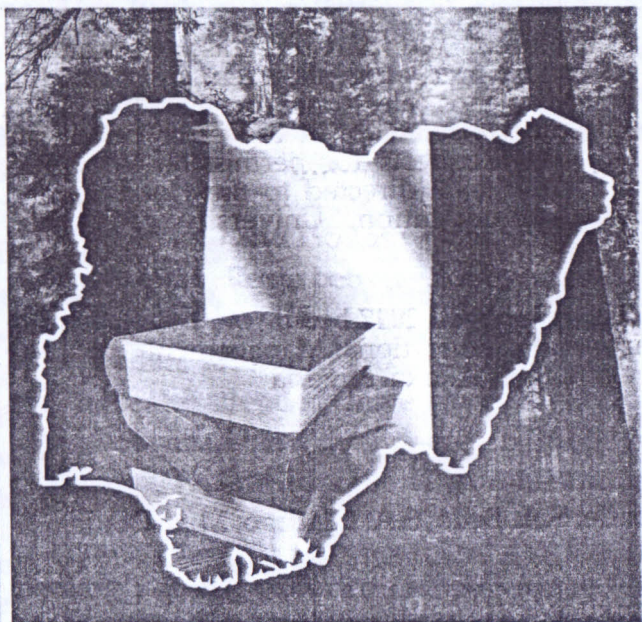




MANAGING EDUCATION FOR SUSTAINABLE DEVELOPMENT IN NIGERIA

(A Book of Readings in Honour of Professor A. O. O. Oguntoye)

Edited by

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FOREWORD

I felt highly honoured to write the foreword of this book of readings entitled: *Managing Education for Sustainable Development in Nigeria*. This book is a collection of papers in honour of Professor Anthony Olatunde Oladipo Oguntoye, a retired Professor of Educational Planning and Economics of Education in the Department of Educational Management, University of Lagos. Professor Oguntoye was born on July 29, 1946 in Epe, Lagos State. He attended St. Leo's Secondary Modern School, Eredo, Epe between 1957 and 1959 as well as St. Mark's Teachers Training College, Iperu, Remo between 1960 and 1961. Professor Oguntoye proceeded to the nation's Premier University, University of Ibadan, Ibadan in 1968 and bagged his Bachelor degree in 1971. He also attended University of Wisconsin, United States where he obtained his Master degree in Public Policy and Administration, and Ph.D in Educational Administration in 1978.

Professor Oguntoye's actual working experience started in 1962 with elementary teaching in various schools in the Colony and Ijebu Provinces of the then Old Western Region. He also taught at Christ's High School, Ibadan between 1971 and 1974. He joined the service of the University of Lagos, Akoka on February 14, 1979, when he was appointed as Lecturer II. On October 1, 1981, he was promoted to the rank of Lecturer I, and by October 1, 1985, he rose to become a Senior Lecturer. He later rose through the ranks and was appointed Professor of Educational Planning and Economics of Education on October 1, 2000.

He was appointed by the Lagos State Government as Provost, Michael Otedola College of Primary Education, Noforija, Epe

Chapter Thirty-Six

UNDERSCORING THE RELEVANCE OF SELF-EFFICACY BELIEFS TO DISTANCE 'LEARNERS' ACADEMIC PERFORMANCE: THEORETICAL AND EMPIRICAL EVIDENCE

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Introduction

In recent times, Ergul (2004) observed that distance learning now moves from a marginal to an integral role in overall educational provision. In doing this distance learning demands much on the part of distance learners. This is because in the distance learning system, learning is more personal and responsibility is more on the shoulders of the students. Therefore, it is expected of distance learners to possess positive self-efficacy beliefs of the programme for them to be able to perform well in their academic pursuits. For this reason, determining the relevance of this type of characteristics of students in distance education it is extremely important to be able to assist them in their academic work. In fact, a combination of cognitive style, personality characteristics and self expectations is asserted to be able to predict student performance in distance education (McIsaac & Gunawerdena, 1996).

