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CURRICULUM THEORY BY RALPH TYLER AND ITS IMPLICATION FOR 21ST CENTURY LEARNING

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ABSTRACT
This work is aimed at examining curriculum theory of Ralph W. Tyler and its implication for the 21st century learning. It is a descriptive paper. The work as a descriptive paper examined 21st century learning, the meaning of curriculum, and Tyler's curriculum theory. His findings have significantly influenced curriculum and the process of instructional design. The success of his model has certainly shaped the curriculum of today and therefore, his findings are worthy of discussion and evaluation. Some of the observations of the work include amongst others; Tyler's model fails to place value on the process and value of learning and instead stresses the attainment of knowledge and achievement of outcomes. Also, Tyler's scientific method has not considered learning impairments or the need for individualized programs to cater for those whom do not function within the main stream classroom. Conclusively, According to Tyler in Aguokogbuo (2000), the rationale for education, learning skills to accomplish the objectives, learning organizing skills, and assessment/evaluation are the four basic things which are related to the development of curriculum. Also for the 21st century learning to be achieved, the teacher must be acquainted with the 21st century learning strategies.

Introduction
21st-century learning is a term used to describe a shift in education from the traditional methods of the past to a more modern approach. This new approach focuses on preparing students for the future by teaching them the skills they need to be successful in a global economy. 21st-century learning is not memorization or recitation but critical thinking, creativity, and collaboration. It is about preparing students for the real world, not just for a test. 21st-century learning is more than just the 3Rs (reading, writing, and arithmetic). It emphasizes the importance of critical thinking, creativity, collaboration, and communication – skills essential for students to thrive in the 21st century. What is also clear is that 21st-century learning cannot occur in a traditional classroom setting. Students need to be actively engaged in their learning and have opportunities to apply what they are learning to real-world situations.

All through time adaptations have been made to curriculum design to create models that provide a system that achieves most profitable educational outcomes. The pioneers and forefathers of curriculum design have provided foundational understanding of methodological approaches while concurrently providing principles of practice.

Procedures outlined by various curriculum designers are often critiqued for their effectiveness and practicality. Despite the validity cum soundness of such investigations, it is certain that constructed curriculum designs of educational masters have contributed to current schemes and tactics that are utilized by institutions till date.

The concept of curriculum lacked consensus definitions among educators. This is because many educators defined curriculum to suit the social needs prevalent at the time, while at the same time being influenced by the dynamic nature of knowledge, the changing conception of the learner and the learning process as well as of education. By implication, various definitions of a curriculum reflect the changing socio-philosophical views of various classes of educators such as the traditionalists and the progressive educators. Even among traditionalists such as the perennialists, essentialists and the discipline doctrine advocates, notable variations occur in their definitions of a curriculum (Aguokogbuo,2000).

Curriculum according to Ajonuma and Oguguo (2013), is the total experience involving the school in the process of educating young people. Curriculum is a planned learning document which covers all that the learner must know or the process of a learner must undergo in a teaching learning environment under the direction of an instructor, in fact it is the totality of learning (Ekwuru, 2019).

Furthermore, there are numerous stakeholders of curriculum and it is certain that conflict of interest and values arise from having many agencies contributing to curriculum design. For this reason, it is almost impossible to achieve a consensus on a finite definition of curriculum and it is certain that neither concord nor resolution can be made on one singular design for curriculum.

It is, however, commonly perceived that curriculum drives what is taught and learnt by students. It is my proficient cum skilled belief that designed curriculum enables teaching professionals to advance student performance and boost the strategies that are employed to transfer content. Furthermore, the employed approach strongly influences the degree of learning and to what extent the program encompasses all participants (Henderson & Hawthorne, 2000). There are several ways that schools can incorporate 21st-century learning into their curriculum. One of the ways to integrate 21st-century learning into the classroom is addressed by Ralph Tyler in his linear curriculum model.

Ralph Tyler Curriculum Model

Ralph Tyler is an educational pioneer whom sought to develop a set of rules to guide teaching and instruction. Tyler proposed a curriculum design that was sequential and systematic. For this reason, the model developed by Tyler is often referred to as the 'Linear Objectives' model. The 'Tyler Model' can be described as "an explicit set of procedures for planning which is based upon a scientific-rational approach" (Marsh,

1997). Tyler, (1949), recommends that "educational goals be derived from an analysis of the subject and content. His formula of educational design was revolutionary and provided purpose to educational practice. However, in his approach he disregards contextual influences, personal needs or prior learning of students. Nevertheless, his work became a bestseller for it struck the heart of educators who sought clarification of educational aims. His findings have significantly influenced curriculum and the process of instructional design. The success of his model has certainly shaped the curriculum of today and therefore, his findings are worthy of discussion and evaluation. Thus, critique of the model developed by Tyler is warranted because the 'Linear Objectives' model "short changes how teachers actually deal with their classes. It fails to consider how they deliberate and negotiate as they plan and implement curriculum (Brummelen, 1994).

