

An Assessment on Strategic Thinking Among Technology Student in Nigeria Polytechnic [A Case Study of Building Technology Department]

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ABSTRACT

This project was carried out on the assessment on strategic thinking among technology student in Nigeria polytechnics a case study of Building Technology Department. The objective of project includes; to determining the effect of strategic thinkers among technology students, to determine the strategies to encourage the students to think critically and to determine the effect of conventional thinkers among technology. The study adopted a descriptive survey designed which aimed at finding the assessment on strategic thinking. The data used for this study is a primary data and the method of data collection is Questionnaire. The questionnaire was structured so that respondents give their opinions and ratings on the perceived traits of technology students/thinking critically and the effects of conventional thinkers among technology students. It could be concluded that the perceive traits of some of the polytechnic students shows that they are futuristic in their approach, they are also long term focus and willing to take risk. In this project notable effect of conventional thinkers among technology student of the polytechnics in Nigeria that they are isolated not ready to mix and get new idea. Technology students among in polytechnics students are reactive in nature because few of them are aware of new trends and processes but they cannot implement or used them.

Keywords: Strategic thinking; Strategist; Skills

I. INTRODUCTION

Strategic thinking is a process that defines the manner in which people think about, assess, view, and create the future for themselves and

others. Strategic thinking is an extremely effective and valuable tool one can apply to arrive at decisions that can be related to his/her work or personal life (Ajayi, 2003). This definition is critical to an entrepreneur who must think towards success in his/her business. It's about looking at the environment, assessment of certain profiles that are important to the success of the business; view the possible threats in the business and possibly thinking towards the creation of opportunities for their businesses. The greatest and most successful organizations in the world, over many years and decades, would think ahead and encourage great strategic thinking at least somewhere in their business plans.

Strategic thinking requires creativity and innovation in generating alternative strategic choices. But more importantly, it also requires exercising a choice from amongst alternatives. The question is how one exercises a choice. Modern strategy management gives us the techniques of understanding, not of choosing. Surprisingly, not much work has been done to understand what goes on in the mind of the person who takes strategic decisions (Bonn, 2001). Typically, strategic thinking is defined by game theorists as the art of outdoing an adversary, knowing that the adversary is trying to do the same to you. This is the central theme of game theory which deals with decision situations in which two intelligent opponents with conflicting objectives are trying to outdo one another (Chussil, 2005).

Strategic thinking is seen differently by different theorists, and some of those explanations of definitions are more research oriented and academic than we might like if we want to provide

practical guidance about strategic thinking in the real world. Before looking at the more abstract side, let's provide a simple (and perhaps overly simplistic perspective on strategic thinking). Strategic thinking is a MINDSET or way of thinking about a business or organization. It can be distinguished, strategic thinking by several characteristics: Focuses on long term rather than short term; Involves systems thinking, and focusing on the big picture, NOT just the small one; Focuses on identifying leverage (how can we use what we have to maximum advantage); Is both analytical, and creative processes; Involves exiting assumptions, "the way things have been done around here", and a critical approach that questions what we believe; Takes into account that our thinking is going to be partly based on inaccurate information and/or conclusions, and treats any conclusions as tentative or hypotheses.

Strategic thinking includes finding and developing a strategic foresight capacity for an organization, by exploring all possible organizational futures, and challenging conventional thinking to foster decision making.

There is no generally accepted definition for strategic thinking, because no common agreement as to its role or importance, and no standardised list of key competencies of strategic thinkers have been agreed upon by experts in the area of study. There is no consensus on whether strategic thinking is an uncommon ideal or a common and observable property of strategy. Most agree that traditional models of strategy making, which are primarily based on strategic planning, are not working. Strategy in today's competitive business landscape is moving away from the basic strategic planning to more of strategic thinking in order to remain competitive. However, both thought processes must work hand-in-hand in order to reap maximum benefit. It has been argued that the real heart of strategy is the 'strategist'; and for a better strategy execution requires a strategic thinker who can discover novel, imaginative strategies which can re-write the rules of the competitive game; and set in motion the chain of events that will shape and "define the future".

STATEMENT OF THE PROBLEM

Technology students must develop their skills in critical thinking, which is essential for today's employers (Barnet, 1990). The job-specific skills within technology programs require the development of critical thinking such as problem solving, decision making, and creativity, which are the main attributes expected by business and industry (Clark, 1998). Therefore, students should

be able to think critically and appropriately. With this goal, students as well as teachers may increase their thinking abilities to become better learners, independent thinkers, and problem solvers. In Nigeria, educators teaching in polytechnic institutions are addressed as lecturers. Polytechnic students are among the primary contributors to critical thinking development in Nigeria. Nigeria polytechnic students need opportunities to build upon their knowledge and skills to explore new areas and learn new things with confidence.

AIM OF THE STUDY

The aim of the study is to assess the strategic thinking capabilities among technology students in Nigerian polytechnic and to provide solutions to the problems affecting the student thinking.

