MOTIVATION AS A PREDICTOR OF ACADEMIC ACHIEVEMENT AND BEHAVIOUR MODIFICATIONS AMONG SENIOR SECONDARY SCHOOL STUDENTS IN LAGOS STATE

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Abstract
This study investigated motivation as a predictor of academic achievement and behavior modification among senior secondary school students in Lagos state. A sample size of two-hundred and fifty (female, n = 144; male, n = 106) respondents from ten secondary schools in Mushin Local Government Area of Lagos state were used. Researchers' structured and validated questionnaire was the instrument used for data collection. The test-retest reliability value obtained for the instrument using Pearson Product Moment Correlation Co-efficient was 0.84. Data analysis was carried out with the use of frequency counts and percentages for demographic data and Chi-square for the variables studied. Findings revealed that intrinsic motivation, extrinsic motivation, incentives and rewards would have significant effect on academic achievement of senior secondary school students in Mushin Local Government Area of Lagos state. Based on the findings, it is recommended that the Federal Ministry of Education in association with various state governments should ensure regular provision of scholarships and monetary rewards to students for excellent academic performance to motivate them.

Keywords: Motivation, Academic Achievements, Incentives, Rewards, Behavioural Modification
Introduction
Societies all over the world have used education as an instrument for the achievement of their national interests and objectives. Education is an instrument par excellence for effecting national development. It fosters the worth and development of the individual, for the individual’s sake and for the general development of the society (Federal Republic of Nigeria, 2009). All these call for functional education for the promotion of a progressive and united country. Therefore, school programmes need to be relevant, practical and comprehensive, while interest and ability should determine the individuals’ direction in education. It is only when these factors come together that we can achieve the nations’ objectives (Awanbor, 2013).

In Nigeria, for example, in order to achieve the goals and objectives of education, the government set up three levels of education: primary education, secondary education and tertiary education (Federal Republic of Nigeria, 2009). For the purpose of this research, the discussion is limited to secondary education. Secondary education is the second level of education in Nigeria. The National Policy on Education (2009) asserted that secondary education is the education children receive after primary education and before the tertiary stage. The goals of secondary education are to prepare the individual for useful living within the society and higher education. However, considering the number of students that graduate from secondary schools every year, it could be said that secondary education is trying to fulfill these obligations. Yet there is difficulty in ascertaining the quality of secondary school graduates which cast doubt on the extent of realizing the goals and objectives for which it is set up.

Motivation is a strong force in achievement. Moulal (2010) observed that motivation is one of the factors that contribute to academic success; that parents and educators should strive to understand the importance of promoting and encouraging academic motivation early in life. Feldman (2005) refers to motivation as factors that direct and energize the behavior of humans and other organisms, while Wood (2002) sees motivation as a process that initiates, directs, and sustains behaviour to satisfy physiological or psychological needs. Motivation is also seen as what gets one going, keeps one going, and determines where one is going (Slarin, 2006). Motivations are of two major types, intrinsic and extrinsic. Intrinsic motivation is based on the internal factors such as self-determination, effort, challenge and curiosity while extrinsic motivation incorporates external factors such as rewards and punishment (Santrock, 2005). Furrer and Skinner (2003) viewed engagement as referring to active, goal-directed, flexible, constructive, persistent, focused interactions with the social and physical environments. Engagement in school (academic engagement) is said to be an important academic outcome in its own right as it improves performance and validates positive expectations about academic abilities, as well as a good predictor of children’s long-term academic
achievement (Skinner, Zimmer-Gembeck & Connell, 1998); and their eventual completion of school (Connell, Spencer & Aber, 1994). Motivation and academic engagement among students has been the focus of many researchers in a bid to improve the classroom performance of students (Martin, 2009, 2010; Jones 2008; Green, Martin & Marsh, 2007). In summary, Martin (2010) observed that motivation is students’ energy and drive to learn and to work hard at school, while engagement is the behavior that reflects this energy and drive.