The curriculum design prescribed by Ralph Tyler outlines a simple formula and consists of four key thoughts:

1. What are the educational purposes that a school should seek to attain? (Educational Objectives.
2. What learning experiences can be selected to fulfil the educational objectives? (Learning Experiences).
3. How should the learning experiences be organized to achieve the desired outcomes? (Organisation of Experiences.)
4. What assessment and evaluation techniques can be used to determine the success of the implemented curriculum? (Assessment and Evaluating), (Enem, 2019).

One of the best known models for curriculum development with special attention to the planning phases is shown in Figures 1 and 2.

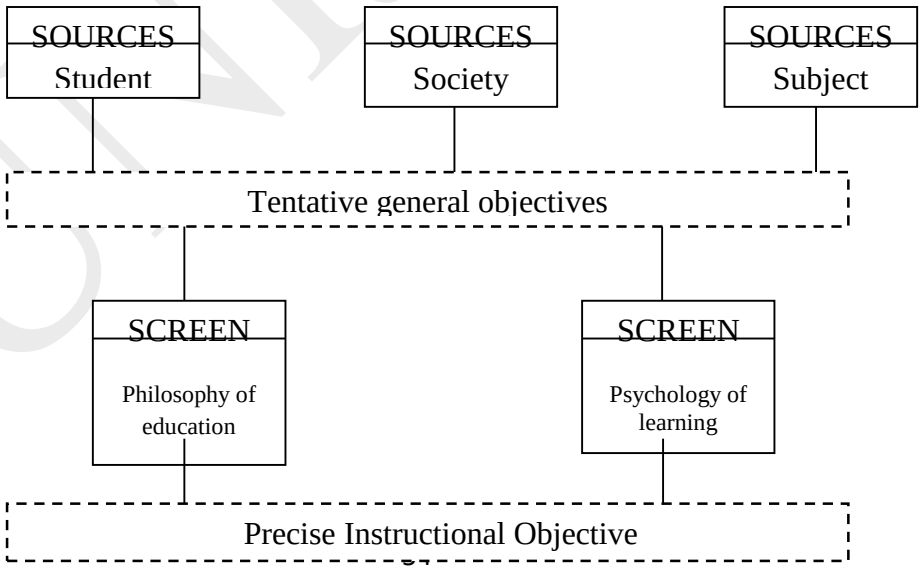


Figure 2: Tyler's model (expanded from Figure 1)

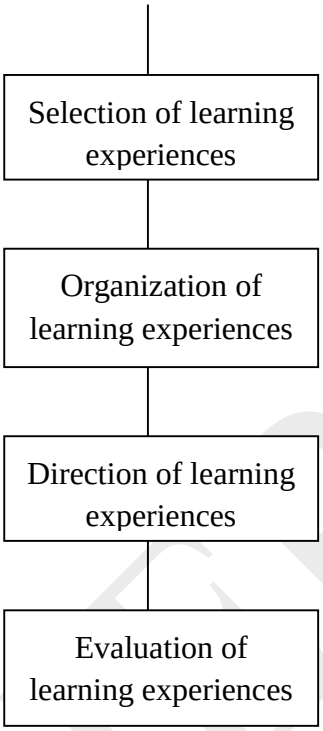


Figure 3



The model is linear in nature, starting from objectives and ending with evaluation. In this model, evaluation is terminal. It is important to note that:

- Objectives form the basis for the selection and organization of learning experiences.
- Objectives form the basis for assessing the curriculum.
- Objectives are derived from the learner, contemporary life and subject specialist.

To Tyler, evaluation is a process by which one matches the initial expectation with the outcomes (Mkpa & Izuagba, 2012).

It proposed a comprehensive model for curriculum development. The first part of this model: the selection of objectives receives the greatest attention from other educators. Tyler recommended that curriculum planners identify general objectives by gathering data from the sources: the learners, contemporary life outside the school, and the subject matter. The numerous general objectives are refined by filtering them through two screens: (1) educational and social philosophy of the school and (2) the psychology of learning and become specific instructional objectives (Duru, 2011).

In describing general objectives Tyler referred them as "goals", "educational objectives", and "educational purposes". He further stated that the curriculum worker must begin analyzing data relevant to student needs and interest. These are educational, social, occupational, physical, psychological and recreational. He recommended observations by teachers, interviews with students, interviews with parents, questionnaires and tests as techniques for collecting data about students. By examining these needs, the curriculum developer identifies a set of potential objectives.

