a child's self-efficacy or lessen it.

Again, being persuaded that we possess the capabilities to master certain activities means that we are more likely to put in the effort, persist in task and sustain obstacles when problems arise. Since positive feedback from significant others is a reliable source of increasing and strengthening the confidence in students thus verbal persuasion foster in university students high self-efficacy beliefs which goes a long way to enhance their performance in academic task. University students can make, revise and reject their self-efficacy related beliefs through social persuasion from parents, teachers, peers and significant others. Through verbal influence university students can overcome challenges and such this will increase their academic productivity for tasks completed by them or about their skills and abilities.

Physiological and Emotional states: Students interpret anxiety (worry or unease), stress (strain or tension), fatigue (weakness or low energy), and mood when they judge their competence that is the state you're in will influence how you judge your self-efficacy. Depression, for example, can dampen confidence in our capabilities. Stress reactions or tension are interpreted as signs of vulnerability to poor performance whereas positive emotions can boost our confidence in our skills. Strong emotional reactions to school

related tasks can provide clues to expected success or failure (Usher & Pajares, 2006).

Emotional state is connected to the study in that students may experience high anxiety which, in turn, can "undermine self-efficacy. Students who experience a feeling of dread when going to a particular class likely interpret their apprehension as evidence of lack of skill in that area. Also, since emotions is paramount to success or failure, strong positive emotions like love to academic task enhances university students interest in academic task, persistence in the face of challenges thus enhancement in academic productivity. But university students, who have a negative emotional state towards academic task like fear, hinder their self-efficacy and such students develop low self-efficacy in academic task, which has a negative impact on their academic productivity. Emotional States like stress reactions or tension are a signs of vulnerability to poor performance in university students whereas positive emotions can boost university students confidence in skills. This theory is illustrated; along with the interaction of images in figure 1.

The theory situates the active role of self-efficacy on academic productivity in that people with high self-efficacy- that is, students who believe they can perform well- are more likely to view difficult tasks as something to be mastered rather than something to be avoided and as such with this efficacious attitude which is a non-cognitive skill make them to persist in academic difficult task even in the face of adversities.

Again, the theory is relevant in the study in that self-efficacy supports a generative capacity such that individuals high in self-efficacy generate and test alternative courses of action when they do not meet with initial success. High self-efficacy enhances functioning through elevated levels of effort and persistence, and can enhance one's ability to deal with problematic situations in academics which enhance academic productivity. As long as the learner is efficacious enough to surmount difficulties they encounter, having some concern about their ability to be successful in a learning situation, will sustain psychological reactions supply information that influences self-efficacy. Successful academic performances are responsible for enhancing self-efficacy whereas failure may reduce efficacy if the development of self-efficacy was not strong. Learners who observe others similar to them being successful in accomplishing a task believe they too can accomplish the same task in the same context. Teachers and parents providing persuasive feedback (e.g you can do this) have been proven to increase self-efficacy in the learner and their academic productivity thus the relevance of the theory to the study.

Conceptual review

Self-efficacy as a non-cognitive trait

Self-efficacy is a concept drawn from Bandura's (1977) broad theory of the person, which posits that human achievements depend on the reciprocal interactions of the person's behaviour, personal factors (or self), and environmental conditions. Self-efficacy leads to specific behaviours and motivations that can encourage or discourage effective performance. Bandura (1994) expounded that self-efficacy refers to one's personal beliefs in their ability to organize and perform a course of action required to reach a desired target. Bandura (1994) detailed

that self-efficacy tells us that people generally will only attempt things they believe they can accomplish and won't attempt things they believe they will fail.

Bandura (1994) revealed that students with high academic self-efficacy view problems as challenges to be mastered instead of threats and set goals to meet the challenges; are committed to the academic goals they set; have a task-diagnostic orientation, which provides useful feedback to improve performance, rather than a self-diagnostic orientation, which reinforces the student's low expectation about what he or she can accomplish; view failures as a result of insufficient effort or knowledge, not as a deficiency of aptitude; and increase their efforts in cases of failure to achieve the goals they have set (Bandura, 1994). Environmental interventions may improve self-efficacy, which can lead the student to select more challenging tasks, which in turn creates more opportunity for useful feedback and can lead to increased self-efficacy and better outcomes. Bandura (1986) documented self-efficacy as peoples' certainty in their capability to perform an action or duty. Self-efficacy is linked to making decisions, formulating a plan of action, and maintaining the effort (Bandura, 1986).

Individuals' self-efficacy enables them to motivate the decisions they make and inevitably their courses of action (Pajares & Schunk, 2001). People are more likely to engage and involve themselves in activities and tasks in which they feel confident and avoid activities where they doubt their abilities (Vuong, Brown-Welty & Tracz, 2010). Motivation to act and perform a task is limited when a person has the impression that he or she cannot produce the desired effect or response (success) (Bandura, Barbaranelli, Caprara & Pastorelli, 1996).

Self-efficacy beliefs can determine how people feel, think, motivate themselves, and act. Bandura point out that, in the basis of self-efficacy there lies a mechanism of changing, continuing and generalising of behaviour (Bandura, 1977). Self-efficacy beliefs effect behaviour through important means. These beliefs, do not only effect the choice of activities, but also help persons in determining how much they strive for achievement, how long they will exert themselves against difficulties, and how they will handle troubles and maintain their course (Bandura, 1977).

Self-efficacy can be defined broadly as individuals' confidence in their capability to achieve particular goals (Hsieh, Sullivan & Guerra, 2007). Bandura (1997) specified that, self-efficacy refers to individuals' assessment and conviction regarding their ability to coordinate and perform a task successfully or how well a person will act upon at almost any challenge. Bandura et.al (1996) proposed that, self-efficacy beliefs influence ambition, drive, persistence in the face of challenges, and susceptibility to pressure and stress.

Barry and Finney (2009) highlighted three categories of self-efficacy namely; social, roommate, and academic self-efficacy. Being able to have interpersonal relations with fellow students and the university staff members shows good social adjustment (Barry & Finney, 2009). Roommate self-efficacy refers to interactions with roommates or people with whom one resides (Zajacova et.al, 2005). Maintaining good relations with people with whom one lives during the

course of one's studies indicates effective interpersonal skills and enhances social adjustment (Barry & Finney, 2009).

Social efficacy refers to an individual's personal relations and social adjustment (Wright, Jenkins-Guarnieri, & Murdock, 2012). Zajacova, Lynch and Espenshade (2005) highlighted that the judgment and convictions that individuals hold towards their capability to perform tasks constitute self-efficacy. Social efficacy at university refers to a student's competence and capability to develop and maintain social interactions with fellow students, as well as with the university staff members (Zajacova et.al, 2005).

Heslin & Klehe (2006) expounded that a person's self-efficacy is a strong determinant of their effort, determination, strategizing as well as their performance. Bandura (2006) described self-efficacy as a set of self-beliefs linked to distinct realms of functioning rather than a global trait. Bandura (1977) asserted that self-efficacy is important because individuals' with high self-efficacy for a task tend to try harder at the task and experience more positive emotions relating to the task. Bandura (1986) added that the stronger a students' self-efficacy, the more persistent students are in their learning. Individual with high self-efficacy reported increased use of cognitive and self-regulatory strategies (Pintrich & Schrauben, 1992). Self-efficacy develops as students notice progress in their learning and as they attain their goals.

Bandura (1991) elucidated that a strong sense of efficacy enhances human accomplishment and personal well-being in many ways. Bandura revealed that people with high assurance in their capabilities approach difficult tasks as challenges to be mastered rather than as threats to be avoided. Such an efficacious outlook fosters intrinsic interest and deep engrossment in activities (Bandura, 1991). Bandura added that efficacious individuals set themselves challenging goals and maintain strong commitment to them; heighten and sustain their efforts in the face of failure; quickly recover their sense of efficacy after failures or setbacks; attribute failure to insufficient effort or deficient knowledge and skills which are acquirable; approach threatening situations with assurance that they can exercise control over them and such an efficacious outlook produces personal accomplishments, reduces stress and lowers vulnerability to depression (Schwarzer, 1992).

