

The Inclusion of Thinking Skills: A Panacea for Improving Instructional Practices in Nigerian Secondary School Education

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Abstract Having critically studied the current New Secondary School Curriculum (NSSC), it is glaring that there was neither the inclusion nor any consideration given to Thinking Skills. Rather, much emphasis was made on IT and Entrepreneurial skills. Thus, the question is: how can we teach these subjects without emphasising thinking skills, and teaching students to be great critical thinkers using thinking skills?" It is on this ground that this paper is conceptualised to call for a review of the NSSC to include Thinking Skills, so as to create an equilibrium in the teaching and learning process. This will make the students problem solvers and it will reposition them to be invaluable assets to the Nigerian society and beyond. This paper examines such issues as the thinking skills initiative, adoption of thinking points and maps in the classroom, a theoretical review of teaching thinking skills in schools, inclusion of thinking skills in the UK and the new secondary school curriculum in Nigeria. Lastly, recommendations are made on the benefits of thinking skills inclusion in the teaching curriculum.

Keywords: *thinking skills, New Secondary School Curriculum (NSSC), instructional practices, secondary school*

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1. Introduction

The system and method of teaching which was considered 50 years ago to be good is no longer sufficient for success in secondary school, career and life in the 21st century [1]. The link between critical thinking and education is indeed a very strong one. It requires young people to be creative, innovative, enterprising and adaptable. Students must have strong motivation, confidence and skills to use critical and creative thinking purposefully. This capability combines two types of thinking: critical thinking and creative thinking. Thinking Skills involves students learning to create and apply new ideas in specific situations, identifying alternative explanations, and seeing or making new links that generate a progressive outcome. United Kingdom (UK), United States of America (USA), Singapore and Korea are good examples of countries emphasising creativity, critical thinking and character building in their curricula [2].

Also, applying thinking skills encourages people to shape their personal opinions and attitudes with self-confidence

instead of simply restating those of others by investigating issues from different perspectives with logically reasoned arguments [1].

[3] Pointed out that at the outset of the twenty-first century, the role of critical thinking in education became pivotal. As a result of this, most countries of the world (including developing countries) started implementing thinking skills in their curricula and at different levels of education [4]. Furthermore, [5], explained that the results of critical thinking studies show that education and thinking skills must go hand in hand to achieve educational goals.

There is no doubt that Nigeria has embraced education as the key to socio-economic revolution, specifically in this era of entrepreneurship, science, and technology-oriented, knowledge-driven 21st century. Little wonder the relentless changes and reforms in her educational policy and curricular since the attainment of her political independence in 1960 to meet the reality of modern times [7]. The clamour now is the New Senior Secondary School Curriculum (NSSSC) would help to provide more about the changes that will led to education as the key to socio-economic revolution and produce well prepared secondary School graduates for tertiary institutions and for the country [7].

2. Statement of the Problem

Since 1960, despite various reviews and upgrade of the country's educational curriculum, such reviews as the Banjo Review, the Taiwo Review, the Ikoku Review, the NERC development of e-curriculum in Nigeria [8]. The introduction of thinking skills is yet to be considered a teachable subject in the secondary schools. [9] & [10] remarked that it is not enough to produce curriculum, it is even more important to include innovative thinking skills subjects during classroom practices, which is lacking in Nigerian schools.

Hence, this study seeks the need for the inclusion of thinking skills in subsequent curriculum reviews as quickly as possible to improve on the current instructional practices in Nigerian secondary schools.

3. Review of Literatures

3.1. The Thinking Skills Initiative

According to [11], thinking skills enables students to develop a set of transferable skills, including critical thinking, reasoning and problem solving, that students can apply across a wide range of subjects and complex real world issues. The syllabus enables students to develop their ability to analyze unfamiliar problems, devise problem solving strategies, and evaluate the diverse ways a problem may be solved. During a Thinking Skills course, students learn to put their personal views aside in favour of examining and evaluating the evidence. Students learn how to make informed and reasoned decisions and construct evidence-based arguments.

In a similar vein, [12] affirm that independent thinking skills build confidence and equip students with a toolkit for tackling complex and unfamiliar subjects, essential for successful progression to higher education or into professional employment.

Meanwhile, in 2005, fifty-five (55) schools in the UK were accredited from the University of Exeter by adopting a whole school approach to the teaching of thinking, embedding thinking in the heart of the school and its curriculum. A further hundred plus schools in the UK also joined the Thinking Schools network, often facilitated and trained by consultants from Thinking Schools International.

Currently, Thinking Schools International (TSI) is conducting direct training with individual learning organizations and certifying trainers at different levels of expertise across the continents.

Still in the quest for educational development, in 2017, Greensprings School, Lagos, Nigeria, started teaching thinking skills as a subject after completing certain training from the TSI – which was the first step on its journey to becoming the first Thinking School in Nigeria and West Africa [13]. Significantly, the Greensprings Training College in Lagos State, Nigeria has started training teachers and school owners on how to adopt the thinking skills during their instructional practices.