Motivation plays an important role on academic performance and behavioral modifications among students. Pintrich and Schunk (2002) described motivation as an integral part of learning. Awan, Noureen and Naz (2011) opined that lack of motivation is “a big hurdle in learning and a pertinent cause in the deterioration of education standards.” Awan, Noureen and Naz (2011) defined motivation as internal condition that stimulates, direct and maintains behaviour, and they believe that there is a strong relationship between learning and motivation. Rusillo and Arias (2010) asserted that there is significant influence of academic motivation on learning at school. Awanbor (2013) opined that students who lack sufficient level of academic motivation exhibit a weak drive towards the pursuit of academic goals and oftentimes end up with social maladies. Such students manifest signs and symptoms of indifference and apathy towards school. Majority of such students, if not all, are those who are involved in examination malpractices and acts of indiscipline within the school and community. Awanbor further noted that poor motivation could be due to inadequate remuneration, poor teaching environment as a result of lack of basic teaching materials, listless and unmotivated learners in the classroom, among others, the teachers have become the endangered species in their own profession. They no longer teach and the students in turn no longer learn.

Chowdhury and Pati, in Awan et al. (2011), opined that academic achievement is defined by examination marks, teachers’ given grades and percentiles in academic subjects. Rickson (1977) asserted that achievement within any context as performance relative to some standard and he further stated that academic achievement and other dimensions of learning can be measured by a variety of yardsticks or measuring instruments, the results of which are types of scores, ranks or grades. Van den Aardweg and Van den Aardweg (1988) regard achievement as a product which can be measured by means of achievement tests and is usually associated with mental success.

Motivation can help to improve attendance in classes, cultivate good habits among the students and also ensure that students enjoy teacher-student relationship. To this end, Renchler (2012) postulated that every educator needs to be concerned about motivation. It is a quality that students, teachers, parents, school administrators and other members of the community must have if our educational system is to prepare young people adequately for the challenges and demands of the coming century.
Theoretical Framework

This study is underpinned by Vroom’s (1964) Valency Instrumental Expectancy Theory. The theory explains why people such as students work and behave in the way they do in terms of efforts and direction they take. It also prescribes what organizations should do to encourage people/teachers to apply their efforts and abilities to achieve desired goals as well as satisfying individual needs. Valency Instrumental Expectancy Theory expects that people constantly predict the likely expectations about future events. Motivation therefore, according to Vroom is a combination of valence (value of perceived outcome), instrumentation (the belief that if I complete certain actions then I will achieve the outcome), and expectancy (the belief that am able to complete the actions). His theory argues that, the strength to act in a certain way depends on the strength of the expectation that the act will be followed by a given outcome and the attractiveness of the outcome to an individual. It is a monetary belief concerning the likelihood that a particular act will be followed by a particular outcome (Vroom, 1964). Thus a belief that hard work leads to quick promotion is an expectancy which an individual can pursue to satisfy his needs. The theory assumes that teachers will be motivated to produce only if they expect that productivity will lead to a valued goal. Therefore, it is assumed that increased effort will lead to increased performance. This means that satisfaction from the initial effort must be efficiently great or equitable to make the effort worthwhile and there must be a feedback. This theory was therefore adopted to guide an assessment of the effects of motivation on the academic achievements and behavioural modifications among students in Mushin Local Government Area of Lagos state.


The intrinsic motivation in this theory involves the types of motivations that come from within the student without any monetary gain or rewards which include good learning environments, conducive play grounds and joy that emanates from the students’ participation in class activities while extrinsic motivation involves the
types of motivation that involves monetary gains or financial rewards, accolades, cheers, gifts, teachers' word of encouragement, pats on the back can all spur the students in putting efforts which can transcend into behavioural change which involves improvement in school attendance, good interpersonal relationships, good habits, environmental and personal hygiene, neatness, classroom organization and teachers' ability to teach well and academic achievement such as good grades, academic excellence, promotion and improved intelligent quotient. This theory therefore, asserted that academic achievement and desired behavioural modifications can be achieved if necessary motivations are being put in place.

Research Questions
1. Will intrinsic motivation influence academic achievement and behaviour modification among senior secondary school students in Mushin Local Government Area of Lagos state?
2. Will extrinsic motivation influence academic achievement and behaviour modification among senior secondary school students in Mushin Local Government Area of Lagos state?
3. Will incentives motivation influence academic achievement and behavior modification among senior secondary school students in Mushin Local Government Area of Lagos state?
4. Will reward motivation influence academic achievement and behavior modification among senior secondary school students in Mushin Local Government Area of Lagos state?