In contrast, people who doubt their capabilities shy away from difficult tasks which they view as personal threats; have low aspirations and weak commitment to the goals they choose to pursue; when faced with difficult tasks, they dwell on their personal deficiencies, on the obstacles they will encounter, and all kinds of adverse outcomes rather than concentrate on how to perform successfully; they slacken their efforts and give up quickly in the face of difficulties and they are slow to recover their sense of efficacy following failure or setbacks (Schwarzer, 1992).

Schunk (1994) in Zinkeng (2011) discovered that if learners' self-efficacy is not too low, it could serve as a motivator in the increase of a students' persistence toward completing task. As long as the learner is efficacious enough to surmount difficulties they encounter, having some concern about their ability to be successful in a learning situation will sustain psychological reactions supply information that influences

self-efficacy. Successful academic performances are responsible for enhancing self-efficacy whereas failure may reduce efficacy if the development of self-efficacy was not strong. Learners who observe others similar to them being successful in accomplishing a task believe they too can accomplish the same task in the same context. Teachers and parents providing persuasive feedback (e.g you can do this) have been proven to increase self-efficacy in the learner (Zinkeng, 2011).

Schunk (1985), in Zinkeng (2011) argued that, a reciprocal relationship exist between students' goals setting and their perceptions of self-efficacy. When students set intermediate goals that are specific and proximal in time, they can perceive their learning progress more readily, and this, in turn, enhances their self-efficacy. Increased self-efficacy can lead students reciprocally to set even more challenging ultimate goals for themselves (Zimmerman, 1995). As students work on task, they constantly compare their progress to the goals that have been set. Students who compare their progress toward learning goals are more apt to experience a sense of self-efficacy for skill improvement and engage in activities they believe to enhance learning.

Bandura (1997) argued that self-efficacy has its most powerful motivational effects through the traits of cognized goals. Goals provide the basis for self-regulation of effort by providing a standard for judging the adequacy and effectiveness of goal relevant effort and strategy (Bandura & Cervone, 1983). Specific and difficult (but not impossible) goals are strongly related to performance in a wide variety of tasks and settings (Locke & Latham, 1990). Self-efficacy leads to higher goals being set (Zimmerman, Bandura, & Martinez-Pons, 1992), and high goals increase the positive effects of self-efficacy by providing an evaluative context to aid self-regulation (Cervone, Jiwani, & Wood, 1991). When goals provide a standard, highly efficacious persons show a stronger relationship among self-evaluation, self-direction, and performance (Bandura & Schunk, 1981).

Schunk (1990), in Zinkeng (2011) opined that self-efficacy dictates the choice of activities, effort, persistence, and achievement. Learners weigh and combine factors such as perceived ability, task difficulty, amount of effort, amount and type of assistance received from others, perceived similarity to models, and persuader credibility. Very central to these self-efficacy effects seems to be the ability to manage the stressors created in demanding situations by means of a more positive analysis of extant risks and available coping resources, which results in the tendency to see demanding situations as challenges rather than threats (Chemers, Hu and Garcia, 2001).

Self-efficacy beliefs influence task choice, effort, persistence, resilience, and achievement (Bandura, 1997) compared with students who doubt their learning capabilities, those who feel efficacious for learning or performing a task participate development of academic self-efficacy more readily, work harder, persist longer when they encounter difficulties, and achieve at a higher level (Pajares and Schunk, 2001). Students with strong senses of self-efficacy tendency involve in challenging tasks, invest more effort and persistence, and show excellent academic performance in comparison with students who lack such confidence (Bong, 2001, cited by Nasiriyani, Azar, Noruzi, Dalvand, 2011).

Bandura (2001) describes self-efficacy as a motivational orientation that stimulates grit when faced with difficulties, enhances deliberate actions, encourages long-term view, fosters self-regulation and allows for self-correcting whenever necessary. Metcalfe & Shimamura (1994) added that university students with stronger academic self-efficacy would probably use cognitive strategies. Such students may employ metacognition, which may be defined as "thinking about thinking" or "knowledge about knowing and learning" which refers to a higher-order cognition used to monitor and regulate cognitive traits such as reasoning, comprehension, problem solving, learning, and so on (Metcalfe & Shimamura, 1994). They would effectively handle their resources, believe intelligence is pliable, pursue mastery goals rather than performance and therefore display better academic performance (Metcalfe & Shimamura, 1994).

Zajacova, Lynch & Espenshade (2005) denoted that efforts and persistence are one of the attributes of students with high self-efficacy. Such students continuously work, if unable to follow course, they find out effective ways to control difficulties in achieving their goals (Ormrod, 2000). While students with low self-efficacy will discontinue, they are unable to remove barriers in achieving and learning (Ormrod, 2000). Students with high self-efficacy are able to pay serious attention, organize, and elaborate material effectively through their cognitive aspect (Pintrich & Schunk, 1996; Zajacova, Scott, Lynch & Espenshade, 2005; Heslin & Klehe, 2006).

Social cognitive psychologists (Bandura, 1989) identified three factors in the development of high and low self-efficacy. They include; students' earlier academic record, teachers' message and success and failure of others:

Students' earlier academic record: Students with poor grades in previous examinations develop low-self efficacy. Teachers' guidance will foster this since such students recognize the importance of effort and persistence for learning and achieving a goal by developing resilient self-efficacy (Bandura, 1989). Teachers must provide difficult task to students which can be achieved with effort, and hard work (Ormrod, 2000). Students whose previous academic results are excellent, teachers must further enhance high self-efficacy of such students and one effective technique is intrinsic motivation (Bandura, 1989).

Teachers' message: Motivational messages of teachers in particular will develop students' self-efficacy. Teachers politely point out the drawbacks of the students' work. Frequent guidance and help of the teachers may develop students' negative attitude towards capacities and believe to learn and achieve is injured. It conveys the message that "I don't think you can do this on your own". The moderate helping behaviour of the teacher will have a positive impact while frequent guidance and supporting behaviour of teachers may develop students' dependency and feelings of worthless (Bandura, 1989).

Success and failure of others: This is based on observational learning. Students observe the output of their class fellows and convinced that when their class fellows can improve grades and learn lessons, they are also able to learn and understand the difficulty. Class fellows of same age are significant model to enhance greater high self-efficacy as

compared to teachers (Schunk and Hanson, 1985). Peer models have greater impact on developing self-efficacy in particular observing those students who had difficulties at some stage; later on removing barriers in academic tasks (Schunk and Hanson, 1985).

Efficacy beliefs play a vital role in the development of self-directed lifelong learners in adolescents and young adults (Holland, 1985). Students' belief in their capabilities to master academic activities affect their aspirations, level of interest in intellectual pursuits, academic accomplishment and how well they prepare themselves for different occupational careers (Holland, 1985). Bandura (1986) came to the conclusion that self-efficacy influences the choice and commitment in a task, the energy spent in performing it, and the level of the performance.

The concept of academic productivity

Academic productivity is used interchangeably with academic performance, academic achievement and academic success, which is indispensable in every formal educational institution (Kpolovie, Joe & Okoto, 2014). Steinmayr, Meibner, Weidinger & Wirthwein (2014) stated that academic achievement has to do with what a learner is able to accomplish by execution of class work in the school. Stiggings (2001) sees academic achievement as something a learner do or achieve at school, college or university, in class, in a laboratory or field work. Stemler (2012) defines academic performance as a student's ability to apply the acquired academic knowledge successfully and argues that being in possession of academic knowledge does not guarantee successful application and use of the knowledge. According to Ayan and Garcia (2008), academic performance is defined in terms of grades.

