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Analysis of Curriculum Development Stages from the Perspective of Tyler, Taba and Wheeler

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Abstract

The present study aims to review and compare the process or stages of curriculum development system from the perspective of deductive, inductive and cyclical models of curriculum development. The models of curriculum development serve as guidelines for constructing curriculum. This study compares the stages of curriculum development of Tyler as deductive, Hilda Taba as Inductive and wheeler's model as cyclical model of curriculum development. The curriculum is defined as a written document, a mode of thought or a skill and various factors like designing, implementation and evaluation are essential for the development of curriculum. These three models play a crucial and different role in the process of curriculum development. Ralph Tyler pioneered four questions in 1949 which are important to shape the curriculum. The models of Taba and Wheeler are modified version of Tyler. Taba starts the curriculum processing from identification of learners' needs and end with the evaluation but for Wheeler curriculum development process is circular does not end at evaluation and starts again from first steps one after some improvements.

Keywords: Curriculum; models of curriculum development; analysis of Tyler; Taba and Wheeler model.

Introduction

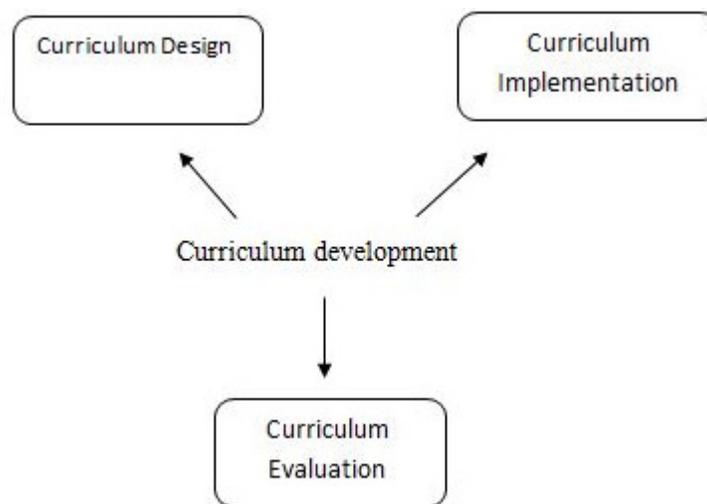
The term curriculum has different meaning, form and purpose for different thinkers. The task of curriculum development is ultimately building a relationship among content/subject matter people like students, teachers, parents and society. According Miol and Lewis, curriculum is a set of goals which provides opportunities for engaging students with various kind of information and learning techniques

(Lewis 1972). The curriculum is also described as an accumulation of knowledge, learning experience in different learning environment with various cognitive content, instructional plan and technology (Uphoff 1982).

(Beauchamp 1961) considered curriculum “as a written document”, According to (Beauchamp 1961) the most important purpose of curriculum theory is to give meaning to various aspects of curriculum activity according to existing knowledge. A curriculum system is comprised of personnel and procedure organization so that a curriculum can be produced for implementation, appraisal and modification (Beauchamp 1981). Further; designing, implementing and evaluating are three phases of a curriculum development system Further; designing, implementing and evaluating are three phases of a curriculum development system(Ornstein and Hunkins 2009). Curriculum process is structured as:

- Curriculum Design: A specific order of the curriculum is called curriculum design. Specifically many elements are crucial to design a curriculum in which functions, objectives are included.
- Curriculum Implementation: When an authentic use of a curriculum put into practice it is called curriculum implementation.
- Curriculum Evaluation: It involves planning, implementing, information gathering, evaluate inconsistencies among planned and real educational results; to evaluate inconsistencies among program of study and its implementation, to shape the efficiency of the development of curriculum and to clarify its importance (Kimpston and Rogers 1986).

Figure 1: Stages of curriculum process



The Models of the Curriculum Development: A Review

To develop the curriculum is a tough and a dynamic process involving different procedures with the intention of improvement in the existing conditions. So its complexity is increased by the lack of the distinct ideas or models in the development and planning of curriculum. There are various important models for example principles of Ralph Tyler, Hilda Taba induction model, Wheeler circular model Galen Saylor and William Alexander and Oliva etc. All models of curriculum development assist in the process of curriculum development. The curriculum development models are very important for guiding all the planners of education, mentors, and administrators. Moreover; in order to produce positive changes, curriculum should be purposeful, planned and progressive.

The objectives of a curriculum development model are based on the need of people at individual level as well as society level. Modeling is a way through which a curriculum development plan is defined. Models are samples that provide guidelines for educational purpose. The models are

used in the development of curriculum for the better output(Oliva 2009). This study examines the crucial stages of three curriculum development models known as Tyler, Taba and Wheeler.. For the use of specific way of teaching, learning and evaluation strategies, to plan an underlying principle, the curriculum development models help designers clearly and systematically(Ornstein and Hunkins 2009).