Of all the thoughts that affect human functioning, and standing at the

very core of social cognitive theory, are self-efficacy beliefs. Locke and Latham (2000) stated that self-efficacy is a significant determinant of performance, operating independently of the individuals' underlying skills in a specific context (Schunk, 1984). Schunk (1991) maintained that self-efficacy is the major determinant of ability to control one's own learning. Those with a high sense of self-efficacy will work harder and persist longer when they experience difficulties. Those with low self-efficacy will not only do worse at tasks, they will also tend to avoid difficult ones altogether. He also believes that motivation is enhanced when a person believes that he is doing better.

According to Turner and Shallert (2001), self-efficacy beliefs affect choices of persons about whether they will be in similar occupational activities in the future or not. These beliefs, however, do not only affect the choice of activities, but also help persons in determining how much they will strive for achievement, how long they will exert themselves against difficulties, and how they will handle troubles and maintain their course (Bandura, 1977; Pajares, 2002). Self-efficacy beliefs provide the foundation for human motivation, well-being, and personal accomplishments. This is because unless people believe that their actions can produce the outcomes they desire, they have little incentive to act or to persevere in the face of difficulties.

Much empirical evidence now support Bandura's (1986) contention that self-efficacy beliefs touch virtually every aspect of people's lives-whether they think productively, self-debilitatingly, pessimistically or optimistically: how well they motivate themselves and prepare in the face of adversities; their vulnerability to stress and depression, and the life choices they make. A strong sense of efficacy enhances human accomplishment and personal well-being in many ways. 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. They set themselves, challenging goals and maintain strong commitments to achieving them. Self-efficacy beliefs, therefore,

determine how people feel, think, motivate themselves and act (Ergul, 2004).

Successful efficacy builders do more than convey positive appraisals. In addition to raising people's beliefs in their capabilities, they structure situations for them in ways that bring success and avoid placing people in situations prematurely where they are likely to fail often. They measure success in terms of self-improvement rather than by triumphs over others. People also rely partly on their somatic and emotional states in judging their capabilities. They interpret their stress reactions and tension as signs of vulnerability to poor performance. In activities involving strength and stamina, people judge their fatigue, aches and pains as signs of physical debility.

Concept of Self-Efficacy Beliefs

By self-efficacy, Bandura (1977) and Schunk (2011) meant an individual's expectancy in his or her capability to organize and execute the behaviours needed to successfully complete a task. They further pointed out that in the basics of self-efficacy, there lies a mechanism of changing, continuing and generalizing behaviour. Bandura (1986) defined self-efficacy as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performance". Also, self-efficacy refers to people's beliefs about their capability to perform certain actions in a specific domain (Bandura, 1993). Self-efficacy refers to people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances (Pajares, 2002). Bandura further affirmed that individuals with high self-efficacy "heighten and sustain their efforts in the face of failure".

Sources of Self-Efficacy

People's beliefs about their efficacy can be developed by four main sources of influence according to Bandura (1986). The most effective way of creating a strong sense of efficacy is through mastery

experiences. Successes build a robust belief in one's personal efficacy. Failures undermine it, especially if failures occur before a sense of efficacy is firmly established. If people experience only easy successes they come to expect quick results and are easily discouraged by failure. A resilient sense of efficacy requires experience in overcoming obstacles through perseverant efforts. Some setbacks and difficulties in human pursuits serve a useful purpose in teaching that success usually requires sustained efforts. After people become convinced they have what it takes to succeed, they persevere in the face of adversity and quickly rebound from setbacks. By sticking it out through tough times, they emerge stronger from adversity.

The second way of creating and strengthening self-beliefs of efficacy is through the vicarious experiences provided by social models. Seeing people similar to oneself succeed by sustained efforts raises observers' beliefs that they too possess the capabilities master comparable activities to succeed. By the same token, observing others' fail despite high efforts lowers observers' judgments of their own efficacy and undermines their efforts. The impact of modeling on perceived self-efficacy is strongly influenced by perceived similarity to the models. The greater the assumed similarity, the more persuasive is the models' successes and failures. If people see the models as very different from themselves, their perceived self-efficacy is not much influenced by the models' behaviour and the results it produces. Modeling influences doing more than providing a social standard against which to judge one's own capabilities. People seek proficient models that possess the competencies to which they aspire. Through their behaviour and expressed ways of thinking, competent models transmit knowledge and teach observers effective skills and strategies for managing environmental demands. Acquisition of better means raises perceived self-efficacy.