Spinath (2012) elicited that academic achievement or (academic) productivity is the extent to which a student, teacher or institution has achieved their short or long-term educational goals. Spinath (2012) added that cumulative GPA and completion of educational benchmarks such as secondary school diplomas and bachelor's degrees represent academic achievement. Ukwuije (1989) elucidated that academic achievement or academic productivity has to do with what a learner is able to accomplish by execution of class work in the school.

Academic achievement is commonly measured through examinations or continuous assessments but there is no general agreement on how it is best evaluated or which aspects are most important-procedural knowledge such as skills or declarative knowledge such as facts (Ward, Stoker & Murray-Ward, 1996). Williams (2018) stated that when people hear the term "academic performance" they often think of a person's GPA. Williams (2018) further denoted that people often consider grades first when defining academic performance and this includes schools, which rank students by their GPA, awarding special designations such as valedictorian and salutatorian for those who graduate first and second in their class. Williams (2018) added that scholarship organizations and universities also start by looking at grades, as do some employers, especially when hiring recent graduates.

Ali, Jusoff, Ali, Mokhtar & Salamt (2009) expounded that academic achievement is calculated by the CGPA

(Cumulative Grade Point Average) that shows the overall academic performance of a student where it considers the average of all examination grades for all semesters during the tenure in a university. The students performing on the low end of the continuum are considered low achievers, with a grade point average below a B (below 70th percentile) on a five-point grading system (e.g., A, B, C, D, and F) while high achievers perform on the high end of the continuum with a grade point average above a B (above 80th percentiles) on a five-point grading system (Cohen, 2001).

Hattie & John (2009) posited that academic achievement represents performance outcomes that indicate the extent to which a person has accomplished specific goals that were the focus of activities in instructional environments, specifically in school, college, and university. Hattie & John (2009) added that academic achievement should be considered to be a multifaceted construct that comprises different domains of learning. Hattie & John (2009) further revealed that academic achievement is measured by the GPA (grade point average) or by standardized assessments designed for selection purpose such as the SAT (Scholastic Assessment Test) which determines whether a student will have the opportunity to continue his or her education (e.g., to attend a university). Therefore, academic achievement defines whether one can take part in higher education, and based on the educational degrees one attains, influences one's vocational career after education (Hattie & John, 2009).

High achievers

Srivastava and Singha (2017) explained that a high achiever would be a student who gets high marks and good grades in his academic performances. High academic achievement means the student is doing well in the examination, especially for those who scores all "A" in the examination (Othman & Leng, 2011). Kapoor (1987) stated that high achievers have proper and planned reading habits than low achievers, Michael (2007) revealed that there exists significant difference between high and low achievers on study strategies. Singh (1983) revealed that there exists a significant difference in the self-concept of high and low achievers which is in favour of high achievers

Low achievers

Chakrabarty & Saha (2014) ascribed the term low achievers to a group of learners who fail to exhibit expected capability in attaining specific grades in traditional evaluation mechanism. Chakrabarty & Saha (2014) further ascribed that low achievement is a challenging phenomenon in every domain of learning but the scenario happens to be more conspicuous in the context of learning. Chakrabarty & Saha (2014) revealed that low in educational domain is the possible outcome of the psychological reality of 'individual difference, which postulates that learners enter the learning backdrop with varied genetic constitution

Empirical review

Shkullaku (2013) investigated on the relationship between self-efficacy and academic performance in the context of gender among Albanian Students in Tiran, Albania. The data was collected from 180 students (102 females and 78 males) selected from first, second and third level studies. Both universities and participants were selected randomly. A questionnaire was used to measure self-efficacy and the grade point average (GPA) of the first semester to measure

the academic performance of the participants. The data was analyzed using descriptive and inferential statistics. The Pearson correlation coefficient was used to see the relationship between self-efficacy and academic performance. T-test was used to compare male and female participants in self-efficacy and academic performance. The results of the study showed that there was a significant difference between males and females in self-efficacy. There was no difference between males and females in academic performance. Also, a significant relationship was found between the students' self-efficacy and academic performance.

Merala, Colak & Zereyak (2014) conducted a study on the relationship between self-efficacy and academic performance. The aim of this study was to investigate relationships between self-efficacy and academic performance among a sample of 82 sophomore students who attended instructional planning and evaluation class at the Marmara University Technical Education Faculty. Survey method was used in this research. The instrument was used to measure self-efficacy is the Motivational Strategies Scale developed by Pintrich and De Groot (1990) and adapted into Turkish by Altun and Erden (2006). Data analyzed by Pearson's Correlation and descriptive statistics. Findings revealed that calculated correlation (r) were, 45 ($p < .01$) between academic performance and MSLQ score. However there is no significant relation between self-efficacy and the other variables ($p > .05$) and as such self-efficacy is more efficient on academic performance than socio-economic variables.

Köseoğlu (2015) conducted a study on self-efficacy and academic achievement -a case from Turkey. 214 First-year university students filled in the Motivated Strategies Learning Questionnaire, completed the implicit theories of intelligence scale, answered the Achievement Goal Inventory Scale, and self-reported their grade point averages. A multivariate analysis of co-variance (MANCOVA) indicated that students with low self-efficacy were inclined to believe that intelligence is inherent and cannot be changed. It also indicated that students with high self-efficacy preferred mastery goals, which entailed challenges and new knowledge, as well as performance goals that comprised good grades and surpassing others. Additionally, a hierarchical multiple regression analysis revealed that effort-regulation, self-efficacy, and help-seeking explained 21% of the variance in GPA. It was also found that the relationship between self-efficacy and GPA was partially mediated by effort-regulation.

Ahmad & Safaria (2013) investigated the effects of self-efficacy on students' academic performance. The main purpose of the paper is to discuss how self-efficacy developed and the way it influences students' academic performance in addition to social interaction with peers. The study was designed to study the impact of self-efficacy on 15 boys, students of the 5th grade of a local school. Hague's (1990) Urdu Self-efficacy scale was administered. Findings show that students with high self-efficacy obtained higher scores on 50 mathematical problems test. Further, content analysis of interviewees' responses showed that students with high self-efficacy planned to study complex subjects in future.

Methods

Research design

The study made use of the mixed-methods design with the adoption of triangulation since it involves holistic, vigorous and sophisticated inquiry. The mixed method is confronted with a question or problem that has no ready answer (Amin, 2005). Triangulation was necessary to obtain a variety of information on the same issue and to use the strengths of each method to overcome the deficiencies of the other on the phenomenon under investigation (Kumar, 2005).

Population of study

The population comprised of students in Anglo-Saxon universities in Cameroon. The study targeted thirty-two thousand, six hundred and seventy-two (32672) students in state universities in English-Speaking regions of Cameroon that are composed of the University of Buea (found in the South West Region) and the University of Bamenda (found in the North West Region). They were selected because of accessibility and convenience. All the faculties, colleges and schools in these universities were targeted with the exception of HTTC Kumba because of its separate geographical location- Kumba. The accessible population of this study was made up of 2476 postgraduate students in the university of Buea and university of Bamenda but considering the large population of students in each of the institutions, this study was limited to three faculties in each of the state universities: Faculty of Education, Faculty of Science and Faculty of Social & Management Sciences, giving a total of six faculties that make up the accessible population of this study.

Sample and Sampling techniques

The Sample size was 443 post-graduate students including 366 Masters/M.Ed Students and 77 Doctorate/Ph.D students. This sample was drawn from first year post-graduate students in the Faculty of Education (132), Faculty of Science (155) and Faculty of Social and Management Sciences (154) in the University of Buea (321) and Bamenda (122) who had completed at least one semester

The probability sampling technique, specifically the simple random sampling technique was used to select three faculties in each of these universities. This afforded every faculty an equal chance of being selected for the study. A proportionate stratified sampling technique was then used to get the number of students to participate per faculty and per level. This technique was used to ensure that, the sample size of each faculty and by level of study was proportionate to the population size of the faculty when viewed against the entire population. The accidental/ convenient/opportunity sampling technique was adopted in choosing the students to participate in the study since this technique consisted of taking the sample from people who were available at the time the study was carried out to fit the criteria the researcher was looking for. Finally, in a situation where the accessible population was more than the required sample, the researcher made use of the simple random sampling technique in order to pick out only the respondents needed

Instruments for data collection

This study employed a closed ended questionnaire for students and a focused group-discussion for students. The questionnaire comprised of 59 close-ended items rated on a 4 point Likert scale (Strongly Agree (SA = 4), Agree (A = 3),

Disagree (D = 1) and Strongly Disagree (SD = 2), with different statements which measured beliefs, feelings and opinions of university students. The purpose of the questionnaire was to obtain information about students ranging from their demographic information to their non-cognitive traits and academic productivity. A focus-group discussion consisting of seven (7) items was constructed to obtain information from 30 students. The rationale for using a focus-group discussion for this study was to obtain an in-depth view on non-cognitive traits as a predictor of university students' academic productivity.

