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**CONTACT**
MSc. Albana Cekrezi
Email: bjes@beder.edu.al

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**Ayodeji Olayemi, OBAFEMI**
Department of Educational Technology,
University of Ilorin, Ilorin, Kwara State
ayodejiobafemi37@gmail.com

# EFFECT OF TRANSFER AND ADAPTATION ON ACADEMIC PERFORMANCE OF STUDENTS IN TECHNICAL AND VOCATIONAL COLLEGE

## Abstract

*This study investigated a possible relationship between transfer and adaptation on academic performance. A survey was distributed to a sample of 189 students of Government Science and Technical College in Ijebu-Ode Local Government Area. Research was indicated for the reasons for relocation or transferring associated with improved academic performance. Results of the study shows that about 80% of the transfers involved a failure rate in Secondary School level which is consistent with the majority enrolment of the out of school students. Majority of participants repeated a class more than once and the reason for transferring. Quantifying responses to question on a likert scale, responses to these questions were totalled to form an "attitude score". The research results showed that majority of new entrants have major flaws based on the fact that they are coming from commercial and arts department. The contribution of this research is to expatiate on the scientific background and the bedrock of technical and vocational technology and the findings from this study are important and can be useful to student affairs professionals, admissions officers, retention programs, students, and faculty.*

**Key words**: *transfers, adaptation, academic performance.*

## Introduction

Based on the mind-sets and culture value, parents and guardians in Ogun State pay more attention to entrance examinations. Parents are encouraged to enrol their wards into secondary schools, because of the notion that vocational and technical colleges as belonging to the low-ability students and many students in the vocational and technical colleges they have low learning motivation.

Parents, both educated and otherwise send their children to school for a variety of reasons, they commit so much resources towards the education of these children at different levels (Ezike, 2018). According to Webster Dictionary, transfer is the act or process of moving and especially changing place or position, an instance of moving the movement. The mindful (purposeful) movement is the physical movement activities that directly relate to academic contents. It is the opposite of movement for the sake of movement but movement that occurs as a result of active learning (Shoval, 2011).

Adaptation on the other hand is considered one of the important capacities of human behavior and it is also a factor in human motivation and in satisfying human needs (Alzboon, 2013). Successful adaptation can only be achieved when students respond appropriately to the environment and thus benefit from it (Kaya et al, 2016). Adapting to new environment demands on adolescent to change their own behaviors in 3 highly related aspects if this taxonomy including learning adaptability, stress-handling and interpersonal adaptability. Jensen (2000) “Over the past decades, we have identified pathways that travel from the cerebellum to brain areas involved with attention, memory, spatial guidance, rhythm, perception and body positioning”. This suggests that it’s not just our conscious mind and telling our “brains engine” what to do, but the reverse is also true. Leaning Community programs were developed to acclimate and retain incoming students, primarily focusing on year 1 students

direct from secondary schools, however growing numbers of students are transferring to vocational and technical college with sustainability low scores credit earned at their secondary school (NSCRC, 2012).

The transition experiences of the transfer population have been difficult for a variety of reasons:

1. Students often enter the vocational college underprepared, without clear academic goals.
2. Discover incompatibility between themselves and the transfer institution.
3. Struggle to manage the demand of multiple roles such as students, parents and employee (Lanan, 1996, Townsend et al, 2006, Zamani, 2001)

As described by Smith et al (2004), leaning communities offers more intensified leaning environments by providing more time for students to develop these connections through the classroom leaning afforded by taking multiple courses together and out of class activities such as study groups, project work, and co-curricular activities. The phenomenon known as transfer shock as evidence by a decline in students' scores has been we documented (Townsend et al, 2006). This drop in cumulative scores has been attributed to changes in the academic settings such as increased class size, decreased interaction with instructors and decreased social connectivity within the larger secondary school context (Davies et al (1999).

Bandura postulates that high level of self-efficacy pushes individuals to accomplish difficult tasks even in situations where there is a potential for failure. Bandura asserts that there are four domains through which one's sense of self efficacy is created or undermined: mastery experience, vicarious experiences, social persuasion and somatic /emotional influences. While learning communities were initially developed to support and acclimate incoming first –years students direct from secondary school to a news academic environment (vocational& technical), increasing numbers of

students are entering 3-year institutions with community secondary grades positioning them as average students.

With more transfer students entering the 3-Year Technical College as new entrants, these students often find themselves void of well integrated support for acclimation. They often find it difficult to transition from one school to another due to increased institution and class size (Chikering, Reisser, 1993: Davies, Casey, 1999 and Greater Academic Independence (Lanan, 1999).

One of the greatest challenges in developing a learning community for transfer students is the diversity of coursework each student brings with them to the receiving college. In many cases, students may have already taken the introductory-level courses commonly linked to first year leaning programs thereby leaving few options to cluster students within the same course.

The Observation Research and Classroom Learning Evaluation (ORACLE) study (Galton Gray et all 1999) evaluated how classroom practice affected pupil progress over the period of transfer. It evaluated how teachers delivered the curriculum and the ways in which students responded to teaching methods. After review of the study, Hargreaves and Galton (1999) found that most teachers began instruction without asking newly transferred students about the curriculum covered in their previous schools, thus putting the students at a disadvantage.

School mobility is a complex phenomenon that researchers hampered by a limited data, do not yet fully understand. Changing schools, once thought of as one among many stressful event that occurs in students' lives, entails unique adjustment processes for students. These children must maintain a continuous sense of identity as they deal with the loss of relationship and form new ones and become accustomed to a new educational process and expectations.

Swirling behaviors by students who transfer to multiple institutions of higher education can negatively influence degree completion (Adelman, 2006).

Concurrent enrollment is part of the changing mobility patterns and has a statistically significant negative effect on persistence (Johnson & Muse, 2012). Transfer student adjustment, known in the literature as transfer shock, was widely studied as it relates to lowered GPAs (Diaz, 1992; Hills, 1965; Laanan, 2001). Adelman (2006), in a national longitudinal study, concluded that students earning grades in the top 40% of their class have advanced academic momentum that ultimately leads to degree completion. The Transfer Student Questionnaire (Laanan, 2004, 2007) was an instrument developed to measure transfer adjustment. In particular, student involvement or engagement, integration, satisfaction, and effort are known to impact student academic success positively for transfer and non-transfer students alike (Astin, 1984; Bean, 1980; Pace, 1990; Tinto, 1975).

Contrary to Ellis (2013), Miller (2013) determined a lack of engagement from many community college transfer students in the state of Texas created barriers to completion. The non-traditional group of transfer students studied, worked, and cared for family members, leaving little time for interactions outside the classroom. In addition, transfer students claimed bonding that typically occurs in the first year was absent due to transferring, and that social cliques were already established. The assumption is that without an attachment to the institution many transfer students slip through the cracks and do not complete. Wang (2009) claimed that few studies had evaluated community college transfer students and factors predictive of their baccalaureate completion. Gender, socioeconomic status, high school curriculum, college GPA, successful math remediation, educational expectation prior to entering college, and college involvement were all variables influencing positive outcomes. Wang considered how exploring involvement on college transfer student outcomes might be beneficial especially since engagement has had a positive influence on traditional students.

Finally, Webber, Laird, and Brcka Larenz (2013) studied the effects of student-faculty involvement in undergraduate research. Student responses analyzed from over 450 institutions administering the NSSE revealed that student and faculty engagement in research activities was important for student success (Webber et al., 2013).

Having one or more "areas of comfort" in stable environments such as home and family provides students with safe places to conduct the adjustment tasks, a typology that categorizes school transfers according to the degree of change in other environments many be useful in disentangling the effects of mobility on academic achievement. For transfer students, possessing the coping mechanisms to deal with the stress, and the extent to which they have the skills to fit in and become involved highly impacts their successful cross-cultural relocation from the community college to the university.

**Research Questions**

The research questions guiding this study of the experiences of the transfer process of students who transferred to vocational and technical college:

1. How is the transfer and adaptation process affecting students experience at technical college?
2. How do students' transfers influence their academic performance in Technical College?
3. What are the underlying reasons for students transfer to Technical College?

**Methodology**

The phenomenological methodology is chosen to understand the participants' experiences by producing description of their lived experience. A phenomenological study is one that describes the common meaning for several individuals of their lives experience (Cresswell, 2013) and in this way the transitioning experiences are not described from researcher's view point. In this study, the ontological assumptions related to the personal feelings, views

and experiences are revealed by the participants. Data were collected using a survey instrument (Transfer students' Questionnaire (TSQ), (Laanan, 2004) was formulated as a result of extensive review of past survey instruments and previous studies in the area (Astin, 1993; Baker & Siryk, 1984, 1986; Laanan, 1995; Pace, 1984, 1990, 1992).)

Stratified purposeful sampling was used to select the students by gender and class to which they were assigned. In this sampling, researchers intentionally select individuals as sites to learn or understand the central phenomenon (Creswell, 2012). The students were at different stages of transitioning (JSS3, SS1, SS2, SS3) and were willing to talk about their experiences.

To enhance trustworthiness, triangulation of sources was done by selecting 5 of their teachers for interviewing to provide additional relevant date on these students and the transfer process. The anonymity and confidentiality of the participants involved in the study was ensured as pseudonyms were assigned to all participants, the names of their previous schools and the names of other students mentioned during the interview process. Participants are either living with their parents or in the hostel. The 5 teachers interviewed have been teaching Year 1 at the school for more than 7 years. They have been taught using knowledge and insights on their academic performance progress and adjustments issues in the transfer process.

## FINDINGS

### Descriptive Results

For this study, 200 questionnaires were given to students. A total of 189 students returned the completed questionnaires. Of these, 10 questionnaires were not included in the data analysis due to insufficient information. The final sample comprised of 189 students from 10departments, which yielded a response rate of 70%. Based on selected characteristics of students (i.e., gender, race= ethnicity, major), the results show that students in the sample

closely reflect the students in the population. Therefore, any generalization about the population could be made from the sample in the study.

**Research Question 1: How is the transfer and adaptation process affecting students experience at technical college? (n=189)**

| | | | | Beta1 after controlling for: | | |
|---|---|---|---|---|---|---|
| Step | Variable | R square | Simple R | Beta after inputs | 1-year environment | Final beta |
| 1 | On-campus apartment | 44 | -12 | -11 | 21 | 10 |
| 2 | Off-campus apartment | 45 | 11 | 12 | 26 | 27** |
| 3 | Self-Rate: self-confidence (intellectual) | 36 | 15 | 17 | 54 | 07 |
| 4 | Competition and survival culture | 76 | 17 | 19 | 31 | 32** |
| 5 | Academic counselling | 89 | -23 | -22 | 45 | 23 |
| 6 | Course learning | 34 | -22 | -21 | 34 | 34*** |
| 7 | Academic workshops | 44 | -38 | -37 | 32 | -06 |
| 8 | Experiences with counsellors | 78 | 33 | 35 | 33 | -03* |
| 9 | Income | 23 | 43 | 44 | 47 | 13 |
| 10 | Technology inclusion | 23 | -12 | -11 | 45 | -08* |

*denotes variables entering regression at $p < .05$ and remains significant at the last step.

**denotes variables entering regression at $p < .01$ and remains significant at last step.

***denotes variables entering regression at $p < .001$ and remains significant at last step.

In the analytic dataset of 200 students for whom there were a total of 189 observations, there were a total of 189 school transfers, each of which was 78 coded in accordance with the conceptual framework. About half of the school changes were on-campus apartment where students changed schools alone (10%) and off-campus apartment (45%). Most of these group transfers were have competitive and survival culture in acclimatizing with the environment, with a small number due to academic boundary changes (89% of the total). Majority of the academic workshop (44%), experience with counsellors (78%), income (23%) and technology inclusion (23%) as well shows that transfer students find the adaptation process positive.

**Research Question 2**: ***How do students' transfers influence their academic performance in Technical College?***

| S/N | ITEMS | SA | A | D | SD | MEAN | DECISION |
|---|---|---|---|---|---|---|---|
| 1 | Teacher understand the foundation of students from their previous school | 109 | 20 | 20 | 40 | 2.89 | Agreed |
| 2 | Students who have issues with instructional activities in technical college are counselled? | 75 | 25 | 25 | 32 | 3.10 | Agreed |
| 3 | Conflicts among students make the transfer into a new environment difficult. | 75 | 25 | 29 | 60 | 2.56 | Agreed |
| 4 | Inadequate amenities makes stay in the school difficult. | 100 | 29 | 35 | 25 | 3.10 | Agreed |
| | **Sectional Mean** | | | | | 2.78 | Accepted |

N=189

Table 2 above reveals the reason for students' transfer in technical college and how it affects their academic performance. Students who have issues with instructional activities in technical college are counselled ($\bar{X}$ = 3.10); Conflicts among students make the transfer into a new environment difficult. ($\bar{X}$ = 2.56). Also, Inadequate amenities makes stay in the school difficult ($\bar{X}$ = 3.10). Sectional mean of 2.78 indicating that students' transfer affects their academic performance.

**Research Question 3: What are the underlying reasons for students transfer to Technical College?**

| S/N | ITEMS | SA | A | D | SD | MEAN | DECISION |
|---|---|---|---|---|---|---|---|
| 1 | To be exposed to the technical and science background | 50 | 50 | 29 | 70 | 3.12 | Agreed |
| 2 | Parents relocation prompted transfers | 20 | 70 | 50 | 49 | 2.89 | Agreed |
| 3 | Low and reduced IQ | 78 | 22 | 25 | 40 | 3.25 | Agreed |
| 4 | Lesson in secondary school is better than technical college. | 34 | 32 | 72 | 23 | 2.56 | Agreed |
| | Sectional Mean | | | | | 2.66 | Accepted |

N=189

Table 3 reflects reasons for students' transfer to be exposed to the technical and science background ($\bar{X}$ = 3.12); Parents relocation prompted transfers ($\bar{X}$ = 2.89); Low and reduced IQ, Lesson in secondary school is better than

technical college ($\bar{X}$ = 3.25; $\bar{X}$ = 2.56 respectively). Sectional mean of 2.66 indicating that there is a major reason for transferring to the technical college.

The results for the other measure of educational attainment indicate that being a transfer student reduces the probability of graduation by 11 percent, supporting the research of Hoyt & Winn (2004) regarding higher drop-out rates. The results also indicate differences in the graduation rates based on the demographic variables, with the older students and female students being more likely to graduate and non-white students less likely to graduate compared to white students. The results are further segregated according to the type of transfer institutions students come from, between community colleges and 4year institutions. However, the results are not statistically significant for the institution level of study.

**Discussion and Conclusions**

Students articulated variable reasons for mobility and these reasons did impact the students' academic and social experiences. The more accepting the students were about the move, more ready they were to embrace the social and/or academic challenges of the new school. The availability of these choices increased the likelihood that any given student would find help as needed. Different resources were required at different times after transferring, depending on the individual student's challenges. This favors the provision of a variety of transfer support resources and the need for individualization based on student characteristics and needs. Students from differing backgrounds (geographic, cultural, ethnic, socioeconomic, family or divergent prior school settings) needed variable resources particular to their challenges.

Recommendations based on this study are as follows: Transfer students are a heterogeneous group, all requiring some supports, but each also requiring specific additional supports to meet their individual needs. A multidimensional

and comprehensive transfer student program in place and available is decisive for guiding these students to improved academic and social success and ultimately graduation.

These findings are important given the increasing number of students who initiate their higher education experience at local community colleges and then transfer to public universities and the demand for educated employees in the marketplace. Educators at institutions receiving transfer students must be aware of the additional attention such students might require to achieve academic success. The results of this study demonstrate that although transfer students tend to have higher scores, they take longer time to graduate, which translates into higher opportunity costs for both them and the recipient institution. This requires the institutions and administrators to be aware of the specific academic needs of the transfer students and the administrative costs involved in the process. Additional research is needed to determine the types of policies that could be implemented at the receiving institutions to enhance the graduation rates and success of the transfer students.

An immediately available program is mandatory for students who are not proficient or fluent in English. The success rate of the transfer student program in preventing failure and improving the likelihood of graduation for the students studied merits confirmation by future work. Whether or not a transfer student program will ameliorate the failure rate of the majority of mobile students was not a question for this study.

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**Adetowubo-King S. ADETAYO**
Department of Business Education,
Tai Solarin College of Education, Omu-Ijebu, Ogun State.
towubo2014.king@gmail.com

# THE EFFECT OF MARKETING STRATEGIES ON THE PERFORMANCE OF SOFT DRINKS MANUFACTURING COMPANIES IN NIGERIA

## Abstract

*Marketing strategy is a necessity for a agency that needs to thrive and continue to be competitive. It is germane to controlling a considerable share of a market if carried out effectively. The overall performance of a product in the product market relies upon on the type of advertising and marketing techniques employed through the business enterprise and how positive it is. Primary statistics have been used for this find out about and had been acquired from questionnaire administered on the respondents. Sixty-nine respondents who are personnel of Nigeria Bottling Company were randomly chosen as the pattern dimension from a populace of 200. Descriptive and inferential information have been used to analyze the objectives. Descriptive information was used to exhibit the advertising strategies used via the company, a couple of regression used to be used to take a look at the extent to which marketing techniques influence sales turnover and Pearson product moment correlation was once used to look at the relationship between advertising strategies and customer satisfaction. Variables used include rate strategy, product strategy, advertising strategy, and location strategy. Findings from the study confirmed the fee strategy, product strategy, promoting approach are the marketing strategies in general used by using the company. Also, outcomes published that that the f-value used to be 69.846 while the imperative p-value used to be 0 which was decrease than the 0.05 degree of statistical significance, as a consequence, advertising techniques have extensive impact on sales turnover. Further effects confirmed that product has a sturdy relationship with patron pride and the learn about concluded that product approach influences client pride while promotion strategy has great effect on income turnover.*

**Key words**: *marketing, turnover, performance.*

## Introduction

Marketing approach is a necessity for a corporation that wishes to thrive and stay competitive. It is germane to controlling a great share of a market if carried out effectively. Marketing strategy can be defined as an approach by way of which a company attempts to attain its target markets. Marketing approach starts with market research, in which desires and attitudes and competitors' merchandise are assessed and continues via into advertising, promotion, distribution and the place applicable, customer servicing, packaging, sales and distribution. Marketing strategy focuses on turning in increased price to clients and the association at a lower cost (Chiliya, Hersbt and Roberts-Lombard, 2009).

The performance of a product in the product market depends on the kind of advertising and marketing techniques employed by means of the company and how fantastic it is. Owomoyela, Oyeniyi and Ola (2013) additionally see advertising approach as way of providing an exceptional product that satisfies customer needs, imparting less expensive fee and engaging in wider distribution and back it up with positive advertising strategy. Marketing approach is a crucial prerequisite of Industry's potential to enhance its market share and limit the effects of the competition. Companies these days operate in a steadily volatile and challenging business environment. These challenges are compelling companies to perceive the high-quality advertising and marketing management strategies, to grow their investment, enhance market share and amplify shareholders fee (Varadarajan, 2010)

Marketing approach can also be considered as a process whereby records about the organization’s merchandise or offerings is encoded into a advertising and marketing message for delivery to the customer. In effect,

companies have a range of alternative information delivery machine handy to them, which can be used to assemble an appropriate marketing combine method (Amine and Cavusgil, 2001). Promotional strategies, in any structure of commercial enterprise are a fundamental part to the insurance policies that determine the overall performance of that business. Sales, on the other hand, have a direct influence on the profits and losses of a business. To make greater sales, one desires to have very strategic plans (Amit and Dominique, 2010).