OBJECTIVES OF THE STUDY

- i. To determine the scope of strategic thinking among technology students.
- ii. To determine the strategies to encourage the students to think critically.
- iii. To determine the characteristics of conventional thinkers among technology students.

SIGNIFICANCE OF THE STUDY

This study is significant because it assesses the current studying strategies of Nigeria polytechnic students with respect to critical thinking, an important area in need of more research. Scanty research has been done on critical thinking within Nigeria polytechnic students, so there is a lack of substantive literature in relation to critical thinking in studying. This study adds substantive information and helps in establishing strategies for studying critically. This study adds knowledge to the topic by identifying the frequency of use of different critical thinking studying strategies. Nigeria polytechnic students also were asked to indicate their perceptions of which studying strategies they presumed could develop and improve their critical thinking in Technology programs.

II. LITERATURE REVIEW

Thinking is a natural process that develops in every individual from birth. Thinking allows a person to impart knowledge through a process of reasoning, analyzing, problem solving, and decision-making (Ekeh, 2003). Nevertheless, people may get confused in learning about their own thinking skills unless they understand that there are different definitions and functions about thinking. Thinking can lead people to view a problem as if receiving new information by

developing the ability to reason inductively and deductively before making a decision (Babalola, 2007). Oftentimes, our thinking is influenced by bias, prejudice, discrimination, and poor judgment (Aina, 2007). To avoid oneshot thinking, individuals should develop their abilities to filter negative influences by increasing their thinking skills through training. Through teaching and learning, an individual may train their brain to think sensibly and cohesively. Moreover, the stages of thinking take place over time, reflecting personal development and professional growth. Ekong and Plante, (1966) described thinking skills as “something which can be taught, provided that the specific processes and skills composing it are identified and, among those, the skills and processes that can be enhanced by systematic assistance are distinguished”.

In addition, Fadipe and Fadipe (2010) also believed critical thinking is a type of higher order thinking. “Higher-order thinking includes critical, logical, reflective, metacognitive, and creative thinking, whereas critical thinking is “reasoned, purposive and reflective thinking used to make decisions, solve problems, and master concepts” (FGN, 2004). Whether critical thinking is under higher-order thinking or is in the highest categories in thinking, the expectation is practically similar. There are many explanations of critical thinking. Ideas, concepts, and interpretations about critical thinking have been meticulously explained with philosophy and psychology perspectives, yet people have a long-term query about this universal concept (FME, 2005). Authors, theorists, and educators often raise questions on critical thinking related to teaching, perceptions of professional and practice contexts, and aptitude measurement. Despite of all the inquiries and lack of definitive answers about critical thinking, scholars and educators are still aware and acknowledge critical thinking as a key skill that should be highlighted in the main agenda of education. That is to say, critical thinking is *sin qua non* in education settings. Iyang (2008) noted critical thinking has become an educational objective that is essential for students to be able to work independently and to think critically once they complete their degrees. Lerner (1999) agreed that critical thinking is a prominent topic at every level in education. These scholars predicted critical thinking as one of biggest challenges in 21st century education and educators should actively integrate critical thinking into their teaching. For this reason, many educational institutions impart critical thinking skills into programs with the intent to improve students’ thinking skills (Lerner, 1999). Besides

educational settings, critical thinking is known as one of the vital attributes that help workers improve their career development and viability in the workplace (Fry and Utu,1999).

Good strategic planning should be simple, but not simplistic. The Simplified Strategic Planning process is a lean, thorough step-by-step roadmap for answering the questions at the heart of the matter (Robert, 2010). The three key questions are:

What are you going to sell? To whom are you going to sell? How can you beat or avoid the competition?

The first two questions define the breadth, scope and focus of your business.

III. METHODOLOGY

This study employed the use of survey research design. The choice of this research design was considered appropriate because of its advantage of identifying attributes of a large population from a group of individuals

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This study was conducted in the polytechnics in the department of building technology in Ado Ekiti, Ekiti State

SAMPLE SIZE AND SAMPLE TECHNIQUES

As a means to effectively study the students of building technology department of Federal Polytechnic , Ado Ekiti, a representative number was chosen as the sample size population , 40 lecturers were contacted as the stratified sample size which represents about 17% error margin in administering 10 questionnaires to lecturers in ND1, ND2 HND1, and HND2.

Data were collected from primary and secondary source. Secondary data were obtained from published reports, books and internet. The questionnaire contains section A contains the demographics of the respondents. Section B is the main body of the questionnaire. This section will contains questions using a four 5 points scale instruments through which the opinion of the respondents were expressed. Their responses were measured by means of a five category rating system.

SA - Strongly agree; A- Agree; PA- Partially agree; D – Disagree; SD - Strongly disagree

Table 1.0 Gender

	Frequency	Percentage
Male	31	77.5%
Female	9	22.5%
Total	40	100%

Source: Author's field survey 2022, using SPSS 20

The table above indicates the Gender of respondent Male is have 77.5%, Female is have 22.5%

Table 2.0 Education qualification

	Frequency	Percentage
Bsc	20	50%
Msc	20	50%
Total	40	100.0%

Source: Author's field survey 2022, using SPSS 20

The table above indicates the Education Qualification of respondent have 50% each for both Bsc and Msc.