Measures

Self-efficacy: This consisted of statements which brought out respondents' opinions on self-efficacy and students' academic productivity. The statements were rated on a four point Likert scale (Strongly agreed=4, agreed=3, disagreed=2 and strongly disagreed=1) which contain 10 items as follows; I don't believe in my self-abilities; I'm often very angry when I don't complete my daily task; When I believe I can succeed in a task, I persist longer even in the face of challenges; I often see difficult tasks as challenges to be mastered rather than as threats to be avoided; I don't set for myself challenging goals; I often put in much effort to solve difficult tasks; I maintain strong commitment to challenging tasks; I don't always take initiative to overcome difficult situations, and I feel angry when challenges are more than my ability.

The focus group were for students to discuss whether self-efficacy affected their learning. How self-efficacy trait could be built in or fostered in students. How self-efficacy could be evaluated as a requirement for training skills, and to give their opinions on how this training could be done.

Validity and reliability of instruments

Validity of instruments was done in three phases: face, content, as well as construct validities were checked. The content validity index was calculated at CVI = 0.96, which according to Amin (2005), is acceptable at CVI $\geq$ 0.7, thus making the researcher to consider the instruments valid since the inter-judge coefficient was greater than 0.7. To check for reliability of the instruments, a pilot study was conducted and reliability analysis report for the pilot test instrument was not violated with Cronbach's Alpha Coefficient reliability analysis value of the instrument (IVM) being 0.955.

Data analysis

This study dealt with two types of data namely: quantitative and qualitative data and they were analysed as follows:

Analysis of quantitative data

Before analyzing the quantitative data that was collected for the study, the test items were coded. Each of the questionnaires was assigned a serial number. After the traits of coding, a pre-designed EpiData Version 3.1 (EpiData Association, Odense Denmark, 2008) database which has an in-built consistency and validation checks was used to enter the data. The essence of coding each test item and questionnaire before data entering was to ensure easy cross verification of the data set based on the individual responses of the respondents if need arose. After the completion of data entry, the information from 443 participants was then

exported to Statistical Package for Social Science (SPSS version 23.0) for further consistency check, data cleaning and eventual analysis.

Data was then analysed with the aid of descriptive and inferential statistics. The descriptive statistical tools used were frequency count and percentages. Spearman's rho test was the inferential statistical tests adopted for the study. The spearman's rho test which is a non-parametric test was used in testing the hypothesis of the study. This test was used because the data for all the variables did not follow the normality assumptions as revealed by Kolmogorov-Smirnov^a and Shapiro-Wilk test with all the P-values less than 0.05. Finally, findings were presented using frequency distribution tables with inferential statistics presented at 95% level of confidence interval with alpha set at 0.05 levels accepting only 5% margin of error.

Analysis of qualitative data

The qualitative data of study that was gotten through the focus group discussions was analysed using the thematic analysis technique. Before the data on focus group discussion was analysed, the data which was recorded using a tape recorder or any other electronic gadgets was transcribed into a primary data (textual data). The textual data was imported into statistical software called Atlasti, 5.0 which is a software designed for the analysis of qualitative data. Key themes, or words, groundings and sampled quotations were used in this process. The key themes/concepts or words represented the main ideas that emerged directly from the statements of the respondents. Groundings on the other hand were used to indicate the number of times a particular key concept emanated from the respondents' direct responses/statements. During the coding traits, it was assumed that any idea that emerged at least once was equally relevant. Therefore, the concepts or themes were considered more important than frequency or grounding in this context. Finally, findings were presented using frequency distribution tables and thematic tables.

Ethical considerations

The respondents' anonymity in the information they provided through questionnaire and focus group discussion, was guaranteed by the researcher. Moreover pictures of respondents were not taken. This measure was to assure them of the researcher's confidentiality measure and also to make them feel free to be part of the study, and not rather be skeptical. Respondents were assured that any information they released would be dealt with in the strictest confidential manner, and that on no grounds shall there be the disclosure of any student's identity.

The principle of voluntary participation was considered as students were encouraged to participate in the research without any duress or coercion and they were also informed of their right to withdraw from the study if they did not want to be part of it at any time.

Also, the use of offensive, discriminatory or other unacceptable language was avoided in the formulation of the questionnaire and focus group discussion guide. The researcher avoided deception by not telling the school authorities and the students lies, or promising them material and financial benefits.

Findings**Table 1**
Characterization of students' academic productivity

Test items	Stretched			Collapsed		
	Strongly agree (SA)	Agree (A)	Disagree (D)	Strongly disagree (SD)	SA/A	D/SD
I don't perform at the top of the class	51 (11.6%)	96 (21.9%)	185 (42.1%)	106 (24.1%)	147 (33.5%)	291 (66.3%)
I often earn a good grade in courses that are of interest to me	232 (52.6%)	144 (32.7%)	44 (10.0%)	21 (4.8%)	376 (85.3%)	65 (14.7%)
I have never resisted a course	116 (26.4%)	129 (29.4%)	111 (25.3%)	83 (18.9%)	245 (55.8%)	194 (44.2%)
I spent an extra year before completing my undergraduate degree programme	226 (51.2%)	69 (15.6%)	77 (17.5%)	69 (15.6%)	295 (66.9%)	146 (33.1%)
I have been benefiting from the presidential grants for good performance	216 (49.1%)	107 (24.3%)	43 (9.8%)	74 (16.8%)	323 (73.4%)	117 (26.6%)
I don't always complete all my assignments on time	128 (29.1%)	134 (30.5%)	111 (25.2%)	67 (15.2%)	262 (59.5%)	178 (40.5%)
I often do not answer all my exams questions in detail	100 (22.9%)	134 (30.7%)	149 (34.2%)	53 (12.2%)	234 (52.7%)	202 (46.3%)
I often earn at least a "B" grade in a course	113 (25.7%)	197 (44.9%)	89 (20.3%)	40 (9.1%)	310 (70.6%)	129 (29.4%)
I have a good grasp of diverse set of skills or proficiency in certain skills	136 (30.9%)	228 (51.8%)	55 (12.5%)	21 (4.8%)	364 (82.7%)	76 (17.3%)
When I graduate from school, I will confidently meet the demands of the labour market.	225 (51.0%)	154 (34.9%)	34 (7.7%)	28 (6.3%)	379 (85.9%)	62 (14.1%)
Multiple response set	1543 (35.1%)	1392 (31.7%)	898 (20.4%)	562 (12.8%)	935 (66.8%)	1460 (33.2%)

n=443

In summary, the findings showed that (66.8%) of the students had high academic productivity but, (33.2%) of them were of low academic productivity. To be more elaborate, 262(59.5%) and 234(52.7%) respectively did not always complete their assignments on time and did not often answer all examination questions in detail, 178 (40.5%) and 202(46.3%) of them always completed their assignments on time and often answered questions in detail during exams. In addition, 147(33.5%) of the students did feature at the top of the class, while 291(66.35%) of them measured up at the top of the class. Furthermore, majority of the students 376(85.3%) indicated they often earn a good grade in courses that are of interest to them, 65(14.7%) said the contrary. Findings equally showed that while 245(55.8%) of the students had never re-sat a course, 194(44.2%) of them had re-sat at least a course. Not all the students had benefited from the presidential grants due to poor performance. 117

(26.6%) of the students proved this fact. Conversely, 310(70.6%) strongly consented that they often earned at least a “B” grade in their courses, but 129(29.4%) of them testified to the contrary. The figure below presents the summary of findings on student’s academic productivity. Also, findings equally showed that while 295(66.9%) of the students spent an extra year before completing undergraduate degree program, 146(33.1%) of did not. Moreover, analyses showed that while 364(82.7%) of the students agreed/strongly agreed having a grasp of diverse set of skills, 76(17.3%) disagreed/strongly disagreed having a grasp of diverse set of skills. Lastly, 379(85.9%) strongly consented that they will confidently meet the demands of the labour market upon graduation, but 62(14.1%) of them testified to the contrary.