**Statements of the Problem**

The principal cause of any agency existence is to fulfil the needs of its chosen and goal customers at an income and to preserve the enterprise growing. For that to happen, there ought to be a high quality advertising approach in place, except which the organization will suffer the problem of low earnings margin, low returns on investment, low returns on belongings and low market share (Clark, 2000). One of the challenges confronted by way of manufacturers is to extend the sales of their products. With many merchandise and with many related merchandise bombarding the market, producers face the herculean venture of bringing their product to the forefront.

It is no gainsaying that the right combination of advertising strategies would help to drive up income extent which in flip leads to expand in profit. However, buyers are of diverse behavior because of character preferences which plays an important role in a consumer's perception about a product and the consumer's wish to go for the product. Also, the customers are now better educated, and globally agencies at present have turn out to be complex. This makes it quintessential for organizations to understand the wishes of their customers and strategized how to satisfy their customers' desires efficiently and correctly thru advertising and marketing strategies.

As also opined via Cross (2018), the success or failure of any business enterprise in the current commercial enterprise activities, depends on how excellent the business enterprise can make its patron relaxed with its products or offerings and this places a huge duty on the organization. The responsibility involves identifying the specific desires of their customers and how first-rate to deal with their products and services so as to fulfill their wants. However, it needs to be stated that it is not clearly a count of producing items or offerings to meet customer's needs and needs that offers them satisfaction however additionally how properly the product or service is brought to the (Cross, 2018).

Although many researches have been carried out on measuring the effect of advertising techniques in an organization, solely few researches have talked about the tender drink companies. Most of these researches centered on different sectors of the manufacturing industry. It is in the light of this that this learn about examined the impact of advertising approach on soft drinks manufacturing organizations in Nigeria the use of Nigeria Bottling Company as the case study.

**Research Questions**

The following are the research questions for this study:

i. To what extent do the advertising techniques used by using the Nigeria Bottling impact their sales turnover?

ii. Is there a relationship between advertising and marketing strategies and consumer's pleasure of Nigeria Bottling Company?

**Objectives of the Study**

The main objective of this research work is to examine the effect of marketing strategies on the performance of soft drinks manufacturing company. The specific objectives are:

i. To have a look at the extent to which advertising strategies have an effect on sales turnover of Nigeria Bottling Company

ii. To take a look at the relationship between advertising techniques and consumer's delight of Nigeria Bottling Company.

**Research Hypotheses**

These are the hypotheses formulated for this study about and they noted in their null forms:

H01: Marketing techniques has no significant have an effect on sales turnover.

H02: There is no great relationship between marketing strategies and patron satisfaction.

**Significance of the Study**

Marketing is an important part of the marketing mix and plays an important role in market success. Marketing is used to ensure that customers are aware of the services and goods that a company provides. It is the process of forming a communication link between a marketer and their target audience. In the soft drink manufacturing industry, there is a paucity of literature on marketing tactics and performance. The majority of related research in this area focuses on other manufacturing industries. The findings of this research will be used as academic input and will add to the body of knowledge in this field. It also contributed to the much-maligned effect of marketing methods on soft drink manufacturing company performance.

**Scope of the Study**

The purpose of this study was to examine the impact of marketing strategies on the performance of Nigerian soft drink manufacturing companies, using Nigeria Bottling Company as a case study. The purpose of this study was to investigate the impact of marketing strategies on sales turnover and customer satisfaction. Only primary data was used, and the entire staff of the chosen company served as the study's population. Marketing strategy (independent variable) is represented by product strategy, pricing strategy, promotional strategy, and place/distribution strategy, whereas performance (dependent variable) is represented by sales turnover and customer satisfaction.

## LITERATURE REVIEW

### Advertising Strategies

Advertising methodology is an action that is intended to help support the promoting of an item or administration. It is vital as it assists with boosting deals as well as assists a business with drawing new clients while simultaneously holding more established ones. It very well may be done through a promoting effort, public connection exercises, a free examining effort, an unconditional present mission, an exchanging stamp crusade, through showings and presentations, through prize giving contests, through brief value cuts, and through house to house deals, selling, individual direct mail advertisements, and messages. It is a prize making action that impacts individuals to purchase and burn-through the results of an advertiser.

The idea of advertising Strategy is slowly turning into a fundamental piece of each current organization of today. There are various theoretical perspectives on showcasing technique in the writing and such perspectives reflect alternate points of view (Li, Kinman, Duan, & Edward, 2000). In any

case, the agreement is that showcasing procedure gives the road to using the assets of an association to accomplish it's put forward objectives and targets. It is considered as the legitimate designation of human and material assets to help ventures to acquire upper hand.

**Deals Performance**

As organizations develop more idealistic about promising circumstances for development, the pressing factor is on for deals associations to meet ever-higher income targets. Consequently, improving deals execution in economy requires a more thorough and information driven way to deal with essential deals measures, including vital arranging, an area distribution, asset arranging and pay programming. Execution can be characterized as the degree of genuine work performed by an individual or how much the real work is appeared by an individual (Richard, 2009). In a time of strengthening contest and wild arrangements with purchasers, strategic selling approaches just don't work. The way to deals achievement is making esteem the purchaser isn't as of now considering in their dynamic.

Deals execution has been conceptualized to incorporate both the result and social measurements. Deals results have consistently been seen by execution situated salesmen as proof to their social exhibition and thus a positive relationship has been secured to exist between position contribution part of responsibility and deals execution. As such, dedicated sales reps are required to broaden more noteworthy endeavors at work there by directly affecting position execution (Silva, 2006). Richard (2009) characterizes execution measures as the crucial indications of the association, which "evaluate how well the exercises inside a cycle or the yields of an interaction accomplish a predefined objective"

**Deals Turnover**

Deals turnover is the aggregate sum of income created by a business during the computation time frame. The idea is valuable for following deals levels on a pattern line through various estimation periods, to spot significant changes in action levels. The computation period is generally one year. The income remembered for this estimation is from both money deals and credit deals. The estimation can likewise be separated by units sold, by geographic locale, by auxiliary, etc. Deals turnover is limited to income produced from tasks. In this manner, it does exclude gains from monetary or different exercises, for example, interest pay, gains on the offer of fixed resources, or the receipt of instalments identified with protection claims.

The measure of deals turnover perceived by a business can differ, contingent upon whether it utilizes the gathering premise of bookkeeping or the money premise. Income is recorded under the accumulation premise when units are transported or benefits gave, while income is recorded under the money premise when money is gotten from clients (which ordinarily defer acknowledgment, with the exception of when there is a prepayment). An organization might be enticed to report projected deals turnover dependent on an augmentation of recorded deals. This isn't savvy, since income may change for an assortment of unforeseen reasons, like cutthroat pressing factor and changes in financial conditions (Lisa, 2004)

.

**Promoting Mix and Strategies**

**Item Strategy**

Kotler and Armstrong (2004) characterize an item as anything that can be offered to a business opportunity for consideration, procurement, use, or utilization that may fulfill a need or need. They further characterize a customer

item as the item purchased by the last purchaser for individual utilization. Buyers purchase items often, with cautious arranging, and by looking at brands dependent on value, quality and style. An item methodology is significantly more than a rundown of explicit item activities over the long haul. It is an express course map intended to control an organization in its endeavors to create and advertise items that form maintainable upper hand and meet its development and benefit goals. A decent item procedure boosts both consumer loyalty and benefits. Estimating Strategy Kotler (2006) characterizes cost as an expense of creating, conveying and advancing the item charged by the organization.

Cost can be expressed as the real or evaluated worth of an important item which is up for trade; it has been characterized as measure of cash paid for item. The value you set for your item assumes an enormous part in its attractiveness. Estimating for items that are all the more normally accessible in the market is more versatile, implying that unit deals will go up or down more responsively in light of value changes (Jones, 2007). However, Kotler and Armstrong (2004) characterize estimating as fundamentally setting a particular cost for an item or administration offered in a short-sighted manner. Monroe (2003) characterizes cost as the measure of cash we should forfeit to secure something we want. Spot Strategy Jones, (2007) characterizes place as any way that the client can acquire an item or get a help. In their own view, it is the third component of the promoting blend, and it includes all choices and apparatuses which identify with making items and administrations accessible to clients. Kotler and Armstrong (2004) additionally characterize spot or dissemination as a bunch of related associations engaged with the way toward making an item accessible for use or utilization by customers. Osuagwu (2002), Bowersox and Closs (1996) gave 'dissemination' as another name for

place. In their view, it is the third component of the showcasing blend, and it envelops every one of these choices and devices which identify with making items and administrations accessible to clients.

Limited time Strategy Zeithaml, Valerie and Bitner, Mary (2000) depict advancement system as a feature of explicit exertion to urge clients to educate others regarding their administrations. As indicated by Duncan (2005), advancement is the way in to the market trade measure that speaks with present and expected partners, and the overall population. Each organization should project itself into the job of communicator and advertiser.

Kotler (2003) additionally reports that advancement technique shows up as an issue of how to make an ideal blend of showcasing specialized devices to get an item's message and brand from the maker to the customer. Kotler (2006) finds that advancements have become a basic factor in the item showcasing blend which comprises of the particular mix of publicizing, individual selling, deals advancement, advertising and direct promoting instruments that the organization uses to seek after its promoting and advertising objective.

**Idea of Organization Performance**

The idea of organization execution is basic in the scholarly writings, its definition is troublesome on account of its numerous implications. Thus, there is anything but a generally acknowledged meaning of this idea. During the '50s organization's exhibition was characterized as the degree to which organizations saw as a social framework satisfied their destinations. Execution assessment during this time was centered around work, individuals and friends' structure. Later during the 60s and 70s, organizations have started to investigate better approaches to assess their exhibition so execution was

characterized as an organization's capacity to misuse its current circumstance for getting to and utilizing the restricted assets.

Otley (2002) sees execution as the final product of exercises, managing benefit, portion of the overall industry, deals development, and cost decrease among others. Richard (2009) thought that organization execution includes three explicit spaces of organization results which are monetary execution (benefits, return on resources, profit from speculation); item market execution (deals, piece of the pie,); and investor return (complete investor return, financial worth added). Showcasing techniques are the determinants of organization's exhibition: the instances of Soft-drinks organizations depict that through advertising methodologies organizations can develop and advance. In this manner, organization execution is perhaps the main factors in the administration research and apparently the main marker of achievement.

Mihai Ristea (2002) characterized execution utilizing the 3E of effectiveness, viability, and economies. As indicated by him, an association is fruitful when it is proficient, compelling and prudent. Productivity comprises in either utilizing an amount given by assets, focused on the most elevated level of the accomplished outcomes, or diminishing the amount of the pre-owned outcome determined to accomplish a foreordained outcome. Adequacy is dictated by accomplishing or surpassing the foreordained outcomes to the real outcomes made all through the advancement of the action. Economies comprise in giving the methods, the fundamental assets to performing at the base expense.

## Hypothetical Framework

### *Item Differentiation Theory*

Product separation alludes to such varieties inside an item class that (a few) purchasers see as flawed substitutes. Customer products are accessible in an assortment of styles and marks and accordingly require some separation. Item separation is pointed toward affecting individuals' view of a brand so that they are convinced to act in a specific way, for example, purchase and utilize the items and administrations offered by the firm (Armstrong and Kotler, 2005). While trying to separate items, firms need to give applicable significance and experience to individuals across numerous social orders. To do as such, methodologies should be conceived that assesses the brands own abilities and skills, the systems of contending brands, and the viewpoint of purchasers which has been generally framed by encounters in their particular social orders (Armstrong and Kotler, 2005).

## Experimental Review

Various investigates have been completed on deals advancement, showcasing correspondence, evaluating advancement and execution. A portion of the connected investigations are

Gita Arval (2016) inspected the effect of deals advancement embraced by Nepalese business associations and its impacts on deals of soda pop in Kathmandu valley. This investigation depends on the essential information through comfort inspecting strategy. The essential information gathered from the better places of Kathmandu valley by up close and personal field study of 150 respondents. It is tracked down that the business advancement exercises play positive effect on deals of soda pop brands. The investigation suggested

that Nepalese business associations ought to detail arrangements of deals advancement on deals of sodas items.

Harun, Kamal and Mustafi (2013) considered the showcasing methodology of sodas in Bangladesh. A sum of 323 soda pops clients were met with an organized poll. This exploration investigates the segment qualities of sodas clients, their use designs, the components behind the clients' fulfilment and the purposes for the choice of sodas in Bangladesh. Discoveries uncovered that there is a critical connection between consumer loyalty and Variety, Quality, Local brand, Taste, Attractive plan (bottle), Reasonable value, Discount evaluating, Product accessibility, TV notice, and Print media promotion. The examination suggested that organizations ought to keep up their item quality and acquaint new flavor with their product offering.

Ojoma and Ayuba (2017) inspected the effect of promoting methodologies on the presentation of Soft-drinks Manufacturing Companies in North-Central, Nigeria. The examination embraced a study research strategy. An aggregate of one hundred and 64 (164) Management Staff of Nigerian Bottling Company and 7-Up Bottling Company in North-Central, Nigeria were chosen utilizing separated irregular inspecting. The information was dissected utilizing Multiple Regression Analysis and Ordinary Least Square (OLS). The significant discovering uncovered that, there is a critical connection between Marketing Strategies and Performance of Soft-drink fabricating organizations in North-Central, Nigeria. The examination infers that the degree of the presentation of any soda pop assembling organization is dictated by the fruitful execution of its promoting blend approaches and methodologies. The investigation in any case, suggests that Nigerian Bottling Company and 7-Up Bottling Company should keep on enhancing their

showcasing systems by creating quality sodas with alluring bundle, plan, test therefore, feasible upper hand.

Seukindo (2012) analyzed the impact of promoting correspondence blend on deals execution of soda organizations. The investigation received informative and unmistakable exploration plans. The objective populace for the investigation was 37 soda organizations in Dares Salaam, Tanzania and an evaluation study was utilized to choose the objective populace. Organized and unstructured surveys were controlled to the respondents. Numerous relapse examinations were applied to test the theories. The consequences of the investigation uncovered that lone direct showcasing had a genuinely certain critical impact on deals execution. Deals advancement and exposure had a positive factual inconsequential impact on deals execution. The examination inferred that organizations can accomplish more elevated levels of deals volume, deals development and deals focuses on deals execution by coordinating promoting message of showcasing correspondence blend in with other advertising correspondence blend methodologies like direct advertising. In this way it is suggested that soda pop organizations foster market correspondence procedures to fit well on the lookout.

## METHODOLOGY

### Study Area

The study area for this research work is Nigeria Bottling Company PLC Ibadan. Nigeria Bottling Company PLC is an indigenous company and a sole franchisee of the international brand Coca-Cola Inc. spanning over six decades of operation. Nigeria Bottling Company started production in 1953 and it is a market leader in the production of non–alcoholic beverage such as Fanta, Powerade, Smartwater, Coca cola Schweppes, sprite, Rani, Rim Zim, (Wikipedia, 2021).

**Research Design**

The analysis adopted a survey research design. Survey analysis could be a technique of aggregation info by asking queries through questionnaires, interview, phone, mail or via the web.

**Population**

The population for this study comprised the whole members of employees of Nigeria Bottling Company Mokola, Ibadan, that is two hundred. The corporate was designated for this study because it is one in all the foremost fashionable soft drinks company in Nigeria. Every of the 5 departments of the corporate that are marketing, production, finance, human resources, and buying created up the population. 85 members of employees from marketing department, 14 from human resources, 16 from finance department, 68 from production department and 17 from the business department.

**Sample Size and Sampling Technique**

A multi-stage sampling technique was used. Stratified sampling technique was used to divide the population into strata (departments) while random sampling technique was used to select 69 respondents as the sample size.

**Sampling Frame**

| **Departments** | **Size** |
|---|---|
| Marketing | 29 |
| Finance | 6 |
| Human Resource | 5 |
| Production | 23 |
| Purchasing | 6 |
| **Total** | **69** |

**Data Sources**

This study only used the main data from the administrative questionnaire developed by the researchers and provided to the employees of the Nigerian bottling company Plc in Ibadan Oyo State. A structured questionnaire was used in the research to collect relevant data from the respondents.

**Method of Data Collection**

In this study, questionnaire became the principle device for statistics collection. The questionnaire was used based on keeping with the facts wanted from the respondents. The questionnaire was administered to respondent, decided on from specific departments of the company. The questionnaire was based totally on 5 Likert scale.

**Measurement of Variables**

**Dependent Variable: Performance**

Performance: Performance is the quit end result of activities, handling profitability, marketplace share, income growth, and price discount amongst others. For this look at overall performance is proxied income turnover and purchaser satisfaction.

**Independent Variable: Marketing Strategies**

Marketing Strategies is proxied by: Product Strategy, Pricing Strategy, Promotional Strategy and Place Strategy.

**Data Analysis Methods.**

Descriptive and logical analysis was used to analyze this research. Use descriptive statistics such as tables and percentages to illustrate the marketing strategies used by Nigerian bottling companies, and use multiple regression

analysis to use Pearson's product moment correlation coefficient to influence the extent to which marketing strategies increase the sales of Nigerian bottling companies. Investigation on the Relationship between Marketing Strategies and Customer Satisfaction of Nigerian Bottling Companies.

**Model specification**

Y = a + bx ……. Regression equation

Where:

Y = dependent variable (performance)

a = constant

b = coefficient

x = explanatory variable (marketing strategy)

The regression model is defined as follows:

PERF = α + ß1PRS + ß2PDTS + ß3PRMS + PLS + μ

STO = α + ß1PRS + ß2PDTS + ß3PRMS + PLS + μ

PRMS = Promotion Strategy

PLS = Placement Strategy

**Analysis of Results and Discussion**

This section presents the results and discussion of the analysis of data collected from major sources. 69 questionnaires have been distributed to the Nigerian bottling Company in Ibadan, Oyo State. 65 copies were filled out and returned. The respondent return response rate of the questionnaire was 94%.

***Objective 1:***

***To have a look at the extent to which advertising strategies have an effect on sales turnover of Nigeria Bottling Company***

Multiple Regression applied math tool was accustomed examine the extent to that selling methods influence sales turnover of the company. The results conferred in tables 4.2, 4.3, and 4.4 below. Table 4.2 showed the model

outline of the regression result. The multiple regression constants R was 0.907 whereas the coefficient of determinant R2 was 0.823. This understood that the extent to which marketing strategies have combined impact on sales turnover was 90 % while the extent to which the variable explains the variation within the criterion variable was eighty-two percent. From table 4.3, it absolutely was determined that the f-value was 69.846 whereas the important p-value was 0.000 that was not up to the 0.05 level of applied math significance, so selling methods have vital impact on sales turnover. From table 4.4, it absolutely was determined that promotion strategy had the very best effect on sales turnover with beta price of 0.642, followed by value strategy with beta value of 0.294, then place strategy with beta value 0.048 and merchandise strategy with beta value of -0.011 so the equation 4.1 was valid.