Technical and Non-Technical Approaches to Curriculum Development

Curriculum development approaches can be separated into technical and non-technical approaches (Hunkins and Ornstein 2004) which is also similar to Product and Process Model (Neary 2002). The product model stresses on the outcome and process model focus on the learning activities, methods. The Technical–Scientific approach is considered logical, efficient and effective in delivering education. The Non-Technical is described as subjective, personal, and aesthetic, focuses on the learner (Hunkins and Ornstein 2004) however the non-technical has some similarities with the Process model.

Several curriculum development models follow the technical scientific approach; the Ralph Tyler (1949) is seen as one of the pioneer’s models. His model’s foundation is connected with the Product model for the current Learning Outcomes in Curriculum. Later, the Backward Design Model, supported by Wiggins & McTighe in 2010, is also very famous among professional programs. According to (Ornstein and Hunkins 2009) curriculum development comprises planning, implementation and evaluation, as well as people, processes and procedures. Although curriculum development models are technically valuable, but sometimes they neglect the human aspect for example the personal feelings, attitudes, values that are concerned with curriculum development(Ornstein and Hunkins 2009).

Further; models using technical approaches are also divided into deductive and inductive models. Ralph Tyler, Oliva the Saylor, Alexander and Lewis models are deductive approaches for developing curriculum development. In deductive approach goals, objectives are decided by curriculum planner, whereas teachers design the instructional strategies and afterwards both curriculum planners and teachers design the evaluation techniques. Deductive models proceed from general to specific but inductive proceed with the specific to general .moreover deductive model are linear as well as prospective.

Several curriculum development models include the Non-Technical/non-scientific approach. This approach does not focus on the content, or learning outcomes, but rather on the learner so Selected Subject matter in the curriculum development process is only important for a student until he can find meaning in it for himself(Hunkins and Ornstein 2004).The more student-centered approaches align with this approach. However it is important to consider whether this approach can be strengthened in many programs to allow for more a more student-centered approach.

The Deliberative model and the post-positivism models are two examples of the non-technical approach(Hunkins and Ornstein 2004). The Deliberative model discuss about the gap between complete freedom for students to choose what they want to learn and already given instruction about learning. The model involves a deliberative process in which teachers give their ideas to students and make a study plan together after getting feeding back from the students but the post-positivism models advocate less teachers’ intervention by educators, advocating chaos to occur in result. In Non-Technical approach students are encountered with content arranged(Hunkins and Ornstein 2004). This approach is not prescriptive; however it can lead to unexpected and creative learning to occur.

Models of Curriculum Development

Ralph Tyler: The Four Principles of Curriculum Rationale

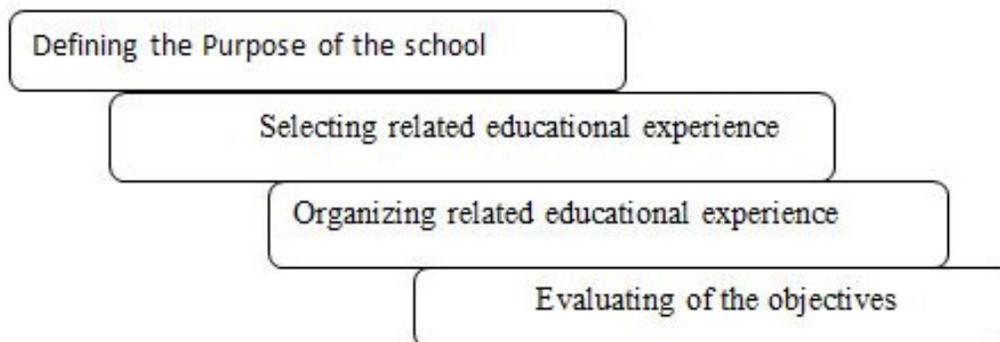
(Hunkins and Ornstein 2004) put much emphasis on the significance of planning in the development of curriculum though different curriculum approaches e.g. Technical/ scientific or Non-Technical/ non-scientific approaches. Technical–Scientific approach is useful for curriculum development, arranging

the learning environment as well as logical and effective in transferring instruction. Ralph Tyler's (1949) original work can be seen in the Technical Scientific Approach and his name is associated with the product model (O'Neill 2010). A few popular models of curriculum development with technical approach are Tyler- Four basic principles, Taba-Grass-roots rationale, Hunkins- Decision making and backward design model. However, models based on technical approach are also divided into two categories as deductive and inductive models. Deductive models are linear, perspective and follow logical stages step by step like planning, designing, implementing and evaluating whereas inductive models are also linear and descriptive.