Table 2
Characterisation of students’ self-efficacy

Test items	Stretched				Collapsed	
	Strongly agree (SA)	Agree (A)	Disagree (D)	Strongly disagree (SD)	SA/A	D/SD
I don’t belief in my self-abilities.	52 (11.8%)	51 (11.6%)	88 (20.0%)	248 (56.5%)	103 (23.5%)	336 (76.5%)
I’m often very angry when I don’t complete my daily task.	141 (32.2%)	215 (49.1%)	72 (16.4%)	10 (2.3%)	356 (81.3%)	82 (18.7%)
When I believe I can succeed in a task, I persist longer even in the face of challenges.	241 (54.9%)	150 (34.2%)	29 (6.6%)	19 (4.3%)	391 (89.1%)	48 (10.9%)
I often see difficult tasks as challenges to be mastered rather than as threats to be avoided.	172 (39.3%)	165 (37.7%)	76 (17.4%)	25 (5.7%)	337 (76.9%)	101 (23.1%)
I don’t set myself challenging goals.	74 (16.9%)	112 (25.5%)	143 (32.6%)	110 (25.1%)	186 (42.4%)	253 (57.6%)
I often put in much effort to solve difficult task.	173 (39.4%)	186 (42.4%)	42 (9.6%)	38 (8.7%)	80 (18.2%)	359 (81.8%)
I maintain strong commitment to challenging tasks.	151 (34.8%)	217 (50.0%)	48 (11.1%)	18 (4.1%)	368 (84.8%)	66 (15.2%)
I don’t always take initiative to overcome difficult situations.	67 (15.4%)	82 (18.9%)	143 (32.9%)	142 (32.7%)	149 (34.3%)	285 (65.7%)
I am not confident that I can deal with difficult situations that comes my way.	87 (19.8%)	67 (15.3%)	103 (23.5%)	182 (41.5%)	154 (35.1%)	285 (64.9%)
I feel angry when challenges are more than my ability.	157 (35.5%)	176 (39.8%)	64 (14.5%)	45 (10.2%)	333 (75.3%)	109 (24.7%)
Multiple response set	825 (18.8%)	987 (22.5%)	1242 (28.3%)	1327 (30.3%)	1812 (41.4%)	2569 (58.6%)

n=443

Summarily, findings revealed that 41.4% of the students were found to be of low self-efficacy while 58.6% of them were of high self-efficacy. To be more explicit, a majority of the students - 336(76.5%) strongly disagreed/disagreed with the statement that they did not believe in their self-abilities. 103 of them- 23.5%- strongly agreed/agreed. 333(75.3%) strongly agreed/agreed that they felt angry when challenges were more than their ability, 109(24.7%) of the students strongly disagreed. In addition, 391(89.1%) respectively strongly agreed/agreed that they persisted longer in a task which they believed they could complete even in the face of difficulties and were very angry when they did not complete their daily tasks, 48(10.9%) and 82(18.7%) of them did not feel perturbed. While 337(76.9%) of the students often saw difficult tasks as challenges to be mastered rather than to be avoided, 101(23.1%) of them saw the contrary. While 285 (65.7%) of the students always took initiative to overcome difficult situations, 149 (34.3%) of them did not take such initiatives. 356(81.3%) strongly consented that they are often very angry when they don't complete daily task, but 82(18.7%) of them testified to the contrary. Similarly, while 285(64.9%) of the students were confident that they could deal with difficult situations that came their way, 154(35.1%) of them were found not to have such confidence. The findings also proved that while 253(57.6%) of the students set challenging goals to for themselves, close to 45% of the students did not. The findings equally showed that 80(18.2%) of the students were found out as not putting in much effort towards solving difficult tasks whereas 359(81.8%) of them did. Lastly, 368(84.8%) of the students indicated they maintain strong commitment to challenging tasks, 66(15.2%) of them were found not to.

Table 3***Cross tabulation between students' self-efficacy and academic productivity***

Self-efficacy	Statistics	Academic productivity		Total based on response
		Low achievers	High achievers	
Low	n	1286	626	1812
	%	65.5%	34.5%	100%
High	n	760	1809	2569
	%	29.6%	70.4%	100%
Total	n	1946	2435	4381

Using the cross tabulation technique, findings showed that a majority of the students who were perceived as high achievers (70.4%) were those with high self-efficacy which was significantly lower when compared to students with low self-efficacy of which (34.5%) of them were found to be high achievers.

Table 4***Students' opinion on how self-efficacy affects their learning (focus group discussion)***

Themes/Key concepts	Groundings	Sampled quotations
Determined choice of activity	1	Many of the participants said "self-efficacy determined their choice of activity"
Improve effort to study	3	Many of the participants said "Self-efficacy made them belief on their abilities, determined how much effort they can put in an activity" "Self-efficacy boost my will power in a task" "Self-efficacy makes me want to strive high in exams" "When I have low self-efficacy, I developed low aspiration for activities in school"
Improve persistence	1	"When I believe I can perform a task, I persist longer to achieve my goal"
Improve interest	1	"Self-efficacy makes me developed deeper interest in an activity"

During the focus-group discussions with post graduate students, when participants were asked if self-efficacy affects their learning, all of them responded positively. Their responses were grouped into four themes. Some of them said self-efficacy improved on their determination on choice of activity as well as improved on their efforts to study: "*Self-efficacy boosts my will power in a task.*"; "*Self-efficacy makes me want to strive high in exams.*"; leads to persistence: "*When I believe I can perform a task, I persist longer to achieve my goal,*" and improves on their interest in an activity: "*Self-efficacy makes me develop deeper interest in an activity.*"

Table 5***Students' opinion on how self-efficacy can be fostered in students (focus group discussion)***

Themes	Groundings	Sampled quotations
Promote group work	5	"Giving group works so others can learn from others positive beliefs" "Collaborative learning should be used so other students model efficacious beliefs" "Organising cooperative groups since observing a peer success can strengthened beliefs in one's own abilities" "Use peer models and encourage students to try task in groups".
Promote choice making	3	"Set some areas in courses let students make their own choices" "Allow students to make their own choices" "Give flexible grading assignment or let them determine due date".
Create positive learning climate	2	"Teachers should use teaching methods that create positive climate like question and answer" "Teachers should reduce stressful situation in their classrooms and lower anxiety surrounding events like exams".
Mix ability grouping	1	"Mixed ability grouping during presentation since students with high self-efficacy can boast those with low self-efficacy".
Teachers using probing	1	"Probing should be used during teaching because when students answer a question rightly the belief about themselves becomes high".
Promote healthy communication between teachers and students	1	"Teachers can boast students self-efficacy with communication and feedback"
Offer moderate difficult tasks to students	1	"Teachers should give moderately difficult task"
Motivation of students	1	"Give them encouragement like you can do this"
Cautioning		

From the focus-group discussion session, participants presented nine ways which self-efficacy can be fostered in students. Promotion of group work was the frequently mentioned way followed by teachers allowing students to make their own choices, while creating a positive learning climate. Some other participants called on teachers to mix up students during presentations; to use probing when asking questions to students; to offer learners tasks that are not too difficult, to maintain healthy communication with students, and to provide them with feedback as well as and motivate them in their learning.