Y=0.214PR-0.004PDT+0.686PRM+0.018PLS----4.1

**Model Summary of Marketing Strategies and Sales Turnover**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .907[a] | .823 | .811 | .192328 |

a. Predictors: (Constant), PLSTINFSTO, PRMSTINFSTO, PSTINFSTO, PRSTINFSTO

**Anova of Marketing Strategies and Sales Turnover**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 10.334 | 4 | 2.584 | 69.846 | .000[a] |
| | Residual | 2.219 | 60 | .037 | | |
| | Total | 12.554 | 64 | | | |

a. Predictors: (Constant), PLSTINFSTO, PRMSTINFSTO, PSTINFSTO, PRSTINFSTO

b. Dependent Variable: COYPDTOFHIGHQUAL

**Coefficients of Marketing Strategies and Sales Turnover**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .436 | .483 | | .904 | .369 |
| | PSTINFSTO | .214 | .081 | .294 | 2.645 | .010 |
| | PRSTINFSTO | -.004 | .074 | -.011 | -.060 | .952 |
| | PRMSTINFSTO | .686 | .147 | .642 | 4.653 | .000 |
| | PLSTINFSTO | .018 | .040 | .048 | .442 | .660 |

a. Dependent Variable: COYPDTOFHIGHQUAL

**Field Survey, 2021**

***Objective 2***

***To take a look at the relationship between advertising techniques and consumer's delight of Nigeria Bottling Company.***

Pearson Product Moment parametric statistic was used to examine the connection between promoting ways and consumer's satisfaction. The result's bestowed in tables 4.6 below. The table showed that there's a major however moderate correlation between customer's satisfaction and worth at 0.735 at vital p-value of 0.000 that is not up to 0.05 level of significance. However, there is a significant and powerful correlation between customer's satisfaction and merchandise at 0.909 at critical p-value of 0.000 which is lower than 0.05 level of significance. Also, promotion and place have considerably moderate correlations with customer's satisfaction at 0.547 and 0.599 respectively at vital p-value of 0.000 that is not up to 0.05 level of significance. it had been so inferred that solely product contains a sturdy relationship with customer's satisfaction. That's it's the standard of the merchandise and if the product meet customers' expectation that verify their satisfaction. This supported the work of Harun, Kamal and Mustafi (2013) that product quality, selection and style have vital relationship with customer's satisfaction.

| Correlations of Marketing Strategies and Customer Satisfaction | | | | | | |
|---|---|---|---|---|---|---|
| | | CUSTSATISPRDT | PSTRELCUST | PRSRELCUST | PRMRELCUST | PLSTRELCUST |
| CUSTSATISPRDT | Pearson Correlation | 1 | .735** | .909** | .547** | .599** |
| | Sig. (2-tailed) | | .000 | .000 | .000 | .000 |
| | N | 65 | 65 | 65 | 65 | 65 |
| PSTRELCUST | Pearson Correlation | .735** | 1 | .747** | .650** | .575** |
| | Sig. (2-tailed) | .000 | | .000 | .000 | .000 |
| | N | 65 | 65 | 65 | 65 | 65 |
| PRSRELCUST | Pearson Correlation | .909** | .747** | 1 | .702** | .764** |
| | Sig. (2-tailed) | .000 | .000 | | .000 | .000 |
| | N | 65 | 65 | 65 | 65 | 65 |
| PRMRELCUST | Pearson Correlation | .547** | .650** | .702** | 1 | .693** |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Sig. (2-tailed) | .000 | .000 | .000 | | .000 |
| | N | 65 | 65 | 65 | 65 | 65 |
| PLSTRELCUST | Pearson Correlation | .599** | .575** | .764** | .693** | 1 |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | |
| | N | 65 | 65 | 65 | 65 | 65 |
| **Correlation is significant at the 0.01 level (2-tailed). | | | | | | |

**Field Survey, 2021**

***Summary***

This study examined the effect of selling methods on performance of sentimental drinks producing firms in Nigeria with Nigeria Bottling Company, Oyo State. It specifically examined the marketing strategies utilized by the corporate, the extent to that marketing strategies influence sales turnover of the company and therefore the relationship between marketing strategies of the company and customers' satisfaction.

Each descriptive and inferential statistics similar to frequency tables, Pearson correlation and multivariate analysis were used. It absolutely was discovered from the results of the analysis that product strategy, value strategy and promotion strategy are the promoting methods principally utilized by Nigeria Bottling Company. Also, additional results disclosed the f-value was 69.846 whereas the essential p-value was 0.000 that was below the 0.05 level of applied math significance; therefore, marketing strategies have vital impact

on sales turnover with promotion strategy having the very best effect. More results showed that product strategy contains a sturdy relationship with client satisfaction while price, promotion and place strategies have moderation relationships with customer satisfaction. it absolutely was thus inferred that solely product strategy has a strong relationship with customer satisfaction. That's it's the quality of the merchandise and if the product meet customers' expectation that confirm their satisfaction.

**Conclusion**

Supported the results of the analyses from this study, it absolutely was terminated that product strategy includes a sturdy relationship with customer's satisfaction whereas worth and promotion methods have moderate relationships with customer's satisfaction. Also, promotion strategy has the best impact on sales turnover. In similar manner, the analysis concluded that price strategy, promotion strategy and products strategy are largely utilized by the company.

**Recommendations**

Against the findings and conclusion of this study it became pertinent to advocate soft drinks manufacturing corporations ought to ceaselessly improve on their product quality through price additions reminiscent of low evaluation and products modification activities in line with the dynamic nature of shoppers as this can result in increase in sales volumes and afterwards profitability. Also, beverage companies should begin constant evaluation and valuation of their selling combine policies and methods thus on be in conformity with the dynamical nature of the marketing setting which is able to facilitate in serving customers of the soft-drink producing companies additional effectively and efficiently.

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**Adeneye O. A. AWOFALA**
Department of Science and Technology Education, Faculty of Education, University of Lagos, Akoka, Lagos State, Nigeria.
aawofala@unilag.edu.ng

**Omolabake T. OJO**
Department of Science and Technology Education, Faculty of Education, University of Lagos,Akoka, Lagos State, Nigeria.
otojo@unilag.edu.ng

**Awoyemi A. AWOFALA**
Department of Biological Sciences, College of Science and Information Technology, Tai Solarin University of Education
awofalaaa@tasued.edu.ng

**Oladiran S. OLABIYI**
Department of Science and Technology Education, Faculty of Education, University of Lagos, Akoka, Lagos State, Nigeria
solabiyi@unilag.edu.ng

# IS GENDER A FACTOR IN 21ST CENTURY SKILLS IN EDUCATION AMONG FUTURE SCIENDCE, TECHNOLOGY AND MATHEMATICS (STM) TEACHERS IN NIGERIA?

**Abstract**

*The influences of gender on learning outcomes of achievement in and attitudes towards science, technology, and mathematics (STM) are widely reported but there is a scarcity of study on the influences of gender on 21st century skills in education. These skills are a new cohort of skills which world citizens need so they can traverse education and work in the face of mutable societal, high-tech, and economic demands. This study investigated gender differences in future STM teachers' 21st century skills in education through a quantifiable research paradigm of the descriptive survey design. The participants were 1500 senior future STM teachers in two public universities in southwest, Nigeria. Data collected through a valid and reliable instrument marked "perception of 21st century skills in education*

*questionnaire (Cronbach α=0.88)'' were analyzed using mean, standard deviation and independent samples t-test. The results showed that gender was not a significant factor in future STM teachers' 21st century skills in education even at the subscales level of invention in education, collaboration in education, critical thinking and reasoning in education, self-direction in education, and information literacy in education. Hence, it is endorsed that in order to enhance future teachers' 21st century skills, they should be dynamically affianced in more participatory educational activities embedded with 21st century skills in STM classrooms. More so, equal attention should be given to both male and female future STM teachers in their acquisition of 21st century skills in education.*

**Key words**: *gender, 21st century skills, future STM teachers, Nigeria.*

## Introduction

STM education is unavoidably a formidable pillar for contemporary scientific and high-tech advances needed to promote collective wellbeing, economic and social development (Markus, 2014). That, conceivably, is the motive why Nigerian parents place an inordinate burden on their offspring to flourish academically in STM at every level of education. This apparent worth of STM in citizens' life has prompted the Nigeria Government to proclaim in the National Policy on Education that ''a sizeable proportion of expenditure on university education shall be devoted to science and technology'' (Federal Ministry of Education [FME], 2013, 91a, p.42). In addition, the policy stated that ''not less than 60% of places shall be allocated to science and science-oriented courses in the conventional universities and not less than 80% in the universities of technology and agriculture'' (FME, 2013, 91b, p.42-43). However, even with this apparent significance, students have continued to record abysmally poor performance on the subjects in regional and national examinations conducted either by the West African

Examinations Council (WAEC) or the National Examinations Council (NECO). In the West African Senior School Certificate Examination (WASSCE) results in Biology, Chemistry, Mathematics, Physics, Technical Drawing, and Foods and Nutrition for 2004-2006 (Table 1) for instance, students exhibited low performance in these subjects. Mostly, the pitiable and declining performance of candidates in these subjects over a period of three-years is suggestive of poor and feasibly, deteriorating quality and falling standard of education at the pre-tertiary level in Nigeria.

**Table 1. Three-Year Results in Eight Popular Science and Technical Subjects in the May/June 2004-2006 WASSCE in Nigeria**

| | % of Passes at Credit | | | % of Failure | | Level (Grades 1 - 6) |
|---|---|---|---|---|---|---|
| **Subject** | **2004** | **2005** | **2006** | **2004** | **2005** | **2006** |
| Further Mathematics | 23.99 | 29.57 | 43.69 | 37.40 | 38.05 | 27.15 |
| General Math | 33.97 | 38.20 | 41.12 | 34.47 | 34.41 | 24.95 |
| Agricultural Science | 23.48 | 15.51 | 35.01 | 43.87 | 53.46 | 35.42 |
| Biology | 29.68 | 35.74 | 49.23 | 34.68 | 32.18 | 22.96 |
| Chemistry | 37.86 | 50.94 | 44.90 | 32.76 | 27.28 | 30.11 |
| Physics | 49.40 | 41.50 | 58.06 | 19.26 | 25.88 | 16.52 |
| Technical Drawing | 49.43 | 46.01 | 31.86 | 21.16 | 23.85 | 39.14 |
| Foods & Nutrition | 54.74 | 58.08 | 61.47 | 12.15 | 14.04 | 7.93 |
| Source: WAEC (2006) | | | | | | |

The percentage of female students passing STM in the WASSCE is lower than that of male students and the percentage of male students electing to pursue STM-related courses beyond pre-tertiary education overshadows that of female students (Agu & Omenyi, 2013; Ezeliora & Ezeokana, 2010;

Salman, Yahaya, & Adewara, 2011) thereby creating gender gaps in STM participation and performance. At an STM interactive workshop in Lagos, one of the states where this research was carried out, teachers of STM ascribed females' low performance in STM to low motivation characterized by fear, lack of self-confidence and teachers' low passion, drive and interest in STM during pedagogical discourse in the classroom. To them STM subjects are difficult and hard due to over reliance on terminology, symbolism, and syntax, and unusual language. Females' low achievement in STM at the WASSCE coupled with low participation in STM-related courses beyond senior secondary school education engenders disparities that shot many educational and career prospects to women and deny nations their quality talents. In Nigerian universities, the average enrolment based on gender in the years 2008-2010 was 37.6% for women, likened to 62.4% for men (United States Embassy in Nigeria, 2012).

Studies carried out in Sub-Saharan Africa, principally in nations like Zambia, Ghana and Senegal pinpoint to some of the variables causing gender differences in students' achievement in STM (Donkor & Justice, 2016; Mensah, 2006). These underlying causes comprise unexceptional teachers and low parents' expectations, society and peers' influence; girls' role in the home precluding them from studying; girls believe that STM subjects are male domains; girls' poor dispositions towards STM; poor career guidance in schools; and sexual provocation which is prevalent among women. In the advanced nations such as Australia, United States of America and United Kingdom, gender differences in STM underachievement and under-representation have been ascribed to STM being culturally regarded as masculine domains, modes of assessment and gender-prejudiced textbooks that are in tune with male gender, inadequate female role models in STM

classrooms and unconscious gender stereotyping (King, 2000; Master, & Meltzoff, 2017; Master, Cheryan, & Meltzoff, 2016). In this study, gender is viewed as the economic, social, political and traditional qualities and prospects, linked to being man and woman (Desprez-Bouanchaud, Doolaege, & Ruprecht, 1987). Gender is a socially constructed attributes, opportunities and relationships connected with being masculine and feminine that are learned through the processes of socialization. In Nigeria and like most other nations of the world, male and female show disparity in the daily activities they embark on, in involvement in decision-making, and in accessing and controlling of resources with women showing low access to resources, decision-making and prospects (National Bureau of Statistics, 2018; Afu, Gbobo, Ukofia, & Itakure, 2017; Patrick, 2010).

In general, there are two major school of thoughts regarding educational gender disparities in global cultures and these are the conservative and the progressive. The conservative school of thought sees disparity between men and women in social and cultural aspects as being natural and biological and hence fixed. History indicates that this standpoint was pervasive and went unobstructed, as reinforced by a huge literature centering on the lowliness of women. For instance, in traditional Nigeria culture, men and women were anticipated to pursue distinct natural roles in society: men were considered as the family head, breadwinner, strong, and job-inclined and women as nurturer, family-inclined, and weaker vessel (Egunyomi, Fadeyi, Folaranmi & Adelore, 2001; Akinbi & Akinbi, 2015). Women were to be heard and not seen in public domain. Following this perspective, disparities in actions between men and women arise from inborn biological disparities between males and females which are not vulnerable to alteration and education is viewed as a way of enculturing and enlightening males and females into their

God given roles as men and women. Consequently, men are bodily sturdier, more irrepressible, possess superior spatial, mathematical and machine-driven gifts and incline to view the world as notions, matters, and models (Mawaddah & Duskri, 2018). While women show rapid physical and psychological maturity, are extra tenderly and cherishing, possess greater and extra intelligent oral abilities and view the world in private, beautiful and ethical footings (Mawaddah & Duskri, 2018).

In the progressive school of thought, males and females' social and cultural roles are predicated on effects stemming from culture, society and history, which are mutable as the world changes. Within this perspective, societies are male-controlled in which women are positioned as subordinates with men dominating women and interpreting biological disparities in stereotypical overtures (Master, & Meltzoff, 2017; Master, Cheryan, & Meltzoff, 2016; Cheryan, Master, & Meltzoff, 2015; Ekine, 2013). The import of this standpoint is to comprehend gender disparity as a cultural sensation, stemming from the overriding notions of a specific culture or epoch. Following this standpoint, education is considered as a tool for building consciousness on why gender disparities are vital in the society and the need to engender better equivalence between the genders and oppose stereotypical overtures capable of repressing the women. In Nigeria, ethnic obstructions and ecological manipulations produce subservient complex in women (Aja-Okorie, 2013) and via the cultural and customary process of socialization, women are inclined to consent to damaging self-fulfilling prediction, typecasting and stigmatization (Oniye, 2010) which may be difficult to erase. Thus, in Nigeria and other African countries, the total state of affairs of men and women is defined as follows:

- Women are largely underemployed in comparison with men, in which more men than women constitute the majority of learners and graduates from the university.
- Unequal wage exists for both men and women.
- Unequal representation of men and women in economic and governmental decision-making process with women largely under-represented.
- Unequal sharing of family responsibilities between men and women with women being subservient to men and whose voices are not to be heard.
- More women succumb to the threat of poverty than men.
- Women are largely susceptible to gender-linked ferocity and women and girls are prone to trading or trafficking in mortal persons (Society for Family Health, Nigeria (undated); Mensah, Biney, & Ashong, 2009; Aina, Ogunlade, Ilesanmi, & Afolabi, 2015; National Bureau of Statistics, 2018; Akinbi & Akinbi, 2015; Osokoya, 2008; Fapohunda, 2013).

Male and female involvement in STM studies in schools is defined as their admission and degree of being engaged and full of life in STM classrooms and in STM-related courses. Females' admission into Nigeria's post-basic education levels (senior secondary schools and tertiary institutions) is copiously lower than that of males (Markus, 2014) with more females being under-represented in STM classrooms and in STM-related courses at Nigeria's post-secondary institutions (Salman, Olawoye, & Yahaya, 2011). Nevertheless, statistics showed that females' enrolment into primary schools in Nigeria is higher than that of males (National Bureau of Statistics, 2018) with more males completing the Nigeria Basic Education

Certificate Examination (BECE) than females (National Bureau of Statistics, 2018). In 2014, the percentage of girls' enrolment in Nigerian primary schools stood at 48.6% but declined in 2015 and 2016 to 47.4% and 47.5% respectively while the rate of completion of primary, junior secondary and senior secondary schools for girls stood at 64.8%, 38.9% and 33.2% respectively in 2016 (National Bureau of Statistics, 2018). Table 2 below shows the 2004 candidates' pattern of enrolment in STM subjects at the Senior Secondary Certificate Examinations (SSCE) according to gender.

Table 2**.** Enrolment pattern of candidates in STM subjects in the 2004 Senior Secondary School Certificate Examinations according to gender

| STM Subjects | Total No. of candidate | No. of Males | % | No. of Females | % |
|---|---|---|---|---|---|
| Further Maths | 18557 | 14732 | 79 | 3825 | 21 |
| General Maths | 832689 | 446907 | 54 | 385782 | 46 |
| Agric Science | 656599 | 369893 | 56 | 286706 | 44 |
| Biology | 821966 | 439358 | 53 | 382608 | 47 |
| Chemistry | 269774 | 159533 | 59 | 110241 | 41 |
| Health Science | 12306 | 5586 | 45 | 6719 | 55 |
| Physics | 265262 | 158402 | 60 | 106860 | 40 |
| Applied Electricity | 389 | 337 | 87 | 52 | 13 |
| Auto Mechanics | 169 | 166 | 98 | 3 | 2 |
| Building Construction | 200 | 178 | 89 | 22 | 11 |
| Electronics | 245 | 200 | 82 | 45 | 18 |

| | | | | | |
|---|---|---|---|---|---|
| Metal Works | 570 | 562 | 99 | 8 | 1 |
| Technical Drawing | 7490 | 6462 | 86 | 1028 | 14 |
| Wood Work | 499 | 488 | 98 | 11 | 2 |
| Clothing and Textile | 541 | 15 | 3 | 436 | 97 |
| Food and Nutrition | 16903 | 1196 | 7 | 15707 | 93 |
| Home Economics | 11066 | 475 | 4 | 10591 | 96 |
| **Source:** Salman, Olawoye and Yahaya (2011) | | | | | |

In an investigation of females' enrolment into STM, Danjuma (2010) showed that at the Government Senior Science Secondary School, Jalingo, girls' enrolment into science subjects was 85 (34.4%) while that of boys was 162 (65.6%) with a gender disparity of (31.2%). Similarly, at the Government Senior Technical Training School, Jalingo, girls' enrolment into technical subjects was 313 (27.3%) whereas that of boys' enrolment was 835 (72.7%) with a gender gap of (45.4%). Also, at the Federal Science and Technical College, Jalingo in the Department of Science, girls' enrolment into science subjects was 26 (22.4%) while that of the boys was 90 (77.6%) thereby leaving a gender gap of (55.2%). Equally, at the Federal Science and Technical College, Jalingo, in the Department of Technical, girls' enrolment into technical subjects was 19 (18.1%) while that of the boys was 86 (81.9%) with a gender gap of (63.8%). Similarly, at the College of Education, Jalingo, in the Nigerian Certificate in Education year one, girls' enrolment into sciences was 63 (33.2%) while that of the boys was 127 (66.8%) with a gender gap of (33.6%). At the technical department of the college, girls' enrolment was 4 (12.5%) while boys' enrolment was 28 (87.5%) leaving a gender gap of 24 (75%). At the department of mathematics of the college,

girls' enrolment was nil (0%) whereas boys' enrolment was 15 (100%). These statistics revealed a wide gender disparity in the enrolment of males and females in STM education.