Table 3.0 The scope of strategic thinking among technology students

Perceived Traits of tech students	N	Mean	Std. Deviation	Rank
They are future based	40	4.35	.483	1
Long term focused	40	4.30	1.181	2
Willing to take risk	40	4.13	1.244	3
Lifelong learner	40	3.90	1.215	4
They are curious	40	3.68	.829	5
They are able to prioritize	40	3.53	1.198	6
Creative	40	3.40	.672	7
Nimble	40	3.37	1.234	8

Source: Author's field survey 2022, using SPSS 20

The table above provide mean of the scope of strategic thinking among technology students as follows:4.35 for being are future based, 4.30 for Long term focused. 4.13 forWilling to take

risk, 3.90 for Lifelong learner,3.68 for They are curious, 3.53 for They are able to prioritize, 3.40 for being Creative.

Table 4.0 The strategies to encourage the students to think critically

Thinking Critically	N	Mean	Std. Deviation	Rank
Constantly query their opinion	40	5.40	6.328	1
Speak sound, strategic	40	4.88	.335	2
Get out of the classrooms for details	40	4.38	.628	3
Ask tough question	40	4.10	1.336	4
Observe and seek trends	40	3.38	.838	5

Source: Author's field survey 2022, using SPSS 20

The table above provide mean of the strategies to encourage the students to think critically as the mean of 5.40 is for being constantly query their opinion which is ranked as number one , 4.88 represents Speak sound, strategic and is ranked number two. 4.38 represents

out of the classrooms details which is ranked number three , 4.10 represents Ask tough question which is ranked number four and 3.38 represents Observe and seek trends which is ranked number five. The highest mean is constantly query their opinion which have a mean of 5.40

Table 5.0 The characteristics of conventional thinkers among technology students

	N	Mean	Std. Deviation	Rank
Isolated	40	4.60	.591	1
Predictable	40	4.00	.751	2
Reactive	40	3.78	.660	3
Unable to prioritize	40	3.73	1.396	4
Short term focused	40	3.25	1.032	5
Inflexible	40	3.10	.900	6
Satisfied	40	2.85	1.001	7
Cautious	40	2.15	1.657	8

Source: Author's field survey 2022, using SPSS 20

The table above provide mean of the conventional thinkers among technology students: 4.60 represents being isolated, 4.00 represents they are predictable, 3.78 represents reactive, 3.73 for they are unable to prioritize, 3.25 for being short term focused, 3.10 for They are inflexible, 2.85 for They are satisfied and 2.15 for being Cautious.

IV. DISCUSSION FINDINGS

This project find out the perceived traits of technology students who are strategic as being future based and long term focused with a will to take risk and mostly they are long-life learners.

It is noted that to encourage strategic thinking among technology students, the lecturers must clearly query their opinion, so also the lecturers must speak sound and be strategic on their instruction to their students. The need for technology students to gather experience is duly rated or acknowledged by their work because one of the major decision factors is that the students must get out of classroom for details as fully elaborated by table 4.0.

From the findings of this study particularly in table 5.0 it is clearly shown that non-strategic technology students or non-thinkers are grossly isolated, predictable and reactive because they cannot initiate a creative idea without support and they cannot even prioritize their activities because most of them are engaged in some other activities that may not be relevant to their academic success not to talk of creativity.

V. CONCLUSION AND RECOMMENDATION

Based on the above stated aims and objectives of this project, the perceive traits of some of the polytechnic students shows that they

are futuristic in their approach, they are also long term focused and are willing to take risk unfortunately most of this students are not creative and they are unable to prioritize issues,

However among the strategies to encourage the technology students of the polytechnics to think critically must include the ability of the lecturers to constantly query their opinion and they should speak or propose strategic ideas and details.

Notable peculiarities of conventional thinkers among technology student of the polytechnics in Nigeria shows that they are isolated not ready to mix and get new idea, they are very predictable because of their rigidity or non-flexibility using tactics of cramming without adding their own creative ideologies.

Technology students in polytechnics are reactive in nature because few of them are aware of new trends and processes but they cannot implement or used them.

RECOMMENDATIONS

Based on the above conclusion the following recommendation can be made:

Government should procure and install modern or state of the art technology equipment in the Nigeria polytechnics so as to boost their futuristic approach/process and making them comparable to their equals in other nations.

Technology students in the polytechnic should be allowed to creatively contribute to issues bothering on infrastructural development, technology management and process management in both private and public industries in Nigeria.

The industrial attachment and training should be remoulded from been only pilgrimage to a reality.

The government of Nigeria should encourage polytechnic graduate through policies that can harmonize the disparity between HND and Bsc. The entry point into further studies should be based on creativity rather than on acquisition of PGD.

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