Verification of hypothesis Ho): There is no significant relationship between self-efficacy and the academic productivity of university students

Table 6***Relationship between self-efficacy and academic productivity***

Test statistics		Self-efficacy	Academic productivity
Spearman's rho	R-value	1.000	.506**
	P-value	.	.000
	N	443	443

** . Correlation is significant at the 0.01 level (2-tailed).

Statistical findings showed that there was a significant, positive and strong relationship between self-efficacy and academic productivity with P-value <0.001 , far <0.05 . The positive sign of the correlation coefficient ($R=0.506^{**}$) implies that academic productivity significantly increases with increase in self-efficacy. Using the cross tabulation technique as shown on the table above, for students with high self-efficacy, 70.4% of them were perceived as high achievers and those with low self-efficacy, 34.5% were perceived as low achievers. The difference in proportion between students with low self-efficacy and high self-efficacy with regard to academic productivity was 35.9% - which is high. Therefore, the null hypothesis that there is no significant relationship between self-efficacy and the academic productivity of students was rejected and the alternative that there is a significant relationship between self-efficacy and the academic productivity of university students was accepted.

Discussion of findings

Self-efficacy and the academic productivity of students

Research Question intended to examine the extent to which self-efficacy affects the academic productivity of university students. Findings showed that there is a significant, positive and strong relationship between self-efficacy and academic productivity of students. The positive sign of the correlation coefficient implies that academic productivity significantly increases with increase in self-efficacy. Also, the strong positive sign of the correlation is an indication that students will be high achievers or perform well in their academics if

they have high self-efficacy. Students will better perform when they portray high self-efficacy about their own self and academic activities. This implies that the more university students believe in their capabilities, the better their academic productivity. Furthermore, the confidence, respect or worth that students have in themselves, affects their academic productivity. Vuong, Brown-Welty & Tracz (2010) confirmed these findings as they explained that people are more likely to engage and involve themselves in activities and tasks in which they feel confident and avoid activities where they doubt their abilities. Motivation to act and perform a task is limited when a person has the impression that he or she cannot produce the desired effect or response (success) (Bandura, Barbaranelli, Caprara & Pastorelli (1996). Individuals' self-efficacy enables them to motivate the decisions they make and inevitably their courses of action (Pajares & Schunk, (2001).

In this study, students agreed that they often believed in their self-ability. This is in line with Bandura (2001) who asserts that self-efficacy is an essential component of initiative. Bandura (1994), added that self-ability makes people to attempt things they believe they can accomplish but won't attempt things they believe they will fail in. Bandura (1977) further denotes that self-ability helps individuals with high self-efficacy to try harder things which makes them to gain experiences and more positive emotions relating to the task. Kassin (1998) supported Bandura's view. He expounded that individuals having high self-efficacy exhibit the characteristics such as expecting successfulness, being happy, making more effort, and may ignore the unnecessary things in life.

Moreover, the findings of this study equally revealed that students see difficult tasks as challenges to be mastered, and not to avoid, take initiative to overcome difficult situations. This is in congruence with Bandura (1991) who asserted that people with high assurance in their capabilities approach difficult tasks as challenges to be mastered rather than as threats to be avoided. Such an efficacious outlook fosters intrinsic interest and deep engrossment in activities (Bandura, 1991). Bandura added that efficacious individuals set themselves challenging goals and maintain strong commitment to them; heighten and sustain their efforts in the face of failure; quickly recover their sense of efficacy after failures or setbacks; attribute failure to insufficient effort or deficient knowledge and skills which are acquirable; approach threatening situations with assurance that they can exercise control over them and such an efficacious outlook produces personal accomplishments, reduces stress and lowers vulnerability to depression (Schwarzer, 1992).

Heslin & Klehe (2006) further confirmed these findings as they expounded that a person's self-efficacy is a strong determinant of their effort, determination, strategizing as well as their performance. Bandura (1977) asserted that self-efficacy is important because individuals with high self-efficacy for a task tend to try harder at the task and experience more positive emotions relating to the task. Bandura (1986) added that the stronger a students' self-efficacy, the more persistent students are in their learning.

More so, findings indicated that students are confident that they can deal with difficult situations that come their way. This view is supported by Schwarzer (1992) who theorized that people who doubt their capabilities shy away from difficult tasks which they view as personal threats; have low aspirations and weak commitment to the goals they choose to pursue; when faced with difficult tasks, they dwell on their personal deficiencies, on the obstacles they will encounter, and all kinds of adverse outcomes rather than concentrate on how to perform successfully; they slacken their efforts and give up quickly in the face of difficulties and they are slow to recover their sense of efficacy following failure or setbacks (Schwarzer, 1992).

In addition, findings revealed that a vast number of students set challenging goals for themselves, and equally put much effort to solve difficult task. This is in line with Schunk (1985), in Zinkeng (2011) who argued that, a reciprocal relationship exists between students' goals setting and their perceptions of self-efficacy. When students set intermediate goals that are specific and proximal in time, they can perceive their learning progress more readily, and this in turn, enhances their self-efficacy. Increased self-efficacy can lead students reciprocally to set even more challenging ultimate goals for themselves (Zimmerman, 1995). As students work on tasks, they constantly compare their progress to the goals that have been set. Students who compare their progress toward learning goals are more apt to experience a sense of self-efficacy for skill improvement and engage in activities they believe to enhance learning.

Bandura (1997) agreed that self-efficacy has its most powerful motivational effects through the traits of cognized goals. Goals provide the basis for self-regulation of effort by providing a standard for judging the adequacy and effectiveness of goal relevant effort and strategy (Bandura &

Cervone, 1983). Specific and difficult (but not impossible) goals are strongly related to performance in a wide variety of tasks and settings (Locke & Latham, 1990). Self-efficacy leads to higher goals being set (Zimmerman, Bandura, & Martinez-Pons, 1992), and high goals increase the positive effects of self-efficacy by providing an evaluative context to aid self-regulation (Cervone, Jiwani, & Wood, 1991). When goals provide a standard, highly efficacious persons show a stronger relationship among self-evaluation, self-direction, and performance (Bandura & Schunk, 1981).

Furthermore, findings also from the study tie with empirical evidence by Shkullaku (2013) who investigated into the relationship between self-efficacy and academic performance in the context of gender among Albanian students in Tiran, results showed a significant relationship between the students' self-efficacy and academic performance. Again, Bandura's self-efficacy theory (1997) tells us that people generally will only attempt things they believe they can accomplish but won't attempt things they believe they will fail in. People with a strong sense of efficacy believe they can accomplish even difficult tasks. They see these as challenges to be mastered rather than as threats to be avoided (Bandura, 1994). Efficacious people set challenging goals and maintain a strong commitment to them. In the face of impending failure, they increase and sustain their efforts in order to be successful. They approach difficult or threatening situations with confidence that they have control over. Having this type of outlook reduces stress and lowers the risk of depression (Bandura, 1994).

Moreover, students' responses revealed that self-efficacy improves on their determination in the choice of activity, improves on their effort to study - "*Self-efficacy boost my will power in a task.*"; "*Self-efficacy makes me want to strive high in exams.*"; leads to persistence - "*When I belief I can perform a task, I persist longer to achieve my goal.*" and finally improves on their interest in an activity - "*Self-efficacy makes me develop deeper interest in an activity.*" Heslin & Klehe (2006), expounded that a person's self-efficacy is a strong determinant of their effort, determination, strategizing as well as their performance. Bandura (1986) added that the stronger a student's self-efficacy, the more persistent the student is in learning. Individuals' self-efficacy enables them to motivate the decisions they make and inevitably, their courses of action (Pajares & Schunk, 2001). People are more likely to engage in and involve themselves in activities and tasks in which they feel confident and avoid activities where they doubt their abilities (Vuong, Brown-Welty & Tracz, 2010). Zajacova, Lynch and Espenshade (2005) highlighted that the judgments and convictions that individuals hold towards their capability to perform tasks constitute self-efficacy.