Low dispositions towards STM, strengthened by high stereotype beliefs and gender imbalance teacher-student interaction account for female students' dwindling performance in the WASSCE and under-participation in STM-related courses at the tertiary institutions afterward (Markus, 2014). To date gender differences in achievement in and attitudes towards STM are well documented in the literature in Nigeria and elsewhere (Fatade, Nneji, Awofala, & Awofala, 2012; Awofala, 2011; Awofala & Anyikwa, 2014; Boaler, Altendorff, & Kent, 2011). This rich literature showed three findings regarding gender differences in achievement in and attitudes towards STM. With regards to achievement in STM, there are findings that indicate significant influence of gender in favour of male students (Awofala, 2010, 2011; Akinsola & Awofala, 2009); significant influence of gender in favour of female students (Ogunkunle, 2007; Ozofor, 2001); and no significant influence of gender (Fatade, Nneji, Awofala, & Awofala, 2012; Arigbabu & Mji, 2004; Ogunleye & Babajide, 2011; Awofala & Anyikwa, 2014). Likewise, with respect to attitudes towards STM, there are findings that indicate significant influence of gender in favour of male students (Mensah, 2006; Bramlett, 2007; Kerger, Martin, & Brunner, 2011; Awofala, Arigbabu & Awofala, 2013); significant influence of gender in favour of female students (Aguele & Agwagah, 2007); and no significant influence of gender (Awofala, 2016; Farooq, & Shah, 2008; Kögce, Yildiz, Aydin, & Altindag, 2009; Mohd, Mahmood, & Ismail, 2011). This significant influence of gender on students learning outcomes in STM either in favour of males or females suggests the presence of discrepancy in the experiences of males and females inside and outside the STM classrooms while the no significant

influence of gender on STM outcomes indicates that gender disparities in STM outcomes are disappearing and so may be unimportant (Awofala, 2017; Arigbabu & Mji, 2004).

Notwithstanding the avalanche of mixed research findings in support of gender differences in achievement in and attitudes towards STM, no attempt had been made to investigate gender differences in 21st century skills in education. This is a gap in literature which this study would like to fill. Our inability to integrate a gender perception into the skills discussion, could restrict teachers' expedition to teach and grow the skills needed by all youths for the interconnected digital 21st century. 21st century skills can be defined as expertise, aptitudes, and learning moods specially branded by stakeholders in the education industry, business leaders and governmental agencies as prerequisite for resounding achievement in 21st century digitally interconnected world and workstations. Many of these skills needed in preparing students for greater attainment in a swiftly mutable, numerical culture are connected with deeper learning, which hangs on understanding skills like investigative thinking, sophisticated problem solving, and collaborative teamwork. 21st century skills are different from the customarily academic discipline skills because they are not predominantly academic content knowledge-driven (Dede, 2009; Cuban, 2015; Graham, 2015).

Before the advent of the 21st century, national educational system globally was pre-occupied with the promotion of students' acquisition of knowledge and content thereby forcing schools to make literacy and numeracy skills available to their learners as these skills were observed as precursors to their attainment (Care & Anderson, 2016). Current advances in Information and Communication Technology (ICT) in the 21st century have made knowledge and information everywhere and effortlessly reachable. Thus, whereas literacy and numeracy skills are nonetheless germane and

indispensable, they are inadequate for the youths of today. The changes in technology, demography and socio-economic status have propelled systems of education worldwide to make a paradigm swing in the direction of engrossing their learners with skills set that are not only cognition-oriented but encapsulate affective, cognitive and social physiognomies (Brynjolfsson & McAfee, 2014). In today's world, the digital labour force is presumed to be meaningfully more inclined to change jobs compared to workforce in the Baby Boom generation whose career mindedness are stable (Forbes Magazine, 2012a; Psychology Today, 2015). Apparently, this job suppleness for the present labour force requires different skills that promote flexibility and adaptability in diverse career domains (Forbes Magazine, 2012b). As developed nations transmogrify from industrial-oriented to service-oriented economies, the need for particular hard skills such as digital literacy is not in doubt (Dede, 2009; Graham, 2015) while soft skills or applied skills such as skills for interaction, collaboration, and processing information and managing others are gradually becoming more imperative (OECD, 2005; Trilling & Fadel, 2009). These different skills are called 21st century skills and have been categorized into three major parts (Trilling & Fadel, 2009): **Learning and innovation skills** which include critical thinking and problem solving, communications and

collaboration, creativity and innovation; **Digital literacy skills** which include information literacy, media literacy, Information and communication technologies (ICT) literacy; and **Career and life skills** which compose of flexibility and adaptability, initiative and self-direction, social and cross-cultural

interaction, productivity and accountability. This classification of 21st

century skills is adopted in this study even though there are numerous other classifications (Partnership for 21st Century Learning, 2009; Dede, 2009).

Digital literacy is a person's capability to discover, assess, use, apportion and create content utilizing information technology. Information literacy refers to the capability of a person to efficiently and virtuously hand-pick, assess and utilise facts to advance, relate and share his/her knowledge (American Association of School Librarians [AASL], 2007). ICT skills refer to a person capability to utilize digital tools, communication technologies and systems to make available, manage, incorporate, assess and build frames of information (The International ICT Literacy Panel, 2002). Media literacy refers to a person's capability to access, explore, assess and converse messages in a diversity of arrangements (National Association for Media Literacy Education [*NAMLE*], 2012). The life and career skills centre on the capability of a person to toil efficiently with different groups, be unprejudiced to changeable notions and ideals, fix and establish aims, accomplish missions successfully, being answerable to outcomes, validate virtuous practices, and be accountable for not only one's self but the bigger society. Leadership and responsibility skills focus on a person's capability to work, appreciate and put up enviable practices in the interest of the bigger society, to motivate people and exploit their strengths to attain a desired goal. Productivity and accountability skills encompass: fixing and achieving goals, ordering necessities, managing time, functioning virtuously, and teaming up and collaborating with associates and customers. The Partnership for 21st Century Skills (2009) upholds that learners must engage in the management of projects; fix and achieve goals; ordering, strategize, and orchestrate work; establish outcomes; multitask; toil meaningfully and virtuously; be responsible for outcomes; and team up and work together

efficiently with groups. Social and cross-cultural skills refer to a person's capability to toil with associates, view oneself as a professional, venerate and encircle collective customary and traditional disparities. Comprehending and encircling social and cultural disparities and utilizing the modifications to create novel notions and original resolutions to difficulties are progressively vital in public domains and in workplace (Partnership for 21st Century Skills, 2009). It is argued that learners should be allowed to network freely with peers, carry themselves with high esteem and earn respect of others, work efficiently in varied groups with people from diverse social and cultural upbringings, and react progressively to diverse notions and ideals.

Communication and collaboration skills encompass the capability of an individual to converse openly, utilizing spoken, printed, and non-verbal tongues, and cooperate efficiently and conscientiously with varied people. In Nigeria, students are able to communicate effectively in mother tongues but find it pretty difficult to communicate in English language which is the language of education and commerce. Articulating thoughts and notions efficiently in English language using spoken, printed and non-verbal tongues in different scenarios and forms is a problem to many students in Nigeria. No wonder students perform woefully in subjects in which the medium of instruction is English. More so, students should be able to exhibit the capability to work efficiently and courteously with varied groups; demonstrate suppleness and readiness to producing essential concessions to achieve a mutual goal; and accept common accountability for cooperative work, and price personal assistances offered by each member of the group (Trilling & Fadel, 2009). The critical thinking and problem solving skills encompass a person's capability to engage in effective reasoning, examine questions to disentangle problems, scrutinize and assess other view points,

and mirror analytically on resolutions and methods. According to the Partnership for 21st Century Skills (2009), students should possess the ability to think successfully, adopt structured intelligence, infer verdicts and resolutions, and crack glitches. Critical thinking is defined as a person capability to examine, deduce, assess, review, and create information (Trilling & Fadel, 2009). Creativity is the capacity to manufacture authentic and original knowledge (Awofala & Fatade, 2015) and is an extraordinary human capability for logical thought and inventiveness (Rhyammer & Brolin, 1999). Creativity and innovations are important skills that should be nurtured in students by providing the enabling environments open to criticism, receptive to novel ideas, and in which mistakes and failures are a springboard for learning. Thus, opportunity should be given to students to use technology to create highly excellent and remarkable works. Though difficult to assess (Awofala & Fatade, 2015), creativity and innovations are not innate and can be cultivated and developed in students with continuous practice (Trilling & Fadel, 2009).

This study sought to investigate gender differences in future STM teachers' 21st century skills in education. Thus, providing rich empirical data on gender differences in future STM teachers' 21st century skills. This information may help teacher educators to devise means of enhancing 21st century skills in education among male and female future STM teachers.

**Research Hypothesis**

$H_O1$: Gender is not a statistically significant factor in future STM teachers' 21st century skills in education.

## Methods

In this study, a quantifiable paradigm involving the descriptive survey of an ex-post facto research design was carried out on pre-service STM teachers from two universities stratified by gender and location in Nigeria's Southwest region in two states of Lagos and Ogun. A survey research method was adopted since it supports the assessment of views, ideas, and attitudes (Awofala, Akinoso & Fatade, 2017). An ex-post facto design was deployed since the factors in the study have already being formed and the investigators only explored and described them as they were. The participants of the study were 1500 senior future STM teachers (800 males and 700 females) randomly chosen from the Department of Science and Technology Education at the University of Lagos, Akoka, Lagos State, College of Science and Information Technology, and College of Applied and Vocational Technology at the Tai Solarin University of Education, Ijagun, Ogun State. The age of the participants varied between 18 and 28 years with an average age of 23.4 years and SD=2.6 years. The future STM teachers can be classified as 900 (60%) who were less than 20 years and 600 (40%) who were between 20-28 years. 1150 (76.67%) chosen from science education comprised physics education, chemistry education, biology education, integrated science education and home economics education cohorts [600 (52.17%) males, 550 (47.83%) females, Mean age = 21.3 years, SD=2.2 years, age range: 18-28 years]. 200 (13.33%) were chosen from mathematics education cohort [100 (50%) males, 100 (50%) females, Mean age = 23.4 years, SD=2.4 years, age range: 18-26 years]. The remaining 150 (10%) were from technology education cohort [100 (66.67%) males, 50 (33.33%) females, Mean age = 24.5 years, SD=3.2 years, age range: 19-28 years].

One instrument developed by the researchers and named Perception of 21$^{st}$ Century Skills in Education Questionnaire (P21CSEQ) was utilized

for the collection of data for the present study. The instrument composed of 44 items, which are positively worded and affixed to a 5-point Likert scale ranging from: much like me - 5, more like me - 4, not like me- 3, less like me - 2, to least like me – 1. The minimum score on the P21CSEQ is 44 while the maximum score is 220. The instrument has five factors named invention in education, self-direction in education, collaboration in education, information literacy in education and critical thinking and reasoning in education. Two experts in questionnaire development for suitability for the study exposed the questionnaire to content validity and their submissions integrated into the instrument. Table 3 below shows sample items on the P21CSEQ.

**Table 3. Sample items on the P21CSEQ**

| |
|---|
| **Critical thinking and reasoning in education** (CTRE) Cronbach alpha (α)=0.91 |
| I have the capability for rational thinking and capable of fixing learning problems through methodical skills |
| I am skillful at gathering and evaluating quantifiable and qualitative data in school research |
| **Information literacy in education (ILE)** Cronbach alpha (α)=0.94 |
| I can access written information in educational dialogue |
| I find it easy to adhere to honest deployment and referencing of information in education |
| **Collaboration in education (CIE)** Cronbach alpha (α)=0.86 |
| I am capable of building stability amid personal educational schedule and the team educational agenda. |
| My leadership skills will enable me to work in a team in education |

**Self-direction in education (SDE)** Cronbach alpha (α)=0.82

I can strike an equilibrium between personal advocacy in education and the thought of others

I am capable of showing reliable and decent behaviours in educational dialogue

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**Invention in education (IIE)** Cronbach alpha (α)=0.78

I can create original works in and through learning disciplines

I can review, re-purpose, integrate and create thoughts or views in education

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The P21CSEQ was trial-tested on a sample of 300 future STM teachers different from the present study sample and a consistency coefficient of 0.88 was calculated with Cronbach alpha (α). This high reliability indicates that the P21CSEQ is very consistent and could be adopted in the study.

In the present study, we carried out exploratory factor analysis (EFA) to isolate the latent dimension fundamental to the P21CSEQ items. This study was guided by the recommendations by Fabrigar, Wegener, MacCallum, and Strahan (1999) for carrying out factor analysis. In particular, we engaged several benchmarks for identifying the number of factors to be retained and adopted the principal components analysis (Joreskog & Lawley, 1968) because this is the method believed to produce the best parameter estimates (Pedhazur, 1982). The analyses were carried out using SPSS version 23 by adopting varimax rotation method, scree test (Cattell, 1966) and the eigen value greater than one benchmark. The five factors underlying the P21CSEQ were as detailed in Table 3 and items on each subscale loaded on one factor. Loadings for the critical thinking and reasoning in education items ranged from .56 to .82; for the information

literacy in education from .56 to .87; for the collaboration in education from .67 to .89; for the self-direction in education from .52 to .87; and for the invention in education from .67 to .89.

The investigators accompanied by 15 research assistants performed the administration of the instrument on the future STM teachers at different times and in habitually planned classes in the two universities. The comeback rate attained after a chain of follow-ups was 100%, which the researchers noted to be wonderfully reasonable for the study. The collected data were summarized and analysed using mean, standard deviation, and independent samples t-test at α=.05 level of significance.

## Results

**Research Hypothesis One**: Gender is not a statistically significant factor in future STM teachers' 21st century skills in education.

As recorded in Table 4 below, female future STM teachers recorded marginally lesser average mark ($\bar{x}$ *=2.52, S.D =0.59*) than their male counterparts ($\bar{x}$ *=2.55, S.D =0.61*) in aggregate 21st century skills in education. However, this slight difference in average mark was statistically not significant ($t_{1498}$ *= 1.30, p=.19*). With regards to the subscales of 21st century skills in education contained in Table 4 the female future STM teachers recorded marginally lesser average mark ($\bar{x}$ *=2.52, S.D =0.63*) in critical thinking and reasoning in education than their male counterparts ($\bar{x}$ *=2.56, S.D =0.64*) and this difference was however, statistically not significant ($t_{1498}$ *= 1.18, p=.24*).

**Table 4. Independent samples t-test analysis of future STM teachers' perception of 21st century skills in education based on gender**

| Gender | N | Mean | SD | Df | t | p | ES |
|---|---|---|---|---|---|---|---|
| CTRE | Male | 800 | 2.56 | 0.64 | | | |
| Female | 700 | 2.52 | 0.63 | 1498 | 1.18 | .24 | 0.06 |
| ILE | Male | | 800 | 2.57 | 0.59 | | |
| Female | 700 | 2.53 | 0.57 | 1498 | 1.43 | .15 | 0.07 |
| CIE | Male | | 800 | 2.53 | 0.61 | | |
| Female | 700 | 2.51 | 0.60 | 1498 | 1.02 | .31 | 0.03 |
| SDE | Male | | 800 | 2.53 | 0.61 | | |
| Female | 700 | 2.50 | 0.59 | 1498 | 1.43 | .15 | 0.05 |
| IIE | Male | | 800 | 2.56 | 0.60 | | |
| Female | 700 | 2.53 | 0.58 | 1498 | .89 | .38 | 0.05 |
| 21st century skills | | | Male | | 800 | 2.55 | 0.61 |
| Female | 700 | 2.52 | 0.59 | 1498 | 1.30 | .19 | 0.05 |
| NB: ES=effect size. | | | | | | | |

In addition, Table 4 revealed that the female future STM teachers obtained marginally lesser average mark ($\bar{x}$ *=2.53, S.D =0.57*) in information literacy in education than their male counterparts ($\bar{x}$ *=2.57, S.D =0.59*). The disparity in average mark was statistically not significant ($t_{1498}$ *= 1.43, p=.15*). For collaboration in education, the female future STM teachers obtained marginally lesser average mark ($\bar{x}$ *=2.51, S.D =0.60*) than their male counterparts ($\bar{x}$ *=2.53, S.D =0.61*). Yet, this disparity in average mark was statistically not significant ($t_{1498}$ *= 1.02, p=.31*). Table 4 showed that the female future STM teachers obtained marginally lesser average mark ($\bar{x}$ *=2.50, S.D =0.59*) in self-direction in education than their male counterparts ($\bar{x}$ *=2.53, S.D =0.61*). Yet, this difference in average mark was

not statistically significant ($t_{1498} = 1.43, p=.15$). With respect to invention in education, the female future STM teachers obtained marginally lesser average mark ($\bar{x} =2.53, S.D =0.58$) than their male counterparts ($\bar{x} =2.56, S.D =0.60$). However, this difference in average mark was statistically not significant ($t_{1498} = .89, p=.38$).

Based on these results, it is concluded that gender was not a significantly potent element in future STM teachers' 21st century skills in education. This non-significance also trickled down to the subscale levels. Therefore, the hypothesis, which states that gender, is not a statistically momentous element in future STM teachers' 21st century skills in education was not rejected. This implies that gender failed to reach a statistically momentous influence on future STM teachers' 21st century skills in education.

**Discussion**

The study's result indicated that gender was not a statistically significant factor in future STM teachers' perception of 21st century skills in education. In fact, both genders showed analogous practices and displayed comparable challenges and capabilities in 21st century skills in education. This result did not show any different educational abilities regarding the influence of gender on future STM teachers' 21st century skills. This result failed to agree with the finding of Kan'an (2018) who revealed that female students were better at acquiring 21st century skills in Jordan than the male students. While not ruling out the influence of public gender stereotyping (Awofala, 2017; Nwosu & Ibe, 2014; Albadi, 2014), the cultural restrictions placed on females in Jordan could be used to explain the significant influence of gender on 21st century skills. This is because it enabled them to spend

more time indoor, which they could use for schoolwork and to share information via the media (Kan'an, 2018).

Precisely in the present study, gender equivalence occurred in the dimensions of 21st century skills in education. These results failed to conform to the results of Mawaddah and Duskri (2018) that indicated that critical thinking skills of women folks were a little healthier than that of men folks. Thus, men are better at reasoning while females are better concerning exactness, meticulousness, and pensiveness of thinking. Harish (2013) and Leach (2011) found that male students showed higher critical thinking skill than female students whereas Bagheri and Ghanizadeh (2016) and Mitrevski and Zajkov (2012) found no significantly potent influence of gender on students' attainment in critical thinking skill. Females deploy critical thinking skills and problem solve like males but in a way, that is less combative and unswerving (Dow & Wood, 2006) due to some biological disparity in cognition but principally through the influence of culture (Dow & Wood, 2006). The insensitive nature of critical thinking to gender in the present study showed that in this 21st century female folks tend to depict themselves as positive critical thinkers as much as men in solving routine and non-routine challenges. Thus, females are more inclined to learning how to think critically and be responsible for their actions without being at the mercy of the men.