[14], in conjunction with University of Exeter revealed in their report on the evaluation of the impact of the thinking school approach indicated that:

- 100% of primary and 87.5% of secondary accredited schools are satisfied with the whole

school Thinking School approach: none are dissatisfied.

- 90% of all accredited schools reported an improvement in the quality of lessons: none have seen lesson quality adversely affected.
- 89% state that the Thinking School approach raises attainment: Only one school stated attainment wasn't raised, but neither did it drop.
- All five major Thinking School International programmes are reported to be highly effective.
- 82% of accredited schools would welcome more support with their evaluation methods.
- Benefits greatly outweigh issues.

The findings of this study gave rise to the teaching of Thinking Skills as a curriculum based subject across the United Kingdom, United States and Africa.

3.2. Adoption of Thinking Points and Maps in the Classroom

Before the introduction and use of thinking skills in the classroom for instructional practices, there is a need to orientate the students on how to use the thinking points and maps for critical thinking.

Firstly, the thinking points are the essential starting points for developing thinking students and thinking schools. It is made up of six Starting Points which are:

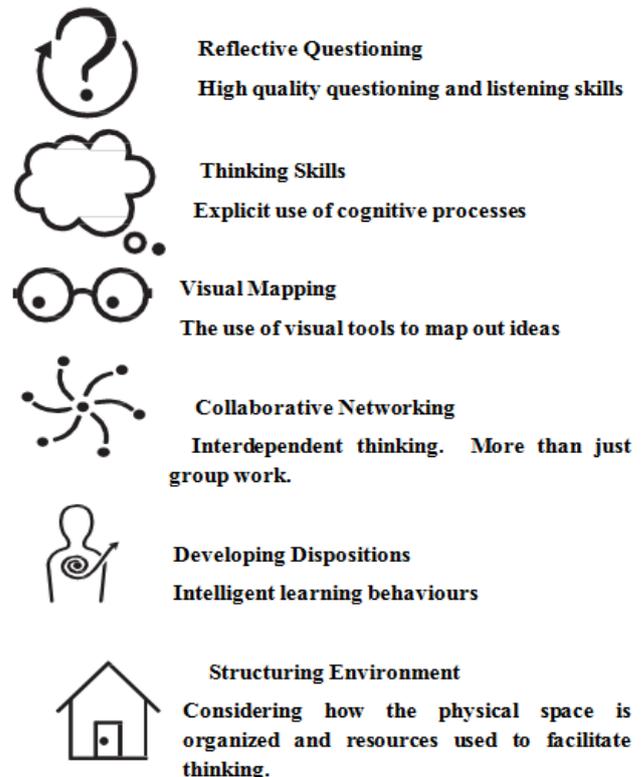


Figure 1. Thinking Points (Source: [13])

3.3. Theoretical Review of Teaching Thinking Skills in Schools

[15] states that with a focus on developing younger children's reasoning abilities through a form of Socratic questioning and enquiry, there is a great need to include curriculum-related materials that will act as a stimulus for

Socratic inquiries and to embed the practices as a regular part of primary school teaching.

As practiced by [15] in their approach called Thinking-Based Learning, this new approach to teaching and learning involves teachers designing lessons where the thinking skills and the curriculum content are taught simultaneously. The students are introduced explicitly to strategies for more skilful thinking, and then prompted to use these strategies to think about the content they are learning. By putting emphases on higher-order thinking into content instruction, deeper understanding is reported, as is better writing, and more engaged interest by students in what they are learning. However, [6] observe that the most crucial aspect of curriculum practice is implementation as the actual hatching of the planned curriculum.

Many schools are trying to extend the use of the thinking skills taught to students in their classrooms into the life of the schools. These schools are thinking of themselves as creating a “culture of thinking” not only in their classrooms but throughout the whole schools. They are, indeed, striving to be “thinking schools”, a concept introduced by the Prime Minister of Singapore in 1997 at the 7th International Conference on Thinking hosted by his country. His idea was that all Singapore schools should become Thinking Schools, thereby making Singapore a “Learning Nation” [16]

The culture of thinking represents one of the earliest public proclamations that the infusion model needed to be a national goal. Since then at least half-a-dozen other countries, including New Zealand, Northern Ireland, and Israel, have embraced the same idea [15,17].

3.3. Inclusion of Thinking Skills in the UK National Curriculum

Thinking Skills inclusion in the UK’s National Curriculum can be dated back in 1999, alongside key skills such as those related to communication and information and communications technology (ICT). Thinking skills are expected to be developed at all key stages and they centre on: information-processing skills, reasoning skills, enquiry skills, creative thinking skills and evaluation skills [18].

Teaching Thinking Skills is now part of The National Curriculum in the English educational system, and teachers are required to inculcate these skills in their daily work with pupils. In the handbook for secondary teachers in England [19] thinking skills are unequivocally presented as follows:

By using thinking skills pupils can focus on ‘knowing how’ as well as ‘knowing what’ – learning how to learn. The following thinking skills complement the key skills and are embedded in the National Curriculum.

Information-processing skills: These enable pupils to locate and collect relevant information, to sort, classify, sequence, compare and contrast, and to analyse part/whole relationships.