Conclusion

Data collected established a link between self-efficacy and university students' academic productivity. However, more research is needed in the non-cognitive psychological domain to adequately explain educational traits. Disseminating these findings to teachers, lecturers, students, educational administrators, guidance counselors, and other stakeholders of education may be a necessary way to increasingly turn the current lack of attention to the non-cognitive psychological trait of self-efficacy within the school into greater awareness and resources to foster non-cognitive

psychological trait of self-efficacy and the enhancement of student learning and academic productivity.

Recommendations

Educators, counselors and parents are encouraged to help students develop realistic, meaningful, challenging and achievable goals that will help them develop a sense of direction and purpose. Teachers should aim at delivering instructions in a way that maximizes the opportunity for the mastery of experiences. Teachers should promote the co-operative learning strategy. It will maximize the learning traits of students from teachers and from one another. Teachers should also promote activity-oriented classrooms as well as provide opportunities for a wider range of communicative experiences. Mutual interaction and verbal expression should enhance self-efficacy of the learners. Learners should be given plenty of opportunities to explain their ideas to their team mates and to lead the discussions.

Building self-efficacy in students today is of prime importance. Along with creating a good school image, other practice measures also have to be taken. Teachers can do this by conveying high expectations of students and praising good work. To help struggling learners with low self-efficacy and get them to invest sufficient effort and persist on challenging tasks, teachers must systematically develop high self-efficacy within these students. Teachers can help strengthen the self-efficacy of struggling learners by Linking new work to recent success; Reinforcing effort and persistence; Stressing peer modeling and Teaching struggling learners to make greater efforts. Parents and particularly teachers, must understand their role in developing high self-efficacy among children. Both of them should also keep an eye on children's peer groups.

Also, counselors should caution students, enlightening them on developing their self-efficacy as well as strengthening their belief that their performance can be improved on. This could instill in students additional effort and hard work. But we also note that there are students with lower self-efficacy who assume that intelligence is an entity that offers no possibility for improvement; feel that they may not be able to succeed in university, and therefore are less likely to target any kind of goal, mastery or performance. Thus it is the work of the counselor and class teacher to build this skill in the student through cautioning; students who are more confident and self-assured are more likely to attain higher levels of academic performance. This implies that the belief in self-efficacy play an important role in predicting academic achievement. Self-efficacy in particular, appears to invoke the employment of various metacognitive strategies and resources that are indispensable for academic performance. For example, upon encountering course work that may be boring or difficult, students with self-efficacy may resort to effort regulation and thrive. Such students perform well academically because they would be self-motivated and would probably manage easily without seeking help neither from peers nor from instructors.

Educators and administrators should incorporate Bandura's (1989) four sources of self-efficacy- mastery experiences, modeling, social persuasion, and managing physiological arousal - into the plan of a course and the design of classroom activities and instructors should consider developing the self-efficacy of students by incorporating

approaches based on these four tools. Students should be provided with opportunities and tools to learn how to handle success or failure; to imitate high-achieving role models, to devise ways of overcoming obstacles and to conceive approaches for managing performance anxiety. Also providing students with particular examples of how individuals are expected to behave under specific circumstances is likely to have a positive influence on their self-beliefs about their own abilities and performances. Finally, since stress and anxiety can easily affect accustomed behaviour, providing students with relevant insight and means of managing stressful conditions can be an irreplaceable cache for advancing both self-efficacy and motivation, and consequently achieving higher levels of learning and performance.

References

- Ahmad, A., & Safaria, T. (2013). Effects of Self-Efficacy on Students' Academic Performance. *Journal of Educational, Health and Community Psychology Vol. 2, No. 1*, 1-8
- Ali, N., Jusoff, K., Ali, S., Mokhtar, N., Syafena, A., & Salamats, A. (2009). The factors influencing students' performance at University Teknologi Mara Kedah, Malaysia. *Management Science and Engineering*, 3(4), 81-90. Retrieved from <http://www.cscanada.net/index.php/mse/article/download/j.mse.1913.035X20090304.010/820>
- Amin, M.E. (2005). *Social Science Research: Conception, Methodology and Analysis*. Kampala: Makerere University Printer.
- Ayan, M. N. R., & Garcia, M.T.C. (2008). Prediction of university students' academic achievement by linear and logistic models. *The Spanish Journal of Psychology*, 11(1), 275-288. Retrieved from <http://dx.doi.org/10.1017/S1138741600004315>
- Bandura, A (1989). Perceived self-efficacy in the exercise of personal agency. *The Psychologist : Bulletin of the British Psychological Society*, 2, 411-424
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37, 122-147.
- Bandura, A. (1986). The explanatory and predictive scope of self-efficacy theory. *Journal of Clinical and Social Psychology*, 4, 359-373
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, 44, 1175-1184.
- Bandura, A. (1991). Self-regulation of motivation through anticipatory and self-regulatory mechanisms. In R. A. Dienstbier (Ed.), *Perspectives on motivation: Nebraska Symposium on Motivation (Vol. 38, pp. 69-164)*. Lincoln: University of Nebraska Press.
- Bandura, A. (1994). Perceived self-efficacy in cognitive development and functioning. *Educational psychologist*, 28, 117-148.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Bandura, A. (2006). Guide for constructing self-efficacy scales. In F. Pajares & T. Urdan (Eds.), *Adolescence and education, Vol. 4: Self-efficacy beliefs of adolescents*. Greenwich, CT: Information Age Publishing.
- Bandura, A., & Cervone, D. (1983). Self-evaluative and self-efficacy mechanisms governing the motivational effects of goal systems. *Journal of Personality and Social Psychology*, 45, 1017-1028.
- Bandura, A., & Schunk, D. H. (1981). Cultivating competence, self-efficacy, and intrinsic interest through proximal self-motivation. *Journal of Personality and Social Psychology*, 41, 586-598.
- Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (1996). Multifaceted impact of self-efficacy beliefs on academic functioning. *Child Development*, 67(3), 1206-1222. doi:10.1111/j.1467-8624.1996.tb01791.
- Barry, C. L., & Finney, S. J. (2009). Can we feel confident in how we measure college confidence? A psychometric investigation of the college self-efficacy inventory. *Measurement and Evaluation in Counselling and Development*, 42(3), 197-222. doi:10.1177/0748175609344095
- Cambridge University Reporter (2003). *Indicators of academic performance*. Available: <http://www.admin.cam.ac.uk/reporter/2002-03/weekly/5915/> [Accessed Feb. 12, 2014]
- Cervone, D., Jiwani, N., & Wood, R. (1991). Goal setting and the differential influence of self-regulatory traits on complex decision making performance. *Journal of Personality and Social Psychology*, 61, 257-266
- Chakrabarty & Saha (2014). Low achievers at elementary stages of EFL learning: the problems and possible way-outs. *International Journal on New Trends in Education and Their Implications Vol 5(3)* pp160-165
- Chemers, M. M; Hu, L., & Garcia, B.F. (2001). Academic self-efficacy and first year college student performance and adjustment. *Journal of Educational Psychology*, 91(1), 55-64
- Cohen, J. (2001). *Parental nudging underscores the lesson that it's important for children to do well*. Retrieved from <http://www.apa.org/monitor/sep01/momshelp.aspx>
- Farooq, M.S., Chaudhry, A.H., Shafiq, M., and Berhanu, G. (2011). Factors affecting students' quality of academic performance: A case of secondary school level. *Journal of Quality and Technology Management*, 7, 1-14.
- Hattie, T., & John, A. C. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. London: Routledge.
- Heckman, J.J. (2008). Schools, skills, and synapses. *Economic Inquiry*, 46(3), 289-324.
- Heslin, P. A., & Klehe, U. C. (2006). Self-efficacy. In S. G. Rogelberg (Ed.), *Encyclopedia of Industrial/Organizational Psychology (Vol. 2, pp. 705-708)*. Thousand Oaks: Sage.
- Holland, J. (1985). *Making vocational choices*. Englewood Cliffs, N.J.: Prentice Hall.