Social persuasion is a third way of strengthening people's beliefs that they have what it takes to succeed. People who are persuaded verbally that they possess the capabilities to master given activities are likely to

mobilize greater effort and sustain it than if they harbor self-doubts and dwell on personal deficiencies when problems arise. To the extent that persuasive boosts in perceived self-efficacy lead people to try hard enough to succeed, they promote development of skills and a sense of personal efficacy. It is more difficult to instill high beliefs of personal efficacy by social persuasion alone than to undermine it. Unrealistic boosts in efficacy are quickly disconfirmed by disappointing results of one's efforts. People who have been persuaded that they lack capabilities however, tend to avoid challenging activities that cultivate potentialities and give up quickly in the face of difficulties. By constricting activities and undermining motivation, disbelief in one's capabilities creates its own behavioral validation.

Mood also affects people's judgments of their personal efficacy. Positive mood enhances perceived self-efficacy, despondent mood diminishes it. The fourth way of modifying self-beliefs of efficacy is to reduce people's stress reactions and alter their negative emotional proclivities and misinterpretations of their physical states. It is not the sheer intensity of emotional and physical reactions that is important but rather how they are perceived and interpreted. People who have a high sense of efficacy are likely to view their state of affective arousal as an energizing facilitator of performance, whereas those who are beset by self-doubts regard their arousal as a debilitator. Physiological indicators of efficacy play an influential role in health functioning, athletic and other physical activities.

Theoretical Framework: An Overview of Social Cognitive Theory

Bandura (1986) suggested social cognitive theory to explain human behavior. This theory discards theories that view individual's behavior as an effect of their environment or internal factors. Nevertheless, social cognitive theory views human behavior as a product of three factors: behavioral, personal and environmental.

According to Bandura (1986), human conduct is described in terms of three factors. In this theory, behavioral, personal, and environmental

factors create interactions to influence each other. For instance, the way learners construe the concerns of their own performance alters and informs their personal and environmental factors (e.g., emotional, cognitive, and biological events), which, in the future will enlighten and adjust their future performance. Nonetheless, Bandura indicated that the influence of these factors differs based on the circumstances and responsibilities with which individuals are involved. Environmental influences may be stronger than personal and behavioral processes in certain situations. Additionally, it takes time for these factors to apply their influence and operate equally, because as Bandura argued that individuals are both products as well as creators of their environment.

Studies on Self-Efficacy and Academic Performance

Self-efficacy has generated research in areas as diverse as medicine, athletics, media studies, business, social and political change, psychology, psychiatry, and education. In psychology, it has the focus of studies on clinical problems such as phobia, depression, social skills, assertiveness, smoking behaviour, and moral development. Self-efficacy has been especially prominent in studies of educational constructs such as academic performance, attributions of success and failure, goal setting, social comparisons, memory, problem solving, career development, teaching and teacher education. In general, researchers have established that self-efficacy beliefs and behaviour changes and outcomes are highly correlated and that self-efficacy is an excellent predictor of behaviour.

In the field of education, self-efficacy is seen to be related with efforts, persistence and performance. Ergul (2004) argued that among the students' characteristics usually examined in distance education, self-efficacy belief is very popular. Schunk (1991) then concluded that individuals who have a high sense of self-efficacy for accomplishing a task work harder and persist longer when they encounter difficulties, whereas those who do not feel efficacious may quit or avoid a task. Furthermore, in academic domains, the research on self-efficacy is less

extensive; however, we are now seeing it being applied to such diverse academic domains as mathematics, computer literacy, writing, in-service teacher training, choice of academic majors, and so on. Many of these studies are correlational and describe how self-efficacy relates to academic outcomes.