The present study result of equality between male and female students in invention in education failed to support the result that significant influence of gender exists on students' inventive thinking skills with female students performing better in science inventive thinking skills than their male counterparts (Abdullah & Osman, 2010). Taylor and Dalal (2017) found significant influence of gender on information literacy skills with women

being a little subtle than men in evaluating information, while men exhibited more robust poise in the reliability and fastidiousness of the data turned out by search engines. Advocates of female education who frequently align with gender barriers in order to provoke gender viewpoints in 21st century skills and highlight mounting females' life skills may no longer be important due to the result of this study. Worldwide socio-emotional skills are valued as the skills for the 21st century needed for regulating youth job-readiness and men and women in this study showed no variations in their 21st century skills.

The present study result of no significance influence of gender on future STM teachers 21st century skills in education did not conform with the perennial stereotypes in education that females are poor in STM ability partly to STM being for males (Awofala & Anyikwa, 2014; Awofala, 2011; Ogunleye, Awofala, 2017; Awofala & Adekoya, 2014). More so, males are the authority figure in the family whereas females are sheer loyal associates (Awofala, 2011; Awofala, 2008) and females are responsible for house chores and watching over the brethren whereas males are final policy makers and power brokers in the family (Arigbabu & Mji, 2004; Awofala, 2011).

## Conclusion

The current investigation has shown that gender is not a significantly potent element in future STM teachers' aggregate 21st century skills in education and at the subscale level. Going by the paucity of research and recurrent inconclusive results on gender differences in 21st century skills in education, there is need for more research in this area to have a firm grip on the subject. Hence, it is endorsed that in order to enhance students' 21st century skills, they should be dynamically affianced in more participatory educational activities embedded with 21st century skills in STM classrooms.

More so, equal attention should be given to both genders in their acquirement of 21st century skills in education.

This study has many limitations, despite its robust sample size. One of such shortcomings is the use of self-reports often condemned for their subjectivity. Another shortcoming is that participants in the study might have fibbed owing to social desirability. Many people are in the habit of highlighting the good aspect of themselves and may have been economical with the truth while filling the questionnaires. Lastly, although the questionnaire as an assessment tool offers a moderately economical, fast and well-organized means of attaining enormous quantity of data from a big sample of respondents, it lacks details, as responses are stationary thus giving little space for participants to provide answers replicating their correct outlooks on perception of 21st century skills in education. In line with these inadequacies, the study's results must be used carefully.

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**Dr. Dena Abd ElHamed ElSaid ElHoteby**
D_ahdm@yahoo.com

# ANALYSIS OF CHEMISTRY'S TEXTBOOKS ON SECONDARY STAGE IN LIGHT OF DIMENSIONS OF MORAL REASONING

## Abstract

*This research was designed to analyze content of chemistry's textbooks for three grades in secondary stage in light of levels of moral reasoning. sample consisted of all subjects included in textbooks for three grades in 2018/2019 in Egypt (applies nationally). Tool in light of levels of moral reasoning, including (moral sensitivity is contain reach moral problem within situation, view idea of ethical problem, presentation of some ethical concepts, application of ethical concepts, identify ethical problem, formulation of ethical problem, identify conflict between two different values, ensure that there is controversy (ie, selection of two or more), interpretation of positions, awareness of ethical behavior- moral inference is contain description of situation and debate in vocabulary can be understood, remind that good argument should be simple, straightforward and appropriate, analysis of issues, put forward different views, request a justification for answer, reach an ethical result by processing information, draw conclusions from ethical issues - moral choice is contain role-playing, choose from values that grapple with moral position, provide justification for selection based on ethical considerations, choose right solution, request a specific decision regarding dispute, conclusion of consequences of congenital choice, select optimal expectation of moral position - moral judgment is contain recognizing existence of an ethical issue, collecting facts associated with moral position, behavior analysis in light of ethical terms (truth, pardon, tolerance, trust, mercy), identification of main character affecting moral position, know some of previous information about influential figures in case and their relationship with each other, choose correct behavior or behavior, error, and solution alternatives, assign right choice of conduct to ethical principles and rules, right behavior to face moral position, making moral decisions for social attitudes that carry a moral dimension, reviewing ethical attitudes, describing loyalists, and fairs, moral judgment is logically supported by reasons and evidence). Findings chemistry's textbooks for three grades in secondary stage don't have moral reasoning.*

**Key words**: *chemistry's textbooks, secondary stage, moral reasoning.*

## Introduction:

Era current is characterized by technological progress, which is reflected in aims of education in general and thus content of textbooks, where focus is on the presentation of scientific material to cope with rapid development, Omission of emotional side, which is one of important aspects of building a person's personality. Textbook is also considered one of the means that support education's goals in society and is keen to present them through content. This paper provides an indicator for educational field to analyze content's textbooks according to moral reasoning. As a result of increased focus on cognitive aspect of students, which may lead to an ethical divide, it was better to pay attention to ethical thinking as one of forms thinking, that could enable learners to face moral crises in this age.

As moral growth of individual is linked to other aspects of growth, especially its link to mental growth of the individual, and when child can't find necessary understanding, orders and prohibitions of adults towards him, will not work on moral growth El-Atab (2012) on which is based Saunders (2015, 5).

Study of Nasr (2012) recommended development of moral reasoning among learners in all educational stages. study of Al-Shrafi (2013) by working on developing methods of moral reasoning among students، university and enhancing its positive aspects. study of Ahmad and Mohamad (2014) values' ethical must be transformed into practices and linked to the environmental and societal reality of the student's life, teacher should be trained and trained to conduct ethical discussions aimed at stimulating and developing moral growth of students.

Textbook is container that reflects goals of education, and seeks to achieve them in various strategies and methods; and then researcher analyzed chemistry's textbooks in secondary stage in light of dimensions of moral reasoning.

The research questions in this study were as follows:

- What levels of moral reasoning can be developed for high secondary students through the content of chemistry's textbooks?

- What is extent to which the content of secondary chemistry's textbooks addresses dimensions of moral reasoning?

This search aims to Open field of research in moral reasoning through a new vision of interest in its development through content of chemistry's textbooks in secondary stage, and Authors of preparation and development of textbooks to attention importance of including dimensions of moral reasoning content.

His goals are list of moral reasoning's levels of ethical thinking that may be included in content of chemistry's textbooks assessed at secondary stag, analysis of content of secondary chemistry's textbooks in light of moral reasoning's levels, and indicator for the educational field to analyze content's textbooks according to moral reasoning.

This research uses analytical descriptive method, and analysis of chemistry's textbooks on secondary stage on 2018/2019 in Egypt (applies nationally).

Student's textbooks, without teacher's guide, and without any generalizations, or other guidance leaflets for teacher.

1) First grade's textbook includes: (Chemistry is central science - Quantitative chemistry - Solutions, acids, and base – Thermochemistry – Nuclear chemistry).
2) Second grade's textbook includes: (Atomic structure – The periodic table and classification of elements – Bonds and forms of molecules – The representative elements of some regular groups).
3) Third grade's textbook includes: (Transition elements – Chemical analysis – Chemical equilibrium – Electrochemistry – Organic chemistry).

- Moral reasoning's levels: (Moral Sensitivity, Inference Moral, Choice Moral, Judgment Moral), and Using describes reasoning 's list of content of chemistry's textbooks in table (3) as indicator.

**Sample:**

This research community included all topics in chemistry's textbooks for first, second and third secondary grades, which were taught in (2018/2019) in Egypt. first grade's textbook includes (5) units and (10) lessons, second grade's textbook includes (4) units and (4) lessons, while third grade's textbook includes (5) units and (5) lessons, and table (1) shows topics of chemistry's textbooks for three grades.

Table (1) shows topics of chemistry's textbooks for three grades

| Grades | chapters | lessons |
|---|---|---|
| First | 5 | 10 |
| Second | 4 | 4 |
| Third | 5 | 5 |
| Total | 14 | 19 |

**Theoretical framework:**

Al-Khalifa (2017) content as "detailed treatment of subjects of course, it usually includes facts, knowledge, concepts, generalizations, principles and theories; that is, it includes many cognitive areas that reflect part or parts of knowledge structure of a science or a number of sciences, In a form or another to fit a particular academic level ", p. 24, and El-Draysh (2017) Content analysis is a technique used to measure and quantify answers to a set of questions by using a number of values for various answers.

Abu Amsha (2015) analyzes content as a compilation of basic knowledge and skills contained in lessons and their writing, and includes both facts, concepts and generalizations.

Al-Khalifa (2017) referred to textbook as " container that contains the material content of the material, and accompanying educational means, activities and various evaluation methods. book may include an introduction to learner, a

catalog that briefly presents curriculum and a list of unfamiliar terms and vocabulary for learners".

Moral Reasoning:

It is defined as Abu Saad (2009) a pattern of thinking that relates to the moral evaluation of things or events. It predates every act or behavior that is congenial, and this is different from the moral behavior. Behavior is complex, involving multiple elements or contributing to occurrence of many factors in moral reasoning, which is only one of these elements. P. 214

Characteristics moral reasoning, Abu Saad (2009):

- Moral reasoning relates to way in which learner reaches a certain judgment (right or wrong), which appears through his view of himself and through his relationship with others, and to determine justification of this choice, after process of logical reasoning, and thus moral reasoning based on compliance with standards society, or obedience to law, or on basis of general moral principles.
- Moral reasoning is nature of ethical decisions and associated rational justifications for what is acceptable or unacceptable.
- Moral reasoning develops through learner's responsibility and commitment to it.
-

Kohlberg developed his theory of measuring growth of Piaget's moral reasoning in cognitive development, and he multiple studies set out three basic levels of moral reasoning growth, Fig (1) explain it.

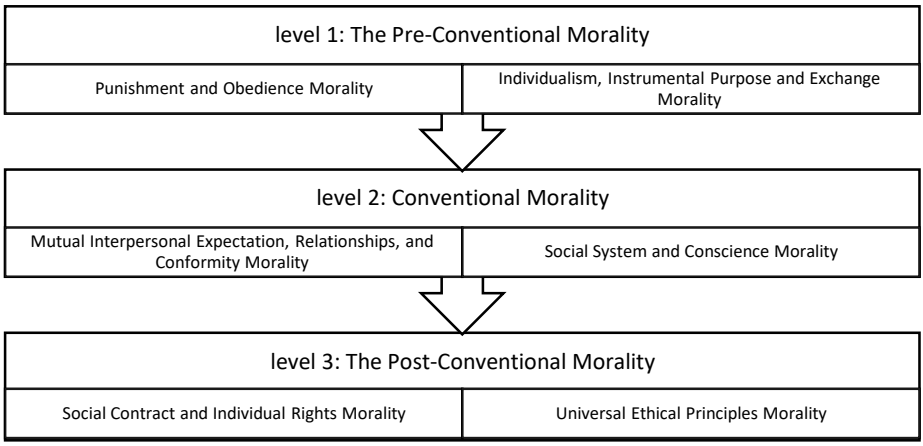


Fig (1): Moral reasoning's levels devolve

There are three basic levels of moral reasoning growth that fist level is the pre-conventional morality is contain punishment and obedience morality and individualism, instrumental purpose and exchange morality, second level is conventional morality is contain mutual interpersonal expectation, relationships, and conformity morality, social system and conscience morality, and third level is the post-conventional morality is contain social contract and individual rights morality, universal ethical principles morality.

Illustrates Saunders p1. L (2015) p29, Paxton. J, & Greene. J (2010) that moral reasoning plays an important role in moral judgment, its role in giving up moral intuition in absence of justifiable reasons, applying both ethics, utilitarian moral principles, resisting automatic tendencies to control behavior, and produce ethical judgments.

Where Paxton. J, & Greene. J (2010) p15, that people are based on moral reasoning, that they can affect each other by adjusting each other's intuition, and sending ethical principles that can be used to transcend moral intuition. As moral intuition can control behavior, people reject judgments based on their own intuition, when those judgments appear to be especially tried if not rational, while moral reasoning comes through practical and life experiences.

Jensen. L, Mckenzie. J, & Pandya. N (2010), explain the following:

- Ethics is a fundamental thing in human life. child distinguishes between right and wrong. people and institutions around them communicate innumerable moral messages either directly or indirectly. It is also an essential part of ethics. It occurs within the individual and between individuals. Institutional and collective contexts; and thus, is influenced by both culture - religion - identity - emotion - crime.
- Moral reasoning is multifaceted. It serves to guide, evaluate moral judgment, moral conduct to motivate, persuade others, to defend, promote behaviors for self, others that are motivated by other motives, whether ethical or immoral, and which are influenced by culture.

Saunders. L (2015), p1, moral reasoning doesn't always lead to moral judgment, depending on complexity of subject. One can come up with reasons that lead to different conclusions. These conclusions differ in terms of confidence degree.

Concluding that morality is a basic and distinctive thing for a person. Moral reasoning is motivated by motives, influenced by societal culture, human complexities, and it doesn't lead mainly to moral judgment.

**Information collection procedure:**

- Review literature, studies related to subject of research and analysis, where a survey of relevant studies for purpose of benefiting from in determining problem, building its tools, analysis, and interpretation of results.
- Preparation of dimensions' list of moral reasoning: To determine inclusion of content of chemistry's textbooks in secondary stage of dimensions of moral reasoning, researcher to see previous studies and literature to reach a dimensions range of moral reasoning, which can be addressed through content of chemistry's textbooks are as follows:

- Analysis included (title, lesson content, charts, drawings, enrichment information, activities, calendar questions, review questions), and extent to which they included moral reasoning's levels.

**Results and discussion:**

- To answer first study question: "What levels of moral reasoning can be developed for high secondary students through the content of chemistry's textbooks?"
- Dimensions reasoning 's list of content of chemistry's textbooks for three grades in secondary stage, which were presented in research procedures, is presented in Table (3) describes specifications' list. first question was answered.

Table (3) describes reasoning 's list of content of chemistry's textbooks

| Moral Sensitivity | Inference Moral | Choice Moral | Judgment Moral |
|---|---|---|---|
| Reach moral problem within situation | Description of situation and debate in vocabulary can be understood | Role-playing | Recognizing existence of an ethical issue |
| View idea of ethical problem | Remind that good argument should be simple, straightforward and appropriate | Choose from values that grapple with moral position | Collecting facts associated with moral position |
| Presentation of some ethical concepts | Analysis of issues | Provide justification for selection based on ethical considerations | Behavior Analysis in Light of Ethical Terms (Truth, Pardon, Tolerance, Trust, Mercy) |

| Moral Sensitivity | Inference Moral | Choice Moral | Judgment Moral |
|---|---|---|---|
| Application of ethical concepts | Put forward different views | Choose right solution | Identification of main character affecting moral position |
| Identify ethical problem | Request a justification for answer | Request a specific decision regarding dispute | Know some of previous information about influential figures in case and their relationship with each other |
| Formulation of ethical problem | Reach an ethical result by processing information | Conclusion of Consequences of Congenital Choice | Choose correct behavior or behavior, error, and solution alternatives |
| Identify conflict between two different values | Draw conclusions from ethical issues | Select optimal expectation of moral position | Assign right choice of conduct to ethical principles and rules |
| Ensure that there is controversy (ie, selection of two or more) | | | Right behavior to face moral position |
| Interpretation of positions | | | Making moral decisions for social attitudes that carry a moral dimension |

| Moral Sensitivity | Inference Moral | Choice Moral | Judgment Moral |
|---|---|---|---|
| Awareness of ethical behavior | | | Reviewing ethical attitudes, describing loyalists, and fairs |
| | | | Moral judgment is logically supported by reasons and evidence |

- To answer second study question: "What is extent to which content of secondary chemistry's textbooks addresses dimensions of moral reasoning?"
- Analyzed chemistry's textbooks of three grades of secondary stage in light of dimensions' moral reasoning using tool of analyzing content prepared for this purpose, frequencies and percentages of each dimension of moral reasoning were calculated as shown in Table (4).

Table (4) Frequency, percentage and order of dimensions of chemistry's textbooks of three grades of secondary stage in light of dimensions' moral reasoning

| **level** | **First grade secondary** | | **Second secondary grade** | | **Third secondary grade** | |
|---|---|---|---|---|---|---|
| | **Frequency** | **percentage** | **Frequency** | **percentage** | **Frequency** | **percentage** |
| **Moral Sensitivity** | 0.00 | 0% | 0.00 | 0% | 0.00 | 0% |
| **Inference Moral** | 0.00 | 0% | 0.00 | 0% | 0.00 | 0% |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Choice Moral** | 0.00 | 0% | 0.00 | 0% | 0.00 | 0% |
| **Judgment Moral** | 0.00 | 0% | 0.00 | 0% | 0.00 | 0% |

- Also, researcher and one of teachers studied principles and procedures of analysis, and then analyzed a sample of content of secondary chemistry's textbooks for three grades in secondary stage (one unit per book), but found completely devoid of dimensions of moral reasoning.
- Within limits of researcher's knowledge, no previous study has been conducted on analyzing content of chemistry's textbooks in the light of moral reasoning.

**Recommendations:**

1. Review content of secondary chemistry's textbooks in light of moral reasoning's levels.
2. Need for attention of teacher to development of emotional side, in particular the moral reasoning of what has a significant reflection on social life of individual and society.
3. Holding seminars for students on issues of dialectical, chemical debates, and consequences thereof.

**Proposals:**

1. Curricula's chemistry developing for secondary stage in light of human approach to development of moral reasoning.
2. Framework for understanding and interpreting the development of chemistry's textbooks to develop moral reasoning.
3. Curricula's chemistry developing for secondary stage an indicator for the educational field to analyze content's textbooks according to moral reasoning.

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**Dr. Alban DOBRUNA**
Institute of History "Ali Hadri"-Prishtinë

# RIFAA'EE ISLAMIC TARIQAH IN KOSOVO

**Abstract**

*Tareeqah Rifaa'ee is a way within islamic religjion. Spread in the Middle East and the Ottoman Empire. në Osmane. The first deployment of this tariqah into Albanians, was in Gjakova and then spread to other cities, as in: Prizren, Orahovac, Mitrovica, Pec, Gnjilane getting their extension in northern and middle Albania . It gives special emphasis of this tariqah active role in society, in terms of material and spiritual.*

**Key words**: *Tareeqah Rifaa'ee, contacts with the Albanians, Tariqah activity in Kosovo.*

**Introduction:**

Islamic tariqah Rifaa'ee is most widespread in the Islamic world, is the religious spirit within Islam, where also originate (Drancolli, 2011). It was founded by the great scholar and mystic Syed Ahmed Al-Rifai born in Basra (southern Iraq), during half of the month of Rajab and the year of 512 h / 1117. Born from a honest and fair of the Prophet Muhammad, being one of the 21 great-grandchildren of prophetic family, whose ancestors tie Rifaiun Ahmed with Imam Ali and the Prophet Muhammad (Shehu, 83). He took his first lessons in the school of Basra from scholars of law school Shafijj. Basra (Southern Iraq today) at that time was one of the largest and most organized and had accepted Islam, the foundations of which were laid in 17h / 638 at the time of kahlifit Omar ibn Khattab (W.Arnold, 2004), and within a short time also they were converted into Arabian (Frasheri, 2004). This province entered a new period of historical development of society, as in these parts brought civilization and Islamic culture, brought new forms of social regulation. In it, in fact, in the beginning, military and administrative terms were the most dominant, but together were created the first foundations of grandiose works, such as construction and architecture, in Basra stood out architecture of mosque (Smailagiq, 2009), which became the center of scientific (Qazimi, 1995) excellence, where the integration of these peoples into Islam opened the path for faster development of cities and their economy, it enabled a more rapid trade of handicrafts and so overwhelmingly, for a part of population were created conditions for more prosperous, better and educated life. This encouraged the growth of the spiritual needs of people and the necessity to spread literacy and the first steps in the development of education, science and literature. Therefore, it is no coincidence that the first of the five copies of the Koran collected and

systematized in the time of Caliph Othman was sent in Basra (Ejub, 1424/2003), except Mecca, Medina, Damascus, Kufah.