The next step in the process of general objectives is the analysis of contemporary life in both the local community and the society. From the needs of society flow many potential educational objectives (Asoegwu, 2009).

For the source the curriculum planner turns to the subject matter, the disciplines themselves. From the three aforementioned sources, curriculum planners derived a multiplicity of general or broad objectives. Once this array of possible objectives is determined, a screening process is necessary to eliminate unnecessary and unimportant and contradictory objectives. Tyler advises the use of the schools educational and social philosophy as the first screen of these goals.
In Philosophical screen Tyler advise teachers of a particular schools to formulate educational and social philosophy and to outline values by emphasizing four democratic goals:

- The recognition of every individual as a human being regardless of his race, national, social and economic status;
- Opportunity for wide participation in all phases of activities in the social groups in the society;
- Encouragement of variability rather than demanding a single type of personality;

- Faith and intelligence as a method of dealing with important problems rather than depending upon the authority of an autocratic or aristocratic group (Obasi, 2009).

In the Psychological screen, the teachers must clarify the principles of learning that they believed to be sound. "A psychology of learning as emphasized by Tyler not only includes specific and definite findings but it unified formulation of theory of learning which helps to outline the nature of the learning process, how it takes place, under what conditions, what sort of mechanism operate and the like." Tyler explains the significance of the psychological screen in the following statements:

- Knowledge in the psychology of learning enables us to distinguish changes in human beings that can be expected to result from a learning process from those that cannot.
- Knowledge in the psychology of learning enables us to distinguish goals that are feasible from those that are likely to take a very long time or are almost impossible of attainment at the age level contemplated.
- Psychology of learning gives us some idea of the length of time required to attain an objective and the age levels at which the effort is most efficiently employed (Mkpa, 2012).

In Fig.2 Tyler's model describes three more steps in curriculum planning: selection, organization, and evaluation of learning experiences. He defined learning experiences as "the interaction between the learner and the external conditions in the environment to which he can react". And teachers must give attention to learning experiences in order to:

- Develop skill in thinking
- Helpful in acquiring information
- Helpful in developing social attitude
- Helpful in developing interest

According to 'Tyler's Model', the first step of course design is crafting the desired outcomes of the curriculum. Secondly, learning experiences are designed and then activities scaffold to develop knowledge and yield success. The achievement of the program is determined by evaluation and assessment conducted at the conclusion of the unit. According to this model the process is not re-evaluated or restructured to create a more successful documentation, curriculum or framework. Reinvention and improvement is a valuable practice and necessary to drive productivity and successful practice.

The scientific design would infer educators are responsible for predetermining the desired outcomes of students with limited consideration of the needs, values, social constructs and prior learning of participants. This approach is considered as narrow-minded according to Harro Van Brummelen, 1994). The writer would support this thought of contention, for teaching and learning are interdependent and the success of students is determined by the degree of participation and involvement because knowledge is not neutral as assumed by Tyler (Brummelen, 1994).

Although the 'Tyler's Model' provides a "checklist of things that curriculum planners must do at some point", as an entirety the linear approach has shortfalls because it fails to recognize the active role students themselves play in determining curriculum structure (Brummelen, 1994). Students are not passive learners but rather active participants in acquisition of knowledge. Therefore learning should be "...nurtured, rather than taught" (Glatthorn, 1994) as reflected in a 'Linear Method' calculated by Ralph Tyler and those supporting a technical orientation.

Tyler's Model overlooks the role students' play in the ownership of their learning and the extent to which their acquired knowledge is meaningful (Glatthorn, 1994). For this reason, curriculum modifications are necessary to ensure that student needs are attended too. Unprecedented technological progress demands for education to train people who are prepared for the twenty-first century (Marsh, 1997). In result, curriculum design continually needs to be reshaped and modified to provide systems that accurately cater for contextualized circumstances.

Tyler does not account for the necessary changes to curriculum. His proposed model has been identified as 'Linear' and thus performs no actual process of action research, modification or readjustment. Other curriculum designs, such as Seels and Glasgow's model, are cyclical and suggest that education should enhance teaching and learning pathways to improve the standards accomplished by all participants.

In my opinion, there is need for reinvention and 'Tyler's Model' fails to recommend change to ensure programs are cutting edge and designed to prepare individuals for a world stage. To ensure graduates are equipped with the skills and strategies needed to be creative and productive members of society it is necessary to embrace social change and modify programs to cater for the needs of students. Therefore, curriculum should be shaped with consideration of student requests. It would be fair to assume that according to the 'Tyler Model' that social and cultural evolution is not considered.