Ralph W. Tyler presented four basic stages of curriculum development defined as “Basic Principles of Curriculum and Instruction” as known as Tyler's Rationale. The Tyler Rationale (1949) is the most famous modernist model of curriculum development that specifies the four main components of the curriculum: purposes, experiences, methods and evaluation (Lau 2001). These four stages derived from the four questions raised by Ralph Tyler in 1949 as one of the pioneers of curriculum engineer and techniques. It stated that the model of curriculum development means how to plan a curriculum according to the goals and the mission of an educational institution shown in figure 2.

1. Goals and objectives
What are the learning rationales a school should try to find?
2. Content
Which learning principles can be presented that will probably achieve these rationales?
3. Learning experiences
In what manner these learning experiences can be organized effectively?
4. evaluation
How to find out that whether the rationales are being accomplished or not?

Figure 2: Four basic principles of Ralph Tyler's curriculum development model



The model of Tyler is deductive, linear and move from general to specific. From the beginning to end it entails a specific order of steps. Besides, prescriptive it shows what is done as well as what should be done by curriculum developers. He focused on “nature and structure of knowledge, the needs of society as well as needs of the learner” which made Tyler model as “society centred” and placed the school curriculum as an instrument for refining the life of community. 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. He suggested that curriculum planners should gather the data from three sources as Learner, Society and Subject matter.

For him, learner as a data source help in understanding the child's needs and interest related to psychology of the child's appropriate objectives coinciding with appropriate age of the learner. The objective must show identified needs, behavior and interests of learners. Challenges and needs of the society can help in the development of the purposes by providing the knowledge, skills and attitude for the learner. Data as a subject matter can be gathered as follow:

Step 1: Identification of the objectives

Identification of unimportant and contradictory factors, the age of the child as well as the behavioural change of the children determine the appropriate purposes for each group.

Step 2: Selection of learning experience

Learning experiences or the interaction between the learner and the external conditions in the environment influence the goals of education by developing positive attitude in the students towards themselves and acquire useful knowledge for problem solving.

Step 3: Organization of the learning experience

Learning experience should be systematic in a way such that ideas and concept are linked with the contents within subjects.

Step 4: Evaluation

It is also important to check the effectiveness of the program whether the purpose has been attained.

According to Taylor (1990), the rationale for education, learning skills in order to achieve the objectives, organizing the learned skills, and assessment/evaluation are the four basic things in the development of curriculum which needs to be followed in a sequence. This model follows the sequence that's why it is called linear model. It is a logical and sequential approach, which shows that curriculum planning is a task of careful consideration and monitoring (Lau 2001). However, this model has its limitation as it does not put emphasis on the reason of why a curriculum gets fail. Later in 1962, Taba-Grass-roots rationale modified the Tyler's model as a popular illustration of inductive models which is not only temporal but also naturalistic. The Wheeler's model improved model of Ralph Tyler in 1967 but it is cyclical and process model as well.

Using a model to develop curriculum can result in greater efficiency and productivity (Oliva, 2009) which can help to analyse the essential phases of the curriculum development process. Besides Tyler, Taba and Wheeler's models there are many other models of curriculum development but this article only relates Tyler, Taba and Wheeler's model so that differences as well as similarities among deductive, inductive and cyclical can be addressed.

Hilda Taba: Grass-Roots Approach

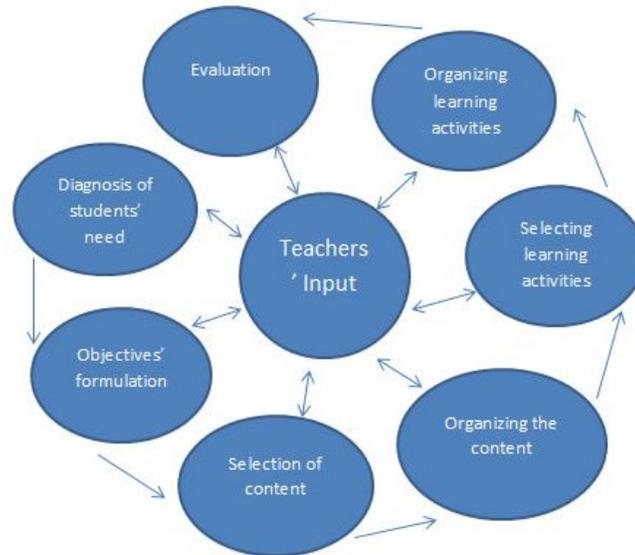
Hilda Taba got supremacy on Tyler's model in 1967 by emphasizing on the role of teachers in developing a curriculum. Tyler starts from the top but, unlike Tyler, Taba starts from the bottom as a grass roots approach (Costa and A. Loveall 2002). Taba's approach is step by step plan following the behavioural approach to build curriculum according to aims and objectives. Taba also advanced a method for clarifying what needs to be learned to the students (Costa and A. Loveall 2002).