On a general note, self-efficacy research in academic settings has focused primarily on two major areas. One area has the link between self-efficacy beliefs and college major and career choices, particularly in the areas of Science and Mathematics (Farmer, Wardrop, Anderson & Risinger, 1995). Researchers had reported that the Mathematics self-efficacy of College Undergraduates is more predictive of their Mathematics interest and choice of Mathematics-related courses and majors than wither prior Mathematics performance or Mathematics outcome expectations (Pajares & Miller, 1994). This line of inquiry has important implications for counselling and vocational psychology theory and practice, given that findings have provided insights into the career development of young men and women, and can be used to develop career intervention strategies.

Bandura's (1997) key contention as regards the role of self-efficacy beliefs in human functioning is that "people's level of motivation, affective states, and actions are based more on what they believe than what is objectively true". For this reason, how people behave can often be better predicted by the beliefs they hold about their capabilities than by what they are actually capable of accomplishing, for these self-efficacy perceptions help in determine what individuals do with the knowledge and skills they have. The relationship between self-efficacy and performance is best summed thus:

The evidence is relatively consistent in showing that efficacy beliefs contribute significantly to level of motivation and performance. They predict not only the behavioural changes differences in behaviour between individuals receiving the same environmental influence, and even variation within the same individual in the tasks performed and those

shunned or attempted but failed. (Bandura, 1997, p.61)

Dale Schunk, of Purdue University, is one of the most prolific researchers applying self-efficacy as an academic construct. He and his colleagues often use a research paradigm that goes beyond correlational analysis to include instructional interventions designed to raise learners' percepts of efficacy and corresponding performance on criteria tasks. Schunk's treatments to influence self-efficacy include variations on modeling, attributions of success or failure, and goal-setting.

In a study of 350 college students, Pajares and Miller (1994) examined the hypothesized mediational role and predictive power of self-efficacy in Mathematics problem solving. Using previously validated measures, the researchers ran several Mathematics-related independent variables in relation to Mathematical problem solving. Results showed that self-efficacy held greater predictive power for problem solving success than did Mathematics self-concept, background in Mathematics, perceived usefulness of Mathematics, and gender.

The effects of background and gender, however, were significantly related to self-efficacy, supporting Bandura's assertion of the mediational role of self-efficacy on performance. Simply put, background and gender are not independent strong predictors of mathematics performance, but are influential sources of Mathematics self-efficacy which is highly predictive and plays a strong mediational role on performance.

Self-efficacy is a domain-specific construct in academics. Many, including Bandura, argued that it is also task-specific, and attempts to measure self-efficacy at the domain level often result in ambiguous or uninterpretable results (Bandura, 1986; Pajares & Miller, 2015). Many of the studies that show self-efficacy to account for lesser variance than other personal determinants often stray from Bandura's prescriptions



for a micro analytic strategy. Often, these studies assess self-efficacy globally with just a few scale items; that is, they ask participants to report on their confidence or efficacy with regard to a specific academic domain, and not a specific performance task.

At this level of self-reporting, it is expected that self-efficacy cannot reliably be separated from other personal determinants such as self-concept, anxiety, self-confidence, and background. It thus raises the question of whether one is actually measuring self-efficacy, or more generally measuring attitudes and other common mechanisms toward a given academic domain. Of course, the latter are important in some areas of educational research, but do not always give us sufficient evaluative information for performance on specific criteria tasks. One possible lens from which to view self-efficacy within the context of instructional technology is to consider one's judgments of personal capabilities to authentically accomplish a specific performance objective. Self-efficacy and performance are inextricably related, and in the domain of Mathematics, both are often correlated with gender.

There is a potential gender effect in Mathematics learning and Mathematics self-efficacy. As discussed earlier, Fennema and Sherman (1977), and Sherman and Fennema (1978) found out that Mathematics confidence and gender stereotyping were significant predictors of Mathematics performance for middle and high school students. Studies with college students showed that gender influenced self-efficacy in Mathematics-related actions, such as academic major and career decisions (Lopez & Beischke 2004).