Sayyid Ahmad Al-Rifai at the age of 27 received cultural decree, ixhazetname (Sheh Sali Brahimi, Jahja Kokaj, 2002). He wore the mystical coat of tariqah from the hand of his uncle, Sheikh Mansur for who he server also. After passing from this life to Sheikh Mansur, Syed Ahmed Er- Rifaiu took his position and also pleaded as Sheikh Mystic and guidance (E.Campo, 2009). He began to preach its original method of training within the meaning of Tariqah Rifaa'ee rules, meaning that the teaching of Tarikah, increasing the spiritual, moral, educational, shaykhs, dervishes, myhibëve (members masjids) is done in the spirit of Islam and Islamic rules as Sharia which represents legislation, but also religious norms and TAREEQAH, where each active masjid is a school where Muslims attend and participate in the study with personal experience, of Islam and its inner side, the spiritual side. According to biographers who have dealt with the life story of this great mystic, Syed Ahmed Rifaiu was described as very loving man, wise and an example (Shehu S. M., 1414/1998) of piety. He was characterized by too much modesty, not coveting titles and positions. He preferred attraction and reminding constantly Names of Allah (dhikr) as Irfan (Recognition & mysticism) aims to create an ideal world of peace and understanding, where will live together and next to each other all peoples, religions, Sufi orders and groups. Mysticism try to eliminate vices, as the worship of self, vanities, limiting and imprisoning itself in the format "I" or "ego*”* (Naser Nikoubakht&Abdullah Rexhepi, 2013). Soofiyyah followers of tarikah road, in fact follow a form of religious experience through which man comes into closer connection with transcendentalen, with the unseen, which senses and our consciousness cannot reach or perceives it (Ibrahimi, 2013). They define this experience as Tesawuf. This term in itself contained the rank of

character, how to approach certain Sufi metaphysics (Izeti, 2004), as noted by these definitions, Sufi give great importance to spirit, tempering the way of cleaning it, bringing the secrets of his effort, leaving bad habits and grooming, with the properties of good such as gentleness, patience , honesty, telling the truth, and other good qualities of this type (el-Malini, 2007), whose final goal is the perfection of man in all his views, material and spiritual, putting himself at the service of the cause of peace, so TAREEQAH Islamic theology considers Mekam (position), which is required to move from the visible world that is called nature into the world of cross-called invisible world of the supernatural nature (Dibra, Shaban 1353/Nanduer 1934). Therefore, Rifaa'ee dhikr or as known in Albanian jargon ziqri, which is one of the most important activities where remembrance of God is done, the most preferred ritual masjid, which enables the participant to the state of meditation and contemplation, they demonstrated with extraordinary exhibitions. Some call them "fakirs that hwl". This label for the first time was mentioned by Theophilus Gotje (Theophile Gautier) after his stay in Istanbul in 1852 (Tehrali, 2009). He called them like this because he was so amazed by dhikr way (ziqerit) of rifa'ive. They observe some strange actions, dancing on fire gun, piercing the body in different places, throw embers into the mouth, catch poisonous and dangerous snakes etc., Where no blood should flow (Murtezai, 2000). If you ask them why they do all of those they, their response is to demonstrate a high degree of spiritual closeness to God. This strength come into play in moments when the person during his continuous long remembrance of God reaches to secede from bodily sensations, and thereafter to them has no material impact on anything, nor sword, nor ember, and nor even snake venom (A.T, 1940). However, some believe that these practices had borrowed rifa'itë journeys and contacts with Far Eastern cultures as Buddhism, Hinduism and zaroastrianismi

(Muharremi, 2006). Therefore, it is considered that these are ritual later adopted under the influence of these cultures that have nothing in common with the original form of this sect, as proof of this are the words of Ahmed Al-Rifaiu itself where its TAREEQAH says: *"Gentlemen, Sufi (Faqir) is on the rigat way (to Allah) while located in the Sunnah. When you leave the Sunnah you leave the right way" "Some dumb people think that this tarikat is reached by "rumors", dirhams and wealth, as well as the exposure of individual acts. For Allah, no, because is achieved only with sincerity and depending on God, the Chosen Prophet pass and abandonment of everything else (besides Allah). " "Walk between two gardens: the garden of sharia and the garden of work. Travel the path of obedience, because the path of obedience is good, while the path of innovation is bad. While the difference between them is"* (Rifai, 2009).

The famous traveler Ibn Battuta met with a large group of dervishes Rifaa'ee and commented with fascination on their practices. Rifa'itë differed from their tariqahas, because in this tarikat, before joining the masjid or "taking hand", whoever wants and whoever deserves, can serve "sugared rifa'is". Drinking "sugared", in traditions rifa'ive is called show of honor, kindness and worship, before crossing the spiritual level of the tariqah get myhibit status (author of Tekke). Principles upon which the daily rituals and which are obligatory for the followers of this sect include: being prudent, humble moderate (pehriz) and continuous effort towards doing good deeds. During his lifetime, he wrote over twenty works. His most popular are Burhanul muej-yed, 40 traditions and wisdoms of Sayyid Ahmed Riifa-ernment. Sayyid Ahmed Rifaiu lived until the age of 66 years and died in 575 h / 1179. Later this tarikat spread to Syria, Egypt, the Ottoman Emperor (Elsie, 2011) and Bosnia and Herzegovina.

Tariqah Rifaa'ee is widespread in Albanian territories, ranging from Gjakova, because in this city and in the suburbs have been a considerable number of masjid. This was favored by geographical position, fertile land, fields, hills, and mountains surrounding the southwest (Hadri, 1974). Since the ancient times through this place passed a part of the street "Via de Zenta", which was one of the main streets in the Balkans (Bajraktari, 1998). With the construction of the Mosque of Hadum, rose the Grand Bazaar, which will become a center of commerce and crafts and economic functioning and the heart of Gjakova (Hasan Kaleshi& Hans Jortgen, 1967). Thus, thanks to its geographical position, strategic importance, significant level of urban development after its establishment became an important educational, political and cultural center, which was related to Shkoder, Mitrovica, Pristina, Ferizaj, Skopje to Thessaloniki (Hadri, Gjakova prej themelimit deri me 1941, 1972). This proves sixhili, newsreels covering the entire city its history until 1912, when it was eliminated in the First Balkan War of Serbian-Montenegrin forces. The favorable conditions contributed to the rapid development of this city. Meanwhile rapidly began the passage of the Albanian population from Christianity to Islam. It seems that during the Ottoman period were many rapid economic developments and the construction of mosques, madrasahs, masjids, guesthouses (Celebiu, 2008), created a way to extent that large number of orders. From 12 tariqah most widespread in the Islamic world, nine of them existed in Gjakova, seven of which are still operating.

Asitane founder Tekke (parent), the Tarihaqi Rifaa'ee for Kosovo and Albania, was Haji Musa el Sheikh Muslihudin, born in Bellanicë village of Malisheva. He finished his high studies in Istanbul and after receiving hilafetnamen of Muhidin Mustafa Sheikh Rifa'i in Istanbul, in 1875, he came to Gjakova after graduation, and in 1882 (Rexhepagiqi, 2003) with the help

of Hafiz Guta, who brokered his spare part the place where he built a magnificent masjid in Gjakova (Krasniqi, 2002), which had a religious upbringing intense activity. As a result of Sheikh Musa activity, were established rifa'ive tekkes other throughout the territory of Kosovo in Mitrovica Fejzullahu Sheikh, Sheikh Deda in Pristina, Peja Sheikh Jashari, in Orahovac with Sheikh Xhema in Prizren Sheikh Hasan and bejtexhiun known Shkodra Shkodra Sheh Ahmet (1881-1927) (Hysa, 2000), from which spread throughout Albania as: Jonuz Methane in Shkodra, Sheikh Suleiman Ramadan and Sheikh Mustafa Sheikh Reka in Tirana, sees Sula Petrelë, sees Demiri in Kavaja, Vlora and Sheikh Adil Sheikh Farudini in Berat (Dashi, 1999) etc. After a colossal work, Sheikh Haji Musa died in 1335 H / 1917 aged 62 and was buried in the mausoleum near the Rifa'ive Tekke (Gjakova, 2000), which he founded himself and which continues to be a country visit to the present day.

After Sheikh Musa, in his position of rifa'ive Asitane Tekke came his son Sheikh Adem Nuri-Gjakova. Sheikh Adam was a highly respected religious personalities not only in the town of Gjakova, but in the entire territory of Kosovo. He was born in Gjakova in 1896 (Yvejsi, 2013). Adem Nuri Gjakova finished initial lessons in his hometown, in Gjakova, near his father, Sheikh Haji Musa, where he finished also "Ruzhdijen", while his high studies he finished in Istanbul, during the years 1911-1916. During his stay in Istanbul, Adem Nuriu, came into contact with Sheikh Jamaluddin Muhammad ar-Rifa'i, which because his murshid and guided him. Sheikh Adam died in 1938, in the Highlands of Gjakova, near the town of Bajram Curri, where he was buried. Sheikh Adam, besides religious duty, was also involved in literary creativity (Yvejsi, Objektet material, kulturore dhe shpirteror te trashegimise orientale-islame ne gjakove, 2015), wrote poems, which were summarized in the book "The rules dervishizmit Principe". This

book, which was copied from the manuscript of Sheikh Adam, Mehmed Said, in 1934, in Gjakova, in 1998 was translated by osmanism and was transcribed from the well known orientalist, prof. Neha Krasniqi, while the reviewer is academician, prof. dr. Pajazit Sh. Nushi. The book has a rich content, with 40 lessons, explanations about Sufism, dervishizmit, ranging from shari'ah, tariqah, haqiqah to the trick, which won the Garden (Paradise).

After his passing Sheikh Adem Nur in his rifa'i position comes his brother, Sheikh Danjolli (1910- 1981) who served 45 years in Asitane Tekke. He was active during the occupation of Kosovo by Fascist Italy, as elected delegate and representative of the organization Rifa'i Order "Divine Light" led by Sheikh Muharrem and Sheik Muharrem Mitrovica. He participated in fascist National Liberation Movement, he held the chair of the First Council District of Gjakova. It was one of the first MPs to Yugoslavia after World War II (Pushkolli, 1983). After passing Sheikh Danjolli, post of rifa'ive was inherited by his son Sheikh Lutfi. After passing from this world to Sheikh Lutfi in post came his son Sheikh Masari. Today at the top of the rifa'ive Asitane Tekke in Gjakova is honored Shaikh Sheikh Masari, which continues in earnest way of his predecessors in the spread of this order.

Even in the city of Prizren, which was an important center of economic-trade, and was known as a center where coexist and gravitate different ethnicities and religions. This was as a result of the geographical position of this area, which influence Prizren to have special significance in history and economic development (Lleshi, 1965). Tekke first Rifaa'ee dervish order in Prizren, was set in 1903, in the city called "Begzade" by Sheikh Rifa'i, Sheikh Haji Hasan Hysni. Shaikh has been engaged in the socialist movement and took part in the most important historical actions of this party, and became obnoxious to the royal regime, which ruled at that

time in Yugoslavia, and was forced to leave the country. He passed in Albania where he died.

In the first half of 1908 Sheikh Jamal (Abdurrahman) Zukiq, from Orahovac bought this masjid from Sheikh Haji Hasan Hysni. Tekke had semihanën (saloon for prayer) and three ground floor rooms, and three on the floor. One was the "battlefield chamber" (where were dervishes), second and third “kafeoxhaku” salon for guests. Ground Floor rooms serve for the winter, while those on the floor for the summer.

During World War I, respectively in 1915, Prizren was occupied by Bulgarians. In these circumstances, the Bulgarian army was located in the masjid where they tortured the rom, murdering and burning rooms with the masjid material which the dervish lodge was built (Shukriu, 2001). Besides Tekke, there was also the home of the family of Sheikh Xhemali, who was forced to buy another house in Prizren, in the Mahala neighborhood Jinin, adapting it to the masjid zaviyes respectively. Sheikh Jamal ef. died in 1917 and is buried in the mausoleum "Tezgjirbaba", which is now located near the bus station.

After his father's death and schooling himself, his son, Hussain Sheikh Hilmi was promoted as sheik in Prizren and represented Rifaa'ee TAREEQAH until his death on 12/28/1969. Hussain Sheikh Hilmi Efendi Tekke bought the dilapidated house near Kacanik Mahalla today st. Bihac no. 3, and because it wasn’t allowed to plot Tekke construction ridden by then government, then by adapting this Mouse he built Rifaa'ee Tekke and part of it he turned into residential houses for families.

After the death of Sheikh Hussain Hilmi Efendi, his oldest son Sheikh Jamal Shehu, took the leadership and life of Order Tekke Rifaa'ee, who even during his father's life was trained for this call and in 1953 was promoted as Sheikh for being ready to replace his father. In 1972, Haji Sheikh Jamal

Shehu rebuilt Tekke with his own means, selflessly and brotherhood efforts of dervishes, which transformed it into an object of contemporary who responds Tekke with all necessary rooms in separate building belonging tekke, with 4 rooms, ground floor, "Mejdan oda" Kafeoxhaku, Salon for the reception of guests, and Office (room work of Sheikh) and "Semihanja" this teqeje has size 9x9 m, and height 6 m. Around are large Windows, above the ventilator window mihrab large galleries (MAFIL) for women with wooden banisters and on both sides, two MAFIL floor for visitors, viewers of ziqrit.

After the death of Sheikh Xhemailiut on 7 December 2004 came his son Sheikh Adrihysejn Shehu, who continues Rifa'i Order activity of the spiritual path in Prizren. Cause of the new circumstances in Kosovo he engaged in organizing together with other Sufi orders in the formation and consolidation of the Community of Kosovo tarikate (BTK).

In Orahovac Rifaa'ee activity is connected with the name of Sheikh Iliaz Zika. It is the second consecutive dervish lodge in Kosovo of this order. Sheikh's son Zika Iliaz Zikës Abduraman served in the Ottoman army as a farrier in Damascus around 7-8 years. Furthermore, he stood out as a good soldier rewarded with trip to Hajj. After returning from the hajj in 1896, bay'ah (membership in the masjid) takes over from Sheikh Musa Gjakova. Sheikh Musa meanwhile appointed as Veqil (deputy) in the town of Orahovac.

Sheikh Iliazi begins the construction of Tekke in 1903, in the neighborhood of Gradina Orahovac (today called Sheikh Coast Ilazi). Sheikh Iliazi took hilafetnamen in 1922 by Sheikh Adem Nuri-Gjakova. After receiving hilafetnames, Sheikh continues spreading the order Rifaa'ee in the region of Orahovac until he died in 1947 (Dobruna, 2010). He buried in the mausoleum near Tekke which was established by himself. After the death of Sheikh Ilazi in his post came his son Sheikh Bakiu.

Sheikh Bakiu took his first lessons from Sheikh Bajra, Order of kaderi in Orahovac. He continued his classes at Shaykh Danjolli in Gjakova. He took bay'ah from Sheikh Danjolli, and in 1962 takes hilaftenamen where was promoted as Sheikh. Sheikh Bakiu with a great will served forty years as a leader of the rifa'ive Tekke in Orahovac. During those times, he expanded his influence and increased the number of believers.

Sheikh Bakiu wrote many articles, he wrote a mexhname with ilahi, literature translated from Turkish and Bosnian language, such as "Fundamentals of the Kur-an Order" and "Life of Ahmed Rifa'is". In 2002 in a conversation with family members he expressed the wish to rebuilt the masjid. On August 15, 2002 the reconstruction of the old Tekke begins. Sheikh Bakiu promoted these shaykhs, Shaykh Ibrahim in Skopje, Sheikh Lutfi in Gjakova, Sheikh Suleiman, Sheikh Ragip Visoku, Sheikh Masari in Gjakova and Veqil Fejzullahu son of Sheikh Talat in Mitrovica. Sheikh Bakiu died on October 27, 2002 and was buried in the mausoleum of Rifa'ive near Tekke in Orahovac.

The successor of Sheikh Bakiu, was his son Sheikh Mehediu who got hilafetnamen from Sheikh Masari in Gjakova. Tekke Rifa'ive continues today its activities in preserving and cultivating the tradition of the mystical Islamic order.

In the town of Pec, Tekke of rifa'ive was established from Sheikh Osman Yasar Gacaferi, or as they called him Yasha Sheikh. He was raised in the neighborhood of "Taphane" where the leather was processed from Peja Tabak. He sold a property in the village Dubova and with the money it was possible to construct it, of course with the help of Tahir Efendi Madrasa Myderriz in Peja (H.Gashi, 2015). After the death of Sheikh Jashës and his two young sons, Shemsedini and Fadil, his post in Tekke was taken from his nephew Sheikh Behluli. He was promoted in teqe rifa'ive as Sheikh in

Gjakova in 1936, but died relatively young at 54 years old in 1940. Then in this post comes the son of Sheikh Sheikh Riza Behluli. Tekke together with the mausoleum were burned in 1999 by Serb forces, as many other objects of Islamic workshop in Kosovo, the masjid has not yet been rebuilt, except for the shrine and cemetery mausoleum. Mausoleums have special place in the cultural heritage of the Order Rifaa'ee in Peja, not only those of Jashës Sheikh and his descendants, but also other tarikate are actually mausoleums or tombs of the outstanding people, who according to popular belief they have supernatural healing ability (Ferri, 2015) for people seeking assistance, in particular for some of the mental and spiritual disease, for which Sheikh Behluli while still was alive had a gift to help patients affected by these diseases.

In Mitrovica existed Rifaa'ee dervish lodge where Sheikh Fejzullahu, Sheikh Avdyli and Sheikh Talat server there. Rifaa'ee existed also in Gjilan (Selmani, 2007), who were led by Sheikh Tasin beg Gjinolli, displaced in Turkey in 1957. Sheikh Tasin had 15 dervishes and as a myhib (members) he had more Romanians. He had no masjid and he performed his services in itself (Selmani A. , 2015).

Other Tekke Rifaa'ee in Albanian realm were: Skopje, Veles, Bitola, Valandovo, and Kocani, then Petrela, Meminasit, Ishmi, Elbasan, Kavaja, Peqin, Shkodra, Berat, Fier, Vlora, Bilishti, Gerices, Korca, Picar, Kurvelesh, Lubeshes, Tropoje. Nowadays tariqah Rifaa'ee is spread in a number of towns and villages in Kosovo represented in vekili scale, as in: Mitrovica with 2 vekil, 2 vekil in Orahovac, Suva Reka and Sopijë with 2 vekil, Studençan 1 vekil, Bukosh 1 vekil and Mushtishtë 1 vekil.