- Humphries, J. E., & Kosse, F. (2016). On the Interpretation of Non-Cognitive Skills: What Is Being Measured and Why It Matters . *Discussion Paper No. 10397*
- Kapoor, R. (1987). A study of factors Responsible for high and low Achievement at the Junior High School level Ph.D Edu. Avadh cit in Buch M.B. (Ed). *Fourth Survey of Research in Education*, pp. 829-830 New Delhi, NCERT.
- Kassin, S. (1998). *Psychology*. (Second Edition). New Jersey: Prentice Hall.
- Köseoğlu, Y. (2015) Self-Efficacy and Academic Achievement – A Case from Turkey. *Journal of Education and Practice*, Vol.6, No.29, 2015, PP 131-141, ISSN 2222-1735 (Paper) ISSN 2222-288X (Online)
- Kpolovie, P.J; Joe, A.I. & Okoto, Y.(2014).Academic Achievement Prediction: Role of Interest in Learning and Attitude towards School *International Journal of Humanities Social Sciences and Education (IJHSSE) Volume 1, Issue 11, PP 73-100 ISSN 2349-0373 (Print) & ISSN 2349-0381 (Online) www.arcjournals.org*
- Kumar, R. (2005). Research Methodology A Step by Step Guide for Beginners, 2nd edition, Pearson Education, Australia
- Locke, E. A. & Latham, G. P. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice-Hall.
- Meral A, M. Colak, E., & Zereyak , E. (2014).the relationship between self-efficacy and academic performance . *Procedia - Social and Behavioral Sciences* 46 (2012) 1143 – 1146
- Metcalf, J., & Shimamura, A. (1994). *Metacognition: knowledge about knowing*. MA: MIT Press.
- Michael C.W. Yip (2007). Differences in Learning and Study Strategies between High and Low Achieving University Students: A Hong Kong study. *Educational Psychology*, Vol. 27, Issue 5, 597-606.
- Narad, A., & Abdullah, B. (2016). Academic Performance of Senior Secondary School Students: Influence of Parental Encouragement and School Environment. *Rupkatha Journal on Interdisciplinary Studies in Humanities*, Vol. VIII, No. 2, (ISSN 0975-2935)
- Nasiriyani, A. Azar, H. K. Noruzi, A. & Dalvand, M. R. (2011). A model of self-efficacy, task value, achievement goals, effort and mathematics achievement. *International Journal of Academic Research*. 3 (2). 612-618.
- Ormrod, J. E. (2000). *Educational psychology*. Upper Saddle River, N. J: Prentice Hall.
- Othman, N., & Leng, K.B (2011). The Relationship between Self-Concept, Intrinsic Motivation, Self-Determination and Academic Achievement among Chinese Primary School Students. *International Journal of Psychological Studies*, Vol. 3, No. 1; PP90-9
- Ou, S.,& Reynolds, A.J (2016).*The Role of Non-cognitive Factors in Pathways to College Attendance and Degree Completion* Contemporary Approaches to Research In learning Innovations, 9: 373 -396. Netherlands: Sense Publishers,
- Pajares, F., & Schunk, H. D. (2001). Self-beliefs and school success: Self-efficacy, selfconcept, and school achievement. In R. Riding, & S. Rayner (Eds.), *Perception* (pp. 239-266). Retrieved from <http://www.des.emory.edu/mfp/PajaresSchunk2001.html>
- Pintrich, P. R., & Schrauben, B. (1992). Students' motivational beliefs and their cognitive engagement in classroom academic tasks. In D. Schunk & J. Meece (Eds.), *Student perception in the classroom: Causes and consequences* (pp. 149-183). Hillsdale, NJ: Erlbaum
- Santrock, J.W. (2006). *Educational psychology* (2nd Ed). New Delhi: Prentice Hall of India
- Schunk, D. H., & Hanson, A. R. (1985). Peer models: Influence on children' self-efficacy and achievement. *Journal of Educational Psychology*, 77, 313 – 322.
- Schwarzer, R. (1992). *Self-efficacy: Thought control of action*. USA: Hemisphere Publishing Corporation
- Shkullaku, R. (2013). The Relationship between Self – efficacy and Academic Performance in the Context of Gender among Albanian Students . *European Academic Research*, Vol. I, Issue 4, 1-12, ISSN 2286-4822,
- Singh, A. D . (1983). A comparative study of high and low academic achievers in self-concept formation to study the difference in the self-concept of high and low achievers. Ph. D. Education, RDVV. *4th Survey of research in Education*, 83-88, V. I. p. 857.
- Spinath, B. (2012). Academic achievement. In *Encyclopedia of human behavior*. 2d ed. Edited by Vilanayur S. Ramachandran, 1–8. San Diego, CA: Academic Press.
- Srivastava, S.P., & Singha, P. (2017). Adjustment problems of high and low academic achievers. *International Journal of Advanced Education and Research*, Volume 2; pp175-181
- Steinmayr, R., Meibner, A., Weidinger, A. F., & Wirthwein, L. (2014). Academic achievement. In L. H. Meyer (Ed.), *Oxford Bibliographies Online: Education (Introduction section, par. 1)*. New York, NY: Oxford University Press.
- Stemler, S. E. (2012). What should university admissions tests predict? *Educational Psychologist*, 47, 5-17. doi:10.1080/00461520.2011.611444
- Stiggings, R.J. (2001). *Students involved classroom assessment* (3rd ed) upper saddle River N J: Practice Hall
- Udoh, A.O. (2012). Learning environment as correlates of chemistry students' achievement in secondary schools in Akwa Ibom State of Nigeria. *International Multidisciplinary Journal, Ethiopia vol 6 (3), no. 26* pp. 208-217
- Ukwuije, R.P.I. (1989). *Educational Measurement and Evaluation for Teachers*. Ibadan Key Publishers Ltd
- Usher, E. L., & Pajares, F. (2006). Inviting confidence in school: Invitations as a Critical Source of the Academic Self-Efficacy Beliefs of Entering Middle

School Students. *Journal of invitational theory and practice*, 12, 7-16. Retrieved from http://medicine.nova.edu/~danshaw/jitp/archive/JITP_V12.pdf

Vuong, M., Brown-Welty, S., & Tracz, S. (2010). The effects of self-efficacy on academic success of first-generation college sophomore students. *Journal of College Student Development* 51(1), 50-64.

Ward, A., Stoker, H.W. & Murray-Ward, M. (1996). "Achievement and Ability Tests - Definition of the Domain", *Educational Measurement*, 2, University Press of America, pp. 2-5, ISBN 978-0-7618-0385-0

Williams, E. (2018). 'What Is the Meaning of Academic Performance?' Work-Chron.com, <http://work.chron.com/meaning-academic-performance-17332.html>

Wright, S. L., Jenkins-Guarnieri, M. A., & Murdock, J. L. (2012). Career development among first-year college students: College self-efficacy, student persistence, and academic success. *Journal of Career Development*, 40(4), 292-310. doi:10.1177/0894845312455509

Zajacova, A., Scott, M., Lynch, S. M., & Espenshade, T. J. (2005). Self-efficacy, stress and academic success in college. *Research in Higher Education*, 46(6), 132-143.

Zimmerman, B. J. (1989). A social-cognitive view of self-regulated academic learning. *Journal of Educational Psychology*, 81, 329-339

Zimmerman, B. J. (1995). Self-efficacy and educational development. In A. Bandura (Ed.), *Self-efficacy in changing societies* (pp. 202-231). Cambridge, UK: Cambridge University Press.

Zinkeng, M. N. (2011). *Metacognitive processes and the academic performance of distance learners in Cameroon*. An unpublished (Ph.D Thesis). University of Buea, Cameroon