"There have been all kinds of priorities put forward including citizenship demands, personal development priorities and vocational training pressures. There have also been various pressures ranging from practical, school-focused approaches to curriculum and curriculum development; theoretical perspectives of different kinds of technical, scientific management approaches" (Marsh, 1997).

According to Marsh, consideration needs to be given to a "cross-section of interests" when developing curriculum and that planning needs to be flexible and not be "typically goal-directed" (March, 1987). Furthermore, Marsh states that curriculum must be tailored to "new complexities... interactions and relationships and should not be limited by predetermined objectives.

In the opinion of Colin J. Marsh, the curriculum model proposed my Tyler does not account for necessary modifications. For example, Tyler's scientific method has not considered learning impairments or the need for individualized programs to cater for those whom do not function within the main stream classroom. Echoing the opinion expressed by Marsh, is theologian Harro Van Brummelen.

In Brummelen (1994) identified the need for holistic education and pointed out that technicians using 'Tyler's Model' seldom ask, "...what kind of person [should] students... become" (Brummelen, 1994). Furthermore, Brummelen believes that the model derived from Tyler is "skewed" because the educational process is presented as a cognitive concept without consideration of worldview or inherent values. Brummelen further explains;
"['Tyler's Model'] ...downplays the importance of creative expression, skills that are not psychomotor ones, and dispositions and commitments. It distorts or excludes goals like understanding, appreciation, and sensitivity. Indeed, its process-oriented approach may prevent students from getting a coherent view of the world."

In the opinion of Brummelen, the linear approach is mechanical and overlooks the consequences of treating students as part of a process and formula. The systematic approach also limits the creativity of teachers and fails to regard them as professionals who can adapt lessons to accommodate for needs and change. Teachers should deliberate and negotiate curriculum before assessing and evaluating student's performance.

Tyler's model has limitations. While it does provide valuable insight into basic curriculum design, it fails to recognize the valuable contribution that students can make to curriculum to guarantee that their learning is meaningful. Teachers also make essential modifications within their practice to accommodate for necessary demands and a prescriptive and scientific method may appear good in theory, yet it a practical sense its short comings become apparent. Furthermore, Tyler's model fails to place value on the process and value of learning and instead stresses the attainment of knowledge and achievement of outcomes.

Currently, school effectiveness is determined by performance standards and indicators (www.myschool.com.au). This recent development within Australia has been legislated by government and seems to have created true disorientation in regards to professional practice and educational demands and desired future direction. While schools have made significant advancement in constructing curriculum that caters for individual needs, abilities and contextual contexts, governmental influences are directing educational institutions toward a scientific approach as developed by Tyler. It would appear that teaching practice has returned to where it has been. Clash of curriculum interests shall instigate renewed debate and influence educational reform.

Conclusion

Basically the rationale of Tyler is an explanation of these steps. Model of Tyler is deductive, linear, move from general to specific and from beginning to end it entails a specific order of steps. Furthermore, it is prescriptive and indicates that what should to be done and what is done by curriculum developers. Tyler model is "society centered" and placed the school curriculum as an instrument for refining the life of community. Thus, the main focus of the curriculum development in this model is to the needs and problems of the society. According to Tyler (1990), to plan the function of education, three forms of resources (1) individuals (children as students), (2) contemporary life, and (3) professional thought of field of study are used. The model of curriculum development means how to plan a curriculum according to the goals and the mission of an educational institution. According to Tyler in Aguokogbuo (2000), the rationale for education, learning skills to accomplish the objectives, learning organizing skills, and assessment/evaluation are the four basic things which are related to the development of curriculum.

In conclusion, governments favour linear models because workers can be held accountable for their performance and the success of implemented programs can be easily determined. In result, government expenditure can be assessed and evaluated. Furthermore, standardized tests provide measures to rate success of students and the attainment of objectives. Scientific approaches to curriculum design as developed by Tyler provide organisation and control. While, these qualities are desirable it comes at the expense of actual learners who are not central to the focus of educational purpose. True education has emotional, social, physical and spiritual needs of students at heart and not simply intellectual ones (Brummelen, 1994) Websites developed to provide transparency in education actually provide a disservice.

Finally, Tyler maintains that for the 21st century learning to be achieved, the teacher must be acquainted with the 21st century learning strategies thus:

- Flipped Classroom. ...
- Project-Based Learning. ...
- Cooperative Learning. ...
- Gamification. ...
- Problem-Based Learning. ...
- Design Thinking. ...
- Thinking-Based Learning.

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