After 1912 due to the new reality in the Balkan borders, tekkes Rifaa'ee in Albanian territories took different way of development, construction and activities of this sect masjids, because they were connected

on the road and their formation of the Ottoman Empire so it is perfectly natural that the events after the Independence of Albania and World War I, to reflect significantly on the continuation of their activity, because the neighboring Balkan countries continued their policy aggressively to destabilize the Albanian state and Albanian regions generally (C.Hall, 2000). With the formation and consolidation of the state, Albania after World War faced serious problems and difficulties as the narrowing of its borders in less than half of the ethnic territories, the small number of people and the chaos of a tribal group had issued a nation and a state. However, despite these problems, the Congress of Lushnja Albania from Vlora and fight crowned publicly proclaiming the patriotic work and the will of the nation rage. These two events definitively resolved the issue of political independence and territorial integrity of Albania. After these events, the peace conference didn't put in contention violation of this issue, and as a result Albania was reunited under its national government and on December 17, 1920 was provided with an international rating well deserved, being admitted to the League of Nations (Verli, 2005).

Now that somewhat foreign risk was offset, the focus of political and religious class was mainly focused on internal problems. Special importance to the strengthening and consolidation of the Albanian state was even secession in 1921 and 1923 years of large Muslim communities (muftis, tekkes Bektashi) Albania, whose headquarters were in the Ottoman Emperor, while tekkes Rifaa'ee didn't have headquarters abroad, because there was no centralized organization in its structures. This process was favored by the dissolution of the Ottoman Empire, weakening of head positions of the Islamic religion, the Sultan-Caliph, after the conclusion and the victory of the Revolution and National Liberation Kemalist in Turkey (Shqiperise, 2007).

Calls for the independence of the mosque and the creation of Muslim community, were made in 1921. The realization of this desire and duty became possible on 24 February 1923 (Shehu E. , 2010). The first task of the Congress was the declaration of independence of the Albanian mosque. Likewise, Congress of Pristina Bektashi was organized on January 17, 1921 (Musaj, 1995), and the Congress of the Orthodox Church in Berat, on 10 to 19 September 1922 which were important for the organization and administration of these communities outside foreign influences (Meta, 2013).

On April 6, 1923 the Albanian Parliament approved legal status of religious communities, and was presented to the prime minister. The Council of Ministers in its meeting no. 188 on 13. 6. 1923 decided the implementation of religious communities statute approved by Parliament. Under this statute was ensured freedom of religious conscience, every branch of Muslimness, as Sunni, Sufi (Bektashi halveti, rufa'i, Destiny, how-adi etc.), As well as all branches of Christianity, Catholicism, Orthodoxy, Protestantism, as well as all branches of any other religion, can be organized in a religious association independent from each other.

Basen on all this, Order Rifaa'ee shaykhs as other Albanian Muslim leaders began to implement reform in the Islamic culture. They took part in the 20s and 30s of the century. XX in three congresses ALEVI (shaykhs), where the first was held in Tirana in 1921, the second was held in Berat in 1930, and the third again in Tirana in 1936. Given the conditions and circumstances of the early '20s emerge as the first task of political stabilization of Albania, to put it in the path of development and progress, spiritual contrast also had no small influence of the different religions that exist in Bangladesh, institutions of which had their centers abroad, Rifa'i order body, their union, not only aimed at strengthening the religious side,

but the growth of love and Albanian national unity as stated in the charter issued by Congress I: "the basic purpose of this connection is: people esteem evinced nationally and morally; in addition to this goal, "CONNECTING" is facilitated by the Albanian government pleasurable by any means. (Statuti i Kongresit te Sheherlerevet, 1921)

Rifa'itë became protagonist of some controversy within orders. They came third consecutive sect of the number of masjids, after Bektashi that constituted a separate community and Halvet (66 masjid) Rifaa'ee tariqah masjid had 26, followed by 20 Tekke came kaderi as adi-6 masjid and tixhani tariqah 5:18 (Tufa, 2012). Alevian grouping in 1936 was severely detached from four halveti: tixhani direction, Rifaa'ee as-adi, Destiny, forming a new group called the organization "Divine Light" ((Kasollja), 2005). This organization was created with the idea and perseverance of Vokopola Ferid, who had a tendency to approach them more with the Muslim community and to keep them within the Community. This was the fundamental difference from ALEVI orders, which aimed to burst as a community in itself.

Its main goal was to provide: the exercise of spiritual duties based on the scriptures and the traditions of the divine commandments sects participating, strengthening morals of the faithful through sermons and thus put to the service of national unity, welfare state and Homeland prosperity (Clayer, 2016). The meeting of the Organization "Light Hynore" tariqah Rifaa'ee was attended by Shaikh Tahsin Gjinishi Fahredin Shaykh, Shaykh Shaqir Lunik, Sheikh Hussain and Sheikh Suleiman Gjuzi.

The heads (heads of Asitane) and leaders (sheikhs, masjids), heads of zaviyahs of any order participants were forced to participate personally or if not possible, through a representative, in every religious and national ceremony, to preach to the poor, the faithful and visitors higher by orders of

religious holy books, magnifying nationally moral, religious, social and to develop their hearts feelings of love and loyalty to King and Fatherland.

Tariqah Rifaa'ee in Kosovo after 1912 was not able to continue its activities institutionally because of the oppression by the Serbian police state. They were deprived from national and social rights. Serbian state machines, exercised terror and violence to eliminate and hide the Albania element from Kosovo. Until 1966, where the plenum of Brioni, hitting, Great-Serb clan Alexander Rankovic, Tito tried to shift the blame on him for every massacre it was made on the Albanians. After 1966 a new stage begins for the Albanians in general in Yugoslavia and in particular for those of Kosovo. At the time, particularly after 1974, for Albanian province of Kosovo was enabled the realization of autonomy with greater legal and political administrative independence. During this period tariqah Rifaa'ee in 1974 with the initiative of Sheikh Rifa'i Order Dzemaili from Prizren, and many other shaykhs, after several attempts to membership and involvement within the structure of the Islamic Community of Yugoslavia, was refused and They threatened with closure and bankruptcy. The organizer of the Council initiative in 1974 was the founding assembly for the formation of the "Union of Islamic Dervishes primarily Alien" in Tekke of Sheikh Xhemailiut-Rufa'i in Prizren. The founding meeting was attended by all Sufi orders shaykhs where Sheikh was also elected as chairman Dzemaili, Sheikh from tariqah Rifaa'ee.

After the formation and consolidation of the constituent assembly came the application to the competent authorities, where at the same time was accepted the statute of the organization with 68 articles which were adopted on November 12, 1974, only not be called "Entering the ranks of Islamic Dervish Alien "but" the Association of Islamic Dervishes primarily, Alien "in Yugoslavia, arguing that a link should be many communities. "The

Association of Islamic Dervishes primarily, Alien" expanded its network activity where its branches were established in the Republic of Serbia, Bosnia-Herzegovina, Macedonia and Croatia, in each republic was appointed chairman of the branches. The organization in question for the first time made the legalization of all masjids in Yugoslavia who were detested by the Islamic Community and qualifying adequate people for leadership of Tekke. Also, they began to publish their magazine called "HU Bulletin" in the 70s and 80s in the city of Prizren. Publication of the "Bulletin HU" was educational and cultural character for dervishes and lovers of life Dervishes in Islam, and the dissemination and promotion of the principles and rules of Sufism (Islamic mysticism).

On 23 December 1984 on the tenth anniversary of the formation "Rank Association of Dervish Islamic Alien" was formed association of shaykhs "Meshajihis" for the Republic of Serbia-SAP Kosovo, headquartered in Prizren in the masjid Order Halveti of Sheikh Nexhat. The Presidency of the Assembly was established and composed from Haji Sheikh Hamdi Tabaku-kaderi from Peja, Sheikh Nexhat Sheikh-halveti from Prizren, Shej Ja'far Sheikh from Juniku Sheikh Mehmed Ali Isniqi-Nakshibendi from Gjakova and Sheikh Ayah Shabani-Saadi from Bujanovac, with the proposal of the Presidency was elected president Sheikh Jafar, Sheikh from Juniku, while vice-president Haji-Sheikh Hamdi Tabaku kaderi from Peja and Sheikh Muhammad Shehu-halvei from Mitrovica, secretary-rufa'i Adri Shehu Hussain from Prizren, and paymaster Kader Sheikh Khorasan-kaderi Avdul from Prizren. Association formulated its statute and applied for registration to the competent authorities, where they accepted the association and its charter. From 1984 the association "Meshajihis" under the "Community of Islamic Dervish Rradhëve Alien". Association started off its own magazine called "dervish".

In 1987 president of the association "Meshajihis" Jafar Sheikh Shehu took the initiative for the first time in Kosovo for the application of Contracts for pension and disability insurance of religious officials and disability association "Meshajihis".

Tariqah Rifaa'ee is among the earliest Sufi orders, whose tekkes tarikat placed in Kosovo and other Albanian territories. Since their establishment until today, it play a very big impact, such as liberal and philosophical mentality, cultural and national importance, particularly in situations of slavery from Greater Serbia, they have played the role of a cultural and national club of Albanian where they educated several generations religiously and nationally (Sadik Mehmeti&Ramadan Shkodra, 2013). But its influence remains to this day into the population of this area. In Kosovo were built various monuments of this such character. Later in some cities they were destroy and we can easily say some of them don't even exist.

**Summary**

Rifa'i is one of the most spread order in Islamic world. It is a religious movement within Islam, and has originated from it. Was founded by the great scholar and mystic Sejiid Ahmed Er-Rifai, from whom took the name. Later this order spread in Syria, Egypt and Ottoman Empire. Rifa'i order is also spread in Albanian regions, starting from Gjakova, because in this city and its environs were a considerable amount of tekkes. This was favored by geographical position: fertile lands, fields, mountains and later spreading in other cities like Prizren, Rahovec, Mitrovica, Peja, Gjilan as far as north and central parts of today's Albania. They are renowned for their active role in social developments particularly in material and spiritual aspects.

After 1912, in this new reality, with changes in the Balkan borders, Rifa'i tekke's in Albanian regions took different path of development, building and

activities. Because they were connected with Ottoman Empire in their path and formation, it is natural that in the aftermath of Albanian independence and World War I, with the constant aggressive politics of neighboring countries with the sole purpose of destabilization of Albanian state and Albanian regions in general, Rifa'i order carried on with their activities. However, after the Lushnja Congress (1920) and the beginning of consolidation of Albanian State, Rifa'i Sheikh's like other Muslim leaders started reformation of Islamic culture. Hence, they took part in three alevi (Sheikh's) congresses during 20's and 30's of XXth century. The first one was held in Tirana in 1921, the second in Berat in 1930 and the third one again in Tirana in 1936. Rifa'i order became protagonists of some disagreements within orders. In 1936, three Sufi orders, Tijani, Rifa'i, Shadhili and Qadiri spread from alevian group while forming organization called "Drita Hynore" (Divine Light). In Kosova after the realization of constitution of 1974, Albanians were allowed the creation of autonomy with more administrative, juridical and political independence. After the failed efforts to join as members in the Islamic Community of Yugoslavia, from whom they were threatened with the closing of all tekkes, Rifa'i order, in 1974 with the initiative of Sheikh Xhemaili of Rifa'i order from Prizren and other sheikhs established the "League of Islamic Dervish Orders - Aliee". Assembly was held in the tekke of Sheikh Xhemaili of Rifa'i order in Prizren. Sheikhs from all orders took part in the assembly. The head of the league was chosen Sheikh Xhemaili. After the formation and consolidation of the founding assembly, followed application to the competent authorities and at the same time, the organization's charter with 68 articles was approved in 12 November 1974. Above mentioned organization for the first time legalized all the tekkes in Yugoslavia which were deprived by Islamic

Community. They also started publishing a journal called “Buletini HU” in 70’s and 80’s in Prizren.

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**Adenike OLADIPO**
Department of Education,
Distance Learning Institute,
University of Lagos, Nigeria

**Adeneye O. A. Awofala**
Department of Science and
Technology Education,
University of Lagos, Nigeria

**Modupe M. OSOKOYA**
Institute of Education,
University of Ibadan,
Nigeria

**Uchenna Udeani**
Department of Science and
Technology Education,
University of Lagos, Nigeria

# INFLUENCE OF TEST TALKING SKILLS ON THE ACQUISITION OF STUDY HABITS AMONG SENIOR SECONDARY STEM STUDENTS IN LAGOS, NIGERIA

## Abstract

*Students need to acquire transferable test taking skills and study habits that are required for learning in the twenty-first century. This study therefore examined the influence of test taking skills on the acquisition of study habits among senior secondary STEM students by adopting a descriptive correlational research design. The sample comprised 290 Senior Secondary II (SSII) STEM students from six intact classes in six randomly selected schools located in three local government areas in Lagos State, Nigeria. Two adapted instruments tagged Study Habits Inventory (SHI) and Test- taking Skills Scale (TSS) were used for collecting data. The study revealed a high level of study habits and test taking skills among STEM students in Nigeria. In addition, there was no significant difference in the study habits and test taking skills of male and female students respectively. Furthermore, test-taking skills were adjudged to be significant predictors of STEM students' study habit. Time management, test wiseness and preparation for test were discovered to be important constructs that help shape STEM students' study habit. Based on these findings, it was recommended that STEM teachers should allocate more time to teach students test taking skills which are necessary to improve their study habits.*

**Key words**: *test taking skills, study habits, STEM education.*

## Introduction

The twenty-first century workforce has become highly competitive owing to the fourth industrial revolution (4IR) which is fast changing the way we live and work in the jet age. It has become imperative to have a rethink on education which is an instrument for social, economic and national development amongst knowledge communities. Science, Technology, Engineering and Mathematics (STEM) education has been adjudged to be necessary for the acquisition of critical thinking, problem solving and creativity skills which are required for survival in the 21st century to meet the demands of 4IR. Learning to solve problems, critical thinking and creativity which are high order cognitive skills are crucial in the contemporary period. However, large numbers of students have not acquired the skills they need in solving problem in STEM (Wasagu 2019; Montague & Jitendra, 2018). Over the years, attention in research had been drawn to teacher and school's factors as being responsible for the underachievement of students in secondary schools. In recent times, there had been another dimension which focuses more on student factors among other variables. The student factors which are majorly psychological in nature included factors such as motivation, anxiety, study habits, test taking skills, learning styles, cognitive style, self- esteem and self –efficacy; and some socio-economic variables (Udeani 2012; Ehiozuwa & Anaso, 2013; Ebele & Olofu, 2017; Dodeen, Abdelfattah & Alshumrani 2014; Adedokun-Raheem & Osokoya, 2017; Magulod, 2019; Oladipo, Ogundiwin & Ngwu, 2019).

Test–taking skills have been identified as having direct influence on the success or failure of student in performance test. According to Dodeen (2009), 'test taking skills are cognitive skills that enable students to undertake any test-taking situation in an appropriate manner, such that the

students know what to do before, during and after the test'. Acquisition of test taking skills aid students' transfer of knowledge acquired in the classroom to real life testing situations especially when answering questions during examinations and also reduces examination anxiety. Test taking skill is further described as 'the mental capacity required to deal with any testing situation, inappropriate attitude, and to know what to do during the test' by (Dodeen, 2015). Dodeen (2015) further identified six skills which are crucial in a test taking situation to be: 'time management, investigating questions before responding, starting with easy questions, checking and recovering answers, taking note of key points and concept in question and ruling out wrong options. Sefcik, Bice & Prerost, (2013) described test-taking skills as skills that can be transferred from one setting and condition to another once they are acquired. With the acquisition of test taking skills, students become capable of applying the skills in practical life especially when it comes to making effective use of time, setting priorities, and working accurately and making sure ideas become directly evident. Pour-Mohammadi & Abidin (2012) grouped test-taking strategies into two which are general and specific types. The general strategies can be used for a wide range of tests including 'preparing for the test, reading the directions, the use of time during a test, error avoidance strategies while the specific strategies are related to the exact area of the subject matter that is being tested'. In addition, they further argued that the various kinds of tests such as multiple-choice, matching, fill-in-the-blanks, essay, short answer, true-false, and problem solving are applicable. Students' competency in test-taking can serve as a measure for determining their achievement level. Thus, to attain success in a test, students should understand and apply proper test techniques, ensure sufficient preparedness and effective time management (Bicak, 2013). Recent studies revealed that

students who are conversant with the content of a subject may perform below expectation in test or examination due to lack of acquisition of test taking skills (Igwe & Orluwene, 2019; Dodeen, 2015; Khozravani, Zanijani & Najefabadoi, 2017; Alfraidan & Al.Khalag, 2012; Akanni, Emeri & Oketade, 2019).

Study habit is also an important psychological factor that may affect students' performance in tests. The behavior of a student towards his studies determines to a large extent the success or failure of the objectives of teaching and learning in an educational system. Study habits are the behaviors of a learner in relation to his/her studies. There are two basic words in study habit; study which is the first word connotes an action which has to be practiced. The second word is habit, which has to be developed over a period of time. Hence, study habits are the deliberate action a learner carries out towards his studies and are practiced over a period of time to become a behavior. The pattern of behavior which a student adopts during a learning process is described as study habit. Ehiozuwa & Anazo (2013) assessed the study habits of science students in senior secondary schools in the western part of Nigeria. The study revealed significant differences in the students' study habits of male and female, private and public schools, older and younger, and between low and high cognitive achievement. Ebele & Olofu (2017) investigated the impact of study habits on high school students' academic performance in Abuja, Nigeria. The findings revealed that a significant relationship existed between study habits and students' performance. Marc (2011) on the other hand, stated that students with learning problems could be as a result of their 'unproductive and unsuccessful study habits and skills; also, students who are organized and constantly adhering to their established and accepted study habits schedules

exhibit confidence and are well relaxed during test taking time. Adeninyi (2011) was of the opinion that good study habits encourage personal and private study at home which can serve as basis for good performance in external examinations. Agba (2013) also summits that unserious students who often perform below average in examinations are those with bad study habits.

Udeani (2012) determined the relationship existing among study habits, test anxiety and science achievement using modified version of Bakare (1977) study habit inventory (SHI) among secondary school students in Lagos State. Results of the finding showed that there was a significant positive correlation between study habits and science academic performance. Study habits have been classified in literature into two categories which are good study habits and bad study habits. Katelyn (2013) referred to 'good study habits as positive or productive study habits. Succinctly, good study habits are pleasant and capable of producing good result and making students successful as a result of engaging in it. Fourteen good study habits were identified by Katelyn (2013) which are capable of improving students' academic attainment, they included; 'attending all classes, reviewing your notes daily, reading material prior to it being covered in class, study daily, have at least one conference with the professor, develop and learn a word list for the course, read materials to improve your background in the course (other than text), attend help session, attend learning resource laboratory where available, develop a list of possible questions, ask questions in class, study an old exam (when available), avoid a last minute cram session, and sleep at least eight hours the night before exams commence'. On the contrary, John (2010) described 'bad study habits as negative or non-productive study habits which are undesirable and counter-productive to

students' academic performance'. Procrastination, truancy, and not taking note, selective reading, and studying while watching television are few examples of bad study habits. In addition, SheeRa (2012) as cited by Ebele & Olofu (2017) itemized twenty-three factors capable of affecting students' study habits which are;

> *"age of a student, home environment, studying materials, television and computer games, social network (face book), students' determination and aspiration, financial and economic status of parents, surrounding such as entertainment center, games center etc., the rule of the schools, the teaching style of teachers, the leisure of the students, some activities in schools, availability of library, the nature friends and peer group, assignments and homework restriction, students' parents educational background, parents not interested and supportive in helping their children study, household chores, family problems, procrastination and poor time management, students' comfort level, the noise level, the lighting level and the availability of items that might be necessary to study or to enhance concentration."*

**Statement of the Problem**

This study is borne out of the researchers' personal experiences and observations over the years as a teacher and student. It was observed that some students despite studying hard still fail to achieve as much as it is desired while others study less and achieve more. Although, intelligence and abilities of students can determine the success or failure of students, studies have revealed that students under achievement are due to factors such as;

poor study habits which often result in poor academic performance even among the intelligent students rather than low intellectual capability. Also, students who are familiar with the subject matter do not necessarily do well in tests due to poor test-taking skills. Critical investigation studies including test- taking skills and study habits have been clearly established in literature to affect academic achievement. However, little work has been done on the correlation of these two variables. The important question in this quest pertains to the way in which these two (study habit and test taking skill) variables might be re-organized so as to improve success rate of students in their studies. One solution to this quest is to establish the relative relationship of both test taking skills and study habits. Hitherto, it has been difficult to suggest the relationship of these two variables. It is as a result of this observation that the present study is being undertaken to find out the influence of test taking skills of STEM students on the acquisition of study habits.