Research Hypotheses
The following research hypotheses were postulated and tested in this research study:
1. Intrinsic motivations will not have significant effect on academic achievement and behavior modification among senior secondary school students in Mushin Local Government Area of Lagos state.
2. Extrinsic motivations will not have significant effect on academic achievement and behavior modification among senior secondary school students in Mushin Local Government Area of Lagos state.
3. Incentives will not have significant effect on academic achievement and behavior modification among senior secondary school students in Mushin Local Government Area of Lagos state.
4. Rewards will not have significant effect on academic achievement and behavior modification among senior secondary school students in Mushin Local Government Area of Lagos state.
Method
The descriptive research method was adopted for this study. The population comprised all senior secondary school students in Mushin Local Government Area of Lagos State. Sample size was two-hundred and fifty (250) respondents selected from ten schools in the study population. Twenty-five students were selected from each school as respondents for the study. A Cluster/Area sampling technique was used to select the participants for the study.
A researcher structured questionnaire consisting of two variables to which the participants were asked to tick the options of their choice in four-point Likert rating scale of strongly agree (SA), agree (A), disagree (D) and strongly disagree (SD) was used for data collection. The validity of the instrument was ascertained by some experts from the cognate unit of this study who assisted in content and construct validity.
Test-retest method was used for reliability of the instrument; a correlation coefficient value of 0.84 was obtained. Copies of questionnaire administered were correctly filled, returned and coded for analysis. Descriptive statistics of frequency counts and percentages were used to analyze the demographic data, while inferential statistics of Chi-square ($\chi^2$) was used to test the hypotheses at 0.05 alpha level.

Results
The demographic data revealed that by Gender, 106 (42.4%) of the total respondents were male while 144 (57.6%) were female. Based on age, the respondents that fell within 10-12 years constituted 82 (32.8%) of the responses, 13-15 years were 108 (43.2%) of the responses, 16-18 years were 47 (18.8%) while 13 (5.2%) was within 19 years and above. Distribution by class, respondents in senior secondary school one constituted 92 (36.9%) of the responses, senior secondary school two constituted 83 (33.2%) while 75 (30%) constituted respondents in senior secondary school three.
The data analyses of the responses of the participants are shown in the table below:

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Df</th>
<th>L.S</th>
<th>Calc $X^2$ value</th>
<th>Crit $X^2$ value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>intrinsic motivation</td>
<td>250</td>
<td>12</td>
<td>0.05</td>
<td>141.05</td>
<td>21.03</td>
<td><em>S</em></td>
</tr>
</tbody>
</table>

Table 1 above showed that the calculated Chi-square value of 141.05 was greater than the Critical value of 21.03 at 0.05 alpha level. This means that the null hypothesis one was rejected. This implies that intrinsic motivation would have
significant effect on academic achievement and behavior modification among senior secondary school students in Mushin Local Government Area of Lagos State.

Table 2: Analysis on impact of extrinsic motivation on academic achievement and behavior modification

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Df</th>
<th>L.S</th>
<th>Calc X² value</th>
<th>Crit X² value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extrinsic motivation</td>
<td>250</td>
<td>12</td>
<td>0.05</td>
<td>175.4</td>
<td>21.03</td>
<td><em>S</em></td>
</tr>
</tbody>
</table>

Calc. X² = 175.4 > Crit. X² = 21.03, df = 12, P < 0.05

Table 2 above indicated that the calculated Chi-square value of 175.4 was greater than the Critical value of 21.03 at 0.05 alpha level. This means that the null hypothesis two was rejected. This implies that extrinsic motivation would have significant effect on academic achievement and behavior modification among senior secondary school students in Mushin Local Government Area of Lagos State.

Table 3: Analysis on impact of incentives on academic achievement and behavior modification

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Df</th>
<th>L.S</th>
<th>Calc X² value</th>
<th>Crit X² value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incentives</td>
<td>250</td>
<td>12</td>
<td>0.05</td>
<td>96.24</td>
<td>21.03</td>
<td><em>S</em></td>
</tr>
</tbody>
</table>

Calc. X² = 96.24 > Crit. X² = 21.03, df = 12, P < 0.05

Table 3 above shows that the calculated Chi-square value of 96.24 was greater than the Critical value of 21.03 at 0.05 alpha level. This means that the null hypothesis three was rejected. This implies that incentives would have significant effect on academic achievement and behavior modification among senior secondary school students in Mushin Local Government Area of Lagos State.