Other studies found out that gender was an influential source of efficacy information in modeling (Schunk, 1987). In personalization studies, Murphy and Ross (1990) found gender to be an influential factor in determining Mathematics success for eighth graders. Other researchers (Lopez & Sullivan, 1992) found out that personalization significantly benefited seventh-grade Hispanic boys in performing Mathematical calculations. Together, these lineages of research suggest that gender

maintains a significant influence on mathematics self-efficacy. As the foregoing indicates, a gender effect has often been reported on the dependent variables (Mathematics self-efficacy and performance). In separate studies, a gender effect was reported on the independent variable (personalization).

Furthermore, studies such as Zimmerman, Bandura and Martinez-Pons, (1992) and Lim (2013) have been conducted in distance learning system on the relationship between self-efficacy and distance learners' academic performance. For instance, Zimmerman et al., (1992) reported that academic self-efficacy positively correlated to various outcome measures such as grades seatwork performance, scores on examinations and quizzes and quality of essays and reports. Also, Chemers, Hu and Garcia (2014), found out that self-efficacy was related to academic performance ($r = .38$). Similarly, Pajares and Kranzler's (1995) study has demonstrated that the direct effect of Mathematics self-efficacy on Mathematics performance ($\beta = .349$) was as strong as the effect of general mental ability ($\beta = .324$).

Researchers have equally reported that self-efficacy beliefs are correlated with other self-beliefs, motivation constructs, and academic choices, changes and performance although, as will be seen, effect sizes and relationships greatly depend on the manner in which self-efficacy and criteria tasks are operationalized and assessed. Researchers have also been successful in demonstrating that self-efficacy beliefs are positively related to and influence academic performance and that these beliefs mediate the effect of skills, previous experience, mental ability, or other self-beliefs on subsequent performance.

A meta-analysis of studies published between 1977 and 1988 revealed that self-efficacy beliefs were positively related to academic performance (Multon, Brown and Lent, 1991). Self-efficacy beliefs were related to academic outcomes ($r = .38$) and accounted for approximately 14% of the variance. Effects were stronger for high school ($d = .41$) and college students ($d = .35$) than for elementary



students ($d = .21$). How the constructs were operationalized also influenced the findings. The strongest effects were obtained when performance indices were assessed with skills measures ($d = .52$) or classroom-based indices such as grades ($d = .36$) than with standardized performance tests ($d = .13$), a finding that supports the context-specific nature of self-efficacy beliefs. As with self-concept, researchers have demonstrated that, when self-efficacy beliefs correspond to the academic outcome with which they are compared, prediction is enhanced and the relationship between self-efficacy and academic performance is positive and strong (Pajares & Miller, 2007).

In Nigeria, Odedele (2000), in her study on test anxiety and self-efficacy, as correlates of academic performance among secondary school students, reported that self-efficacy was significantly related to the academic performance of students. In the same vein, Adegbola (2001) maintained that self-efficacy contributed significantly to the senior secondary school students' scholastic performance. She stated further however that on sex or gender differentials, there was no significant difference in the self-efficacy of the respondents but there was a significant difference on age basis.

Conclusion

Summing up the literature on self-efficacy beliefs, it is evident that the construct plays a significant role in predicting academic performance. Pintrich and De Groot (2000) suggested that the improvement of students' self-efficacy beliefs leads to increased use of cognitive and meta-cognitive strategies and, thereby, higher academic performance. Self-efficacy is closely related to self-regulation, and both are especially useful in the context of online education where increased levels of self-efficacy beliefs toward the technology utilized are needed by the students in order to be able to communicate and interact with their peers and the instructor. No studies have been found when reviewing of the literature on self-efficacy which addresses this area of research.

Recommendations

Based on the discussions so far had in this paper, the following recommendations are hereby suggested for stakeholders in distance learning programme:

- i. Supportive staff, especially the Counselors in distance learning institutions should always counsel students on the relationship that exists between self-efficacy beliefs and academic performance during orientation programmes and on regular basis.
- ii. Tutors in distance learning should also emphasise the importance and relevance of positive self-efficacy beliefs to students' academic performance.
- iii. Distance learners need to have positive self-efficacy beliefs of distance learning programme so that they can succeed in their academic pursuits. They should know what they can do that can translate into good academic performance.

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