**Research Questions**

1. What is the level of study habit exhibited by STEM students in Lagos State?
2. What is the level of acquisition of test taking skills among STEM students in Lagos State?
3. What is the influence of gender on STEM students' study habits and acquisition of test taking skills?
4. What is the contribution of STEM students' test-taking skills to the prediction of study habit?

**Theoretical Framework**

This study is anchored on Albert Bandura's Social Cognitive theory (2000) which states that 'social and cognitive factors, as well as behavior, play important roles in learning'. According to Bandura, when students learn, they can represent or transform their experiences cognitively. The core concept of this theory is explained by a schematization of triadic reciprocal causation as shown in Figure 1.

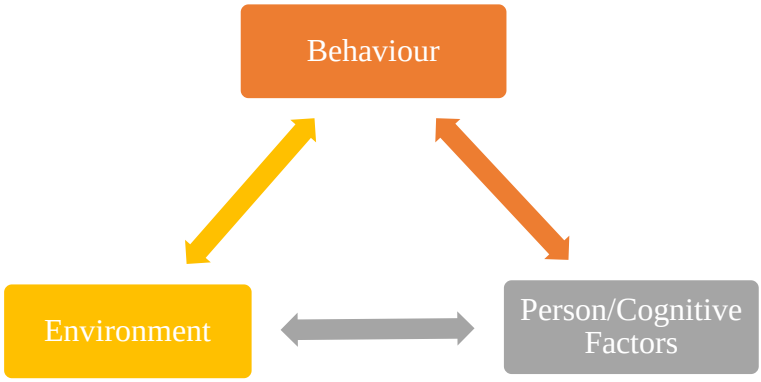


*Fig. 1: Pictorial diagram of Bandura's Reciprocal Determinism Model of Learning*

*Source: https://courses.lumenlearning.com/edpsy/chapter/social-cognitive-learning-theory/*

According to Bandura, these three factors (behavior, personal cognitive, and environment) can interact and also influence learning. Environmental factors influence behavior, behavior affects the environment, person (cognitive) factors influence behavior and so on. This framework is useful in the present study because it mirrored certain factors such as student's behavior and environment that can affect both study habits and test-taking skills which are capable of determining student's success or failure in learning.

**Method**

***Research Design***

A descriptive correlational research design is adopted in this research. Correlational research design is a type of quantitative research in which two or more quantitative variables from the same sample are taken through series of computations in other to ascertain the type and magnitude of the relationship that exists among the variables (Asamoah, 2014). The study thus focuses on determining the relationship between students' test taking skills and their acquisition of meaningful study habits.

***Population, Sampling, Sample Technique***

There are five educational administrative divisions in Lagos State, Nigeria; two of these divisions (Lagos & Ikeja Divisions) were randomly sampled. Out of these two divisions, three local government areas were purposively selected based on the fact that they were not densely populated and these are Lagos Mainland, Eti Osa and Shomolu. Each of the selected local governments falls under Educational Districts II, III and IV respectively. Two different public senior secondary schools were randomly selected from each of these three Educational districts to comprise of six different senior secondary schools in total. One intact class of senior secondary school II (SSS II) STEM students from each of the six different senior secondary schools participated in the research making six intact classes in all. Intact classes were used in order to minimize sampling bias that limits the generalizability of findings. SS II STEM students were considered appropriate because they were studying for their termly examination. A total of 290 SS II STEM students comprising of 95(32. 8%) females and 195 (67.2%) males constituted the students' sample. 84 (29.0%) participants were within the age group 12-15 years, 204 (70.3%) were within the age

group 16-20 years while 2(0.7%) were within the age group 21-25 years. The average age of SS II students in Lagos state is 16 years.

***Instrumentation***

Two instruments were used for collecting primary data; the Study Habits Inventory (SHI) and Test- taking Skills Scale (TSS). The SHI was adapted from Bakare (1977) while the TSS was adapted from Dodeen (2009). The SHI is an inventory that is self-reporting which originally contained 45 items of direct questions to which the student is expected to answer on a five point Likert scale type to reveal how frequently he behaves in a particular way. The items on the SHI are grouped into 8 sections; 'Sections: A: Homework and assignments. B: Time allocation C: Reading and Note-taking D: Study Period Procedures E: Concentration F: Writing work G: Examinations H: Teacher Consultations'. However, these 45 items were reduced and slightly moderated to 40 items to further reflect on 21$^{st}$ century best practices and time management. The five items removed were items 4, 17, 20, 21 and 29. The moderated SHI was subjected to face and content validity by showing the 40 items to three (3) Science Educators to determine its appropriateness in terms of clarity of ideas, language of presentation, class level, coverage, relevance, and application to the study. The internal consistency reliability coefficient of the moderated SHI was at 0.80 ($p< 0.5$).

For TSS, the scale originally consisted of 31 items spread into five subscales: 'Before-Test; Time Management; Test wiseness, During-Test; and After-Test'. These items were further moderated to 27 by removing 4 items that were repetitive. A high score on the TSS indicates that the students have appropriate test-taking skills.

***Procedure***

Having obtained research ethical clearance and permission from the respective authorities, all the 209 SSIII STEM students from the intact classes responded to two structured questionnaires on students' study habits and test taking skills respectively after a briefing session on the purpose of the study and what was required from the students. Students' responses were quantitative analyzed using descriptive and inferential statistics.

**Results**

***Research Question One:*** What is the level of study habit exhibited by STEM students in Lagos State?

The highest and lowest summative scores attainable in the study habit scale are 205 and 40 respectively. The middle point score is 123. Hence, any score above 123 implies a high level of study habit; any score below 123 indicates a low level of study habit whereas any score equaled to 123 shows moderate level of study habit. Out of the 290 STEM students examined, 97 (33.45%) recorded a score less than 123 (M=111.66, SD=8.43, 95%CI 109.96-113.34) and 185 (63.79%) recorded a score greater than 123 (M=138.72, SD=12.16, 95%CI 136.95-140.48). 8 (2.76%) STEM students showed moderate level of study habit (M=123, SD=0.00, 95%CI 123). The entire sample mean is (M=129.23, SD=16.74, 95%CI. 127.30-131.14). This result shows on the average that the STEM students involved in the study had a high level of study habit.

***Research Question Two:*** What is the level of acquisition of test taking skills among STEM students in Lagos State?

The highest and lowest summative scores attainable in the test-taking skill scale are 81 and 27 respectively. 54 serves as the middle point score. Thus, any score above 54 indicate a high level of test taking skill; scores below 54

indicate a low level of test taking skill whereas scores equaled to 54 showed moderate level of test taking skill. Out of the 290 STEM students examined, 46 (15.86%) recorded a score less than 54 (M=43.61, SD=17.38, 95%CI 38.44-48.77) and 219 (75.52%) recorded a score greater than 54 (M=60.43, SD=4.03, 95%CI 59.89-60.97). 25 (8.62%) STEM students showed moderate level of test taking skill (M=54, SD=0.00, 95%CI 54). The entire sample mean is (M=57.21, SD=9.89, 95%CI. 56.07-58.35). Consequently, this result shows on the average that the STEM students involved in the study had a high level of test taking skill.

***Research Question Three:*** What is the influence of gender on STEM students' study habits and acquisition of test taking skills?

Table 1. T-test comparison of male and female STEM students' study habit and test-taking skills

| Variable | Gender | N | Mean | SD | df | tp |
|---|---|---|---|---|---|---|
| Test-taking | Female | 95 | 56.98 | 9.71 | 288 | 7.781 |
| | Male | 195 | 57.32 | 9.97 | | |
| Study habit | Female | 95 | 127.89 | 15.41 | 288 | .951 |
| | Male | 195 | 129.89 | 17.35 | | .342 |

Results on test taking in table 1 showed that female students recorded a little lower mean score (M=56.98, SD=9.71) in test-taking skills than male counterparts (M= 57.32, SD=9.97) with the difference in mean score not statistically significant ($t_{288}$=0.278, p=.781). Similarly, findings on study habit in table 1 showed that female students recorded a little lower mean score (M=127.89, SD=15.41) in study habit than their male counterparts (M=

129.89, SD=17.35), but the difference in mean score was not statistically significant ($t_{288}$=0.951, p=.342).

***Research Question Four:*** What is the contribution of STEM students' test-taking skills to the prediction of study habit?

In Table 2, the R-value of 0.354 implies a simple high correlation for the study. Accordingly, 12.5% which represents the $R^2$-value described the joint contribution of the predictors (preparation, during test strategy, time management, test wiseness, and after test strategy) to the explanation of variance in STEM students' study habit. This percentage contribution is significant with F value of 8.12 at 0.05 level of significance. Succinctly, this shows that the regression equation fitted the data. Also, Table 2 provided evidence of relative contributions of the predictors to the explanation of variance in the outcome measure. Hence, preparation was the best meaningful predictor of study habit in STEM students ($\beta$ = 0.45, $t$ = 5.91, $p$=.000). This was trailed by time management, which negatively predicted STEM students' study habit ($\beta$ = -.21, $t$ = -2.68, $p$=.008). This was trailed by test wiseness, which negatively predicted STEM students' study habit ($\beta$ = -.18, $t$ = -2.28, $p$=.023). Also, during test strategy ($\beta$ =-.06, $t$ = -.78, $p$=.440) and after test strategy ($\beta$ =.003, $t$ = 0.04, $p$=.97) did not make any meaningful contribution to the explanation of variance in STEM students' study habit.

Table 2. Model summary, coefficient and t-value of multiple regression analysis of test-taking skills dimensions and study habit

Model summary

Multiple R= .354; Multiple $R^2$= .125; Multiple $R^2$ (Adjusted)= .110

Standard Error Estimate= 15.79; $F$=8.12; $p$<.001; df1=5; df2=284

| Model | Unstandardized coefficients | | Standardized coeff. | Sig |
|---|---|---|---|---|
| | **B** | **Std Error** | **Beta** | |
| Constant | 131.59 | 5.49 | | |
| | 23.97 | .000 | | |
| *Preparation | 3.20 | .54 | 0.45 | 5.91.000 |
| *During test strategy | -0.49 | .63 | -.06 | -.78 .440 |
| Time management | -1.81 | .68 | -.21 | -2.68 .008 |
| Test-Wiseness | -1.24 | .54 | -.18 | -2.28 .023 |
| *After test strategy | 0.02 | .43 | .003 | .04 .97 |

In this study, the regression equation is represented by study habit $_{predicted}$=131.59 + 3.20 preparation - 0.49 during test strategy - 1.81 times management - 1.24 test wiseness + 0.02 after test strategy.

This study revealed that test taking skill is a significant predictor of STEM students' study habit. This result showed that preparation, time management and test wiseness contributed meaningfully to the prediction of STEM students' study habit. During test strategy and after test strategy did not significantly predict STEM students' study habit in this study. This significant result further strengthens the relationship between test taking skills and study habit. By implication, a good STEM student should show robust preparation towards STEM learning, accurate in time management,

be wise when taking test or examination in STEM subjects. The robust influence of preparation on study habit offers great prospects for STEM teachers to promote students' study habit in STEM.

**Discussions**

This study revealed that the level of study habit and test taking skill of STEM students were very high. This finding supports Dodeen (2009) who observed that students who participated in their study had good skills in taking test. Also, Udeani (2012) noted that students exhibited fairly adequate study habits. The high level of study habit and test taking skill indicated high level of students' adroitness in the non-cognitive domain in STEM education in Nigeria. Although, these two cognitive terms are fairly explored in Nigeria, study habit and test taking skill are capable of promoting students' acquisition of problem-solving skills and concentration required for all-encompassing cognitive capability. Nigerian STEM teachers do not teach study habit and test taking skill as they do for the cognitive domain thereby making students unaware of their study habits and test taking skills which in turn fuels their inability to transfer these skills to other areas of their lives. If STEM teachers could go the extra miles to expose their students to test taking skills and good study habits, they will perform better, become well positioned for the work force of the 21$^{st}$entury and also live useful lives in the emerging society. This submission is supported by Yoloye (1999), in which a study on some students was aimed at identifying science students study habits in Ibadan and subsequently treating them to a counselling program that can motivate them to a more positive habit where necessary. The finding shows that the main factor that can influence study habits of STEM students is consultation with the teachers and the counsellors. The

onus is on the STEM teachers to teach and engage students in adequate preparation for test and examination at all times.

Test preparation, during test strategy, time management, test wiseness and after test strategy as attributes of test taking skills jointly contributed 12.5% to the variance in study habit. The most relatively potent variable among them was test preparation followed by time management and test-wiseness. These results can be compared with the results reported by Yoloye (1999) on the assessment of some test taking attributes and performance of science students in which factors affecting students study habits were listed as test anxiety, reading place, study periods, time allocation, written task, reading habit and assignment. Among the arrays of socio-psychological factors that affect achievement even in non-science subjects, study habit stands out to be a very potent variable. Similarly, out of seven socio-psychological factors combined to investigate the extent to which they can contribute to students' attitude to English; locus of control, interest in schooling, study habit and self –concept contributed significantly (Odinko & Adeyemo 1999). The remaining variables with no significant contribution to the prediction are home language, career aspirations and test anxiety. The second most potent variable coming after interest in school is study habit. Still in support of the potency of study habit, Jekayinfa, Aborime, Saidu and Okafor (2014), in their investigation of study habits and attitude of students toward schooling in Ilorin conclude that cultivation of effective study habit is a basic requirement for students to maintain a well-informed state of mind necessary for attainment of success in academic endeavors.

The results of this study showed that there was no significant influence of gender on STEM students' study habit and test taking skills. This result showed that there was no disparity between male and female STEM students

regarding study habit and test taking skills. The findings corroborate Yoloye (1999) that reported that there is no significant difference between the male and female science students. This, however, is at variance with the findings of Khan (2016) and Ehiozuwa & Anazo (2013) who reported significant difference in gender of students in their study habits. Thus, gender-stereotyping common with the cognitive domain in STEM education is not feasible with study habit and test taking skills in STEM education.

The results of this study, on the average showed that STEM students had a high level of test taking skills which was as a result of efficacy in the management of time before, during and after test. These can be seen as part of the attributes of academic efficacy. The observation can therefore be compared with the outcome of the study of Adeyemi and Oladunmoye (2016), which testify that academic efficacy when compared with other psychological variables, is the strongest variable that can predict academic success among secondary school students.

## Conclusion

This study has brought to the fore that test-taking skills are significant predictors of STEM students' study habit. Time management, test wiseness and preparation for test are important constructs helping to shape STEM students' study habit. In addition, the levels of study habit and test taking skills of the STEM students were very high. This implies that the STEM students are more serious with their study of STEM subjects. In this study, there was no significant influence of gender on STEM students' study habit and test taking skills. Thus, no disparities existed between male and female STEM students in study habit and test taking skills.

**Recommendation**

Based on the findings of this study, the following recommendations are hereby made; that STEM teachers should allocate more time to teach students test taking skills which are necessary to improve their study habits. Since high fliers and low performing students require assistance in improving their test taking skills which influence study practices, it is important that teachers, schools' counsellors, psychologists and parents collaboratively guide students on how to develop test taking skills and good study habits. An array of effective programs aimed at improving these skills should also be implemented. Similarly, teachers' preparation programs should include effective and innovative instructional strategies that pre-service teachers would use to enhance students' testing and study skills. Furthermore, the study shows that study habit and test taking skills are no respecter of gender, STEM teachers should not discriminate between male and female students when engaging them in study habit and test taking skills.

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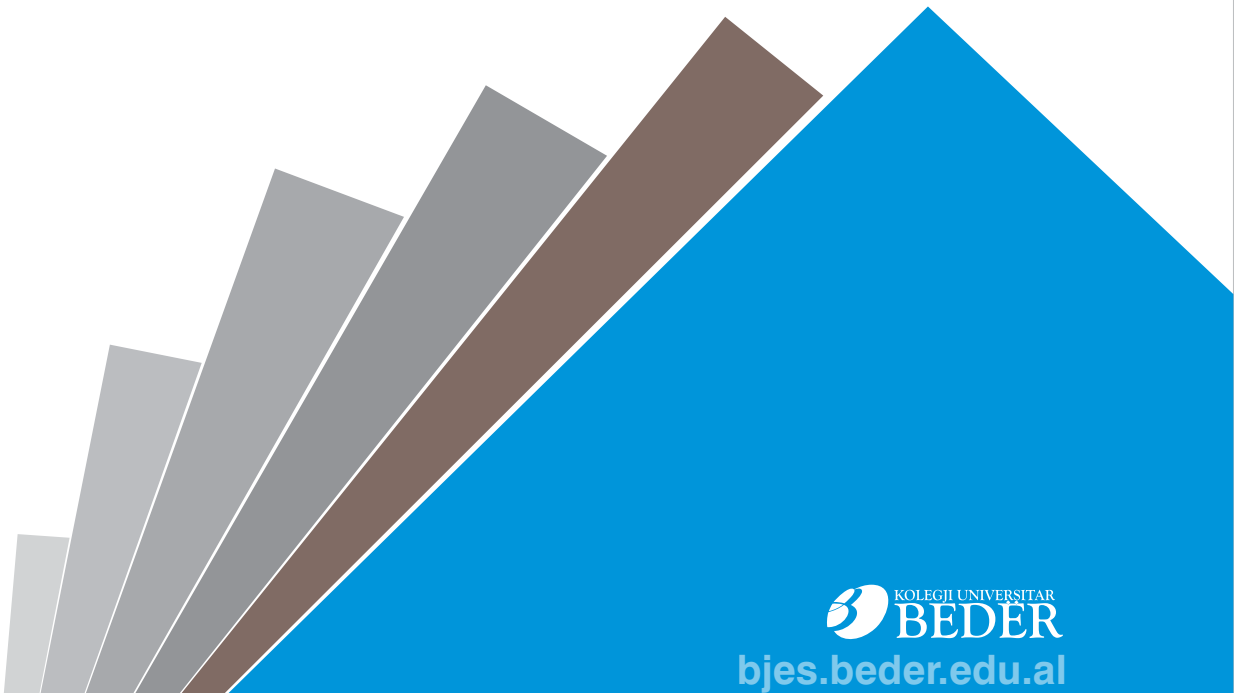


**Address:**
"Jordan Misja" St. Tirana - Albania
**Contact:** e-mail: bjes@beder.edu.al
web: www.bjes.beder.edu.al