Table 4: Analysis on impact of rewards on academic achievement and behavior modification

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Df</th>
<th>L.S</th>
<th>Calc X² value</th>
<th>Crit X² value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rewards</td>
<td>250</td>
<td>12</td>
<td>0.05</td>
<td>236.09</td>
<td>21.03</td>
<td><em>S</em></td>
</tr>
</tbody>
</table>

Calc. X² = 236.09 > Crit. X² = 21.03, df = 12, P < 0.05

Table 2 above indicated that the calculated Chi-square value of 236.09 was greater than the Critical value of 21.03 at 0.05 alpha level. This means that the null hypothesis four was rejected. This implies that rewards would have significant...
effect on academic achievement and behavior modification among senior secondary school students in Mushin Local Government Area of Lagos state.

Discussion of Findings
The finding of Hypothesis one that intrinsic motivation would have significant effect on academic achievement behavior modification senior secondary school students in Mushin Local Government Area of Lagos state agrees with Steel (2012) who asserted that students who are intrinsically motivated are more likely to engage in the task willingly as well as work to improve their skills, which will increase their capabilities. Students are likely to be intrinsically motivated if they: attribute their educational results to factors under their own control, also known as autonomy, believe they have the skills to be effective agents in reaching their desired goals, also known as self-efficacy beliefs are interested in mastering a topic, not just in achieving good grades. Adegbesan (2011) reported that students who are intrinsically motivated from home often shows good behaviours in school and attend classes regularly unlike their counterparts. Intrinsic motivation comes from within the student which also following their passion in order to achieve their life goals and dreams. The finding on Hypothesis two that extrinsic motivation would have significant effect on academic achievement and behavior modification among senior secondary school students in Mushin Local Government Area of Lagos state corroborated with the findings of Awanbor (2013) who postulated that extrinsic constraints such as the threat of punishment, against performing an activity has actually been found to increase one's interest in that activity. His study further revealed that when children were given mild threats against playing with an attractive toy, it was found that the threat actually served to increase the child's interest in the toy, which was previously undesirable to the child in the absence of threat. For those children who received no extrinsic reward, self-determination theory proposes that extrinsic motivation can be internalized by the individual if the task fits with their values and beliefs and therefore helps to fulfill their basic psychological needs.

The finding on Hypothesis three that incentives would have significant effect on academic achievement and behavior modification among senior secondary school students in Mushin Local Government Area of Lagos state is in line with Tom (2009) that common incentives help individuals in showing the desired behavior. He also observed that incentive encourages a performer to perform better in any given activity. Incentives can serve several functions such as initiating action, changing or suggesting goals and intentions, and ensuring commitment. Incentives such as extra marks for students who performed well in class discussions can help to modify students' behavior and aids academic excellence.

The finding on Hypothesis four that rewards would have significant effect on academic achievement and behavior modification among senior secondary school
students in Mushin Local Government Area of Lagos state correlates with that of Steers and Porter (1991) who maintained that expectancy theory on every behaviour is associated with certain outcomes or rewards. In other words, a worker believes that if he or she behaves in a certain way, reward follows. That is, each outcome has a valence or value to the performer. Outcomes such as pay, promotion, better jobs to mention but a few, have different values for different people. Also rewards in form of money or token, gifts, praise and accolades have proved over the time to influence students’ behavior and academic achievement.

Conclusion
Based on the findings of this study, it was concluded that intrinsic motivation, extrinsic motivation, incentives and rewards would have significant effect on academic achievement and behavior modification among senior secondary school students in Mushin Local Government Area of Lagos state.

Recommendations
Based on the findings of this study, the following recommendations were made:
1. The Federal Ministry of Education in association with various states should ensure regular provision of scholarships and monetary rewards to students for excellent academic performance.
2. Motivation given to students should be something that would spur them into better performance and not a little price or very high ransom.
3. Students should be regularly motivated by school administrators for achieving exceptionally good performance.
4. Both intrinsic and extrinsic forms of motivation should be used for students at the secondary school level.
5. Rewards and incentives should also be provided for students for exceptional performance in academics.

References


Motivation, Self concept and Achievement in English and Mathematics at level. *International Education Studies, 4*(3), 72 – 78.