Reasoning skills: These enable pupils to give reasons for opinions and actions, to draw inferences and make deductions, to use precise language to explain what they think, and to make judgments and decisions.

Enquiry skills: These enable pupils to ask relevant questions, to pose and define problems, to plan what to do

and how to research, to predict outcomes and anticipate consequences, and to test conclusions and improve ideas.

Creative thinking skills: These enable pupils to generate and extend ideas, to suggest hypotheses, to apply imagination, and to look for alternative innovative outcomes.

Evaluation skills: These enable pupils to evaluate information, judge the value of what they read, hear and do, develop criteria for judging the value of their own and others’ work or ideas, and have confidence in their judgments [19].

The Cambridge International AS & A Level programme in her quest to help students develop abilities which universities value highly, has developed a set of transferable skills. These include critical thinking, reasoning and problem solving skills which will enable learners to apply acquired skills across a wide range of subjects and complex real world issues [20].

The Thinking Skills subject content is divided into two parts, Problem Solving and Critical Thinking. The subject content is the same for AS & A Level. The difference between AS Level and A Level is determined by the demand of the assessment tasks.

Examination is categorised into four papers, namely: Paper 1 (Problem solving), Paper 2 (Critical thinking), Paper 3 (Problem analysis and solution) and Paper 4 (Applied reasoning). Grade descriptions are provided to give an indication of the standards of achievement. Candidates are awarded particular grades reflecting their respective levels of competences. Weakness in one aspect of the examination may be balanced by a better performance in some other aspect.

3.4. The New Secondary School Curriculum (NSSC) In Nigeria

The introduction of the New Secondary School Curriculum (NSSC) in Nigeria is an initiative which, according to [7], aims at ensuring that graduates from secondary Schools are, among other things, professionally trained in entrepreneurship skills and that they possess relevant Information Communication Technology (ICT) skills that will equip them for challenges of labour market.

To respond to the new requirements, the new secondary school curriculum was developed by the National Educational Research and Development Council (NERDC). The restructuring of the Senior Secondary School curriculum resulted in the development of 42 subjects and 34 vocational Trades/Entrepreneurship curricula. The curriculum which was approved by the National Council of Education in 2009 would provide for a systematic connection between its contents and the learning of future contents.

According to [7], the new curriculum reflects the following trade subjects: Trade/Entrepreneurship: Auto body repair and spraying painting, Auto electrical work, Auto mechanical work, Auto parts merchandising, Air conditioning/Refrigerator, Welding and fabrication engineering craft practice, Electrical installation and maintenance work, Radio, TV and electrical work, Block laying, brick laying and concrete work, Painting and decoration, Plumbing and pipe fitting, Machine wood-working, Carpentry and joinery, Furniture making, Upholstery, Catering and craft practice, Garment making,

Textile trade, Dying and bleaching, Printing craft practice, Leather goods manufacturing repair, Cosmetology, Keyboarding, Data processing, Store keeping, Book keeping, GSM maintenance, Photography, Tourism, Mining, Animal husbandry, Fisheries, Marketing, Salesmanship.

Collectively, students are expected to carry a minimum of 8 subjects and maximum of 9 subjects are expected to be offered by all students. This new curriculum kicked off in June 2014. However, [21], after close examination of the document in the new secondary school curriculum, concluded that it is obvious that the well-articulated objectives of secondary school education cannot be achieved if all the issues revolving its effective implementation are not addressed squarely.

Also, according to our observation, which is in concomitant with [22] of this new curriculum, it is glaring that there was no inclusion nor consideration for thinking skills but there is the inclusion of IT and Entrepreneurial skills. The questions thus, is that, how can we teach all this subjects without emphasising of critical thinking and teaching students to be great thinkers using thinking skills. This calls for a review of the NSSC in the secondary school in Nigeria to include thinking skills, so as to create equilibrium in the teaching and learning process.

4. Conclusion and Recommendations

Based on the foregoing, it can be rightly argued that thinking skills is a precursor to critical thinking which transpires into personal success, national peace, progress and development; it should be reviewed and introduced as a teaching subject in secondary schools in Nigeria as evidence has revealed its acceptance in a private owned secondary school in Nigeria. To this end, it is hereby recommended that:

- I. The Federal Government and NERCD should incorporate Thinking skills into the curriculum and it should be a separate teaching subject in Nigerian secondary schools.
- II. Teachers should be trained by the government through the Thinking School International (TSI) and the Greensprings Training College, on how to incorporate, use, and apply thinking points and maps during their instructional practices.
- III. The Federal Government and NERCD should generalize the instructional approach used in thinking classrooms to multi-grade and multi- subject curricula, and hence meld it to create model thinking-based schools with a commonality of purpose and practice.

In conclusion, if the Federal Government and NERCD successfully implement Thinking Skills as a teaching subject in Nigeria's secondary schools, our schools will become "thinking schools" and our students will become experts in critical thinking. This will in the long run make Nigeria invariably a better equipped country to develop great minds that will meet the objectives of the nation and to be at par with other industrialised nations of the world that have maximally utilised critical thinking skills as the springboard to attaining optimum levels of technological and other forms of development.

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