Taba argued, in curriculum development: theory and practice (1962), that there is a definite order of creating curriculum and teachers should participate in curriculum development; this is called as grass-root approach. This model is similar to Tyler's model but Taba extended with the importance of teachers in the development of curriculum. She believed that generalized learning objectives ought to be organized around curriculum which facilitates students in discovering principles efficiently (Middaugh and Perlstein 2005). Ornstein and Hunkins stated that, to explain a "grassroots approach to curriculum development", Taba introduced seven most important steps as follow:

- **Diagnosis of needs:** First there is a need to find the requirements of the learners before designing the curriculum.
- **Formulation of objectives:** After identifying goals, those goals are required to be accomplished by the teachers.
- **Selection of the contents:** The contents and objectives should not only correspond to one another but also valid and significant.
- **Organization of the contents:** According to the interest of the children the content should be categorized by considering the maturity, understanding and interest of the learners.

- Selection of the learning experiences: Those methods of instruction should be selected which engage the learners with the contents.
- Organization of the learning activities: Besides the contents sequenced and organization, learning activities should also be categorized so that the learners can link the activities with the contents as well as remember what they learned.
- Evaluation: The curriculum planners also need to determine the accomplishment of the objectives. In the process of evaluation both the teacher and student involved(Ornstein and Hunkins 2009).

Figure 3: Taba’s model of Curriculum Development

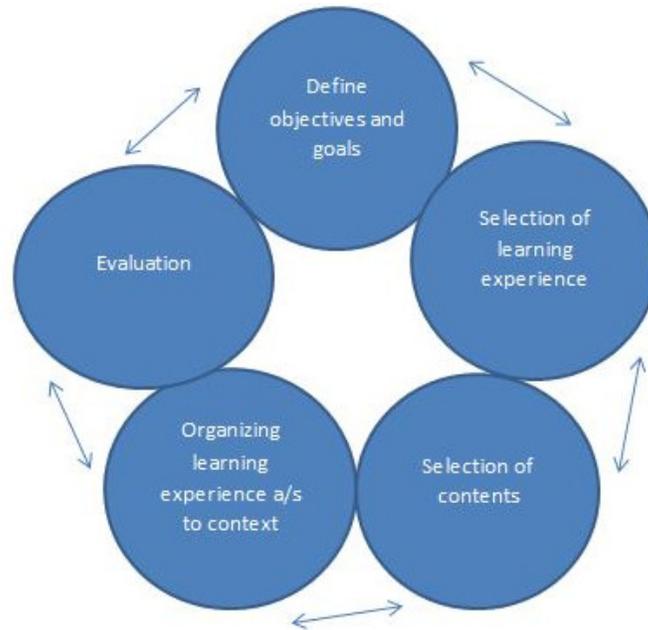


In the perspective of Taba’s model, teachers are the most important factor in the curriculum building. A teacher should participate in the curriculum from the beginning to end. By shifting the responsibility more to teachers rather than administrator, makes Taba’s model different and more realistic. The views of Hilda Taba curriculum development model are used in many schools’ curriculums nowadays.

Wheeler’s Model

Wheeler’s model is also an amendment of Tyler model. After Taba, Wheeler introduced the concept of continuity and he developed a cyclical model which shows that evaluation is not final stage of curriculum development and thus evaluation can become a source of improvement in objective and other stage of curriculum system. Wheeler’s model is a best illustration of flexibility, continuity in the curriculum developed.

Figure 4: Wheeler’s model of curriculum development



According to wheeler, goals are outcome and once the cycle of curriculum development is complete, it starts again from step one and continues again with improvement in the curriculum after putting some changes. This model is different from Tyler models because it put the selection of contents as a separate step and it also add the step about selection of learning experiences. For wheeler, evaluation is the most important because it helps to compare the actual outcomes with the expected outcomes (Wheeler, 1976, cited in Carl, 2009). Although Wheeler’s cyclical model is famous in teaching practice because of its flexibility and relevance to learners in particular situations but it cannot be used always because of time constraints. Moreover, wheeler’s model undertakes a detailed situational analysis which is a time-consuming process and makes it difficult to put into practice in the modern educational practice.

Proposed Curriculum Model structure on the basis of Tyler, Hilda Taba and Wheeler’s model: Hilda Taba and wheeler’s model of curriculum development both are extended ideas of Ralph Tyler’s four principles of curriculum Rationale. Taba just reversed the main procedure for curriculum development whereas wheeler’s model of curriculum development is a cycle of five organized elements that needs continue improvement (C Lunenburg 2018). For wheeler, all the elements of curriculum systems are inter-dependent. All models are similar in terms of providing structuring. Just like Tyler, Taba and wheeler provide a foundation for taking decision regarding the selection of the contents, the contents arrangement as well as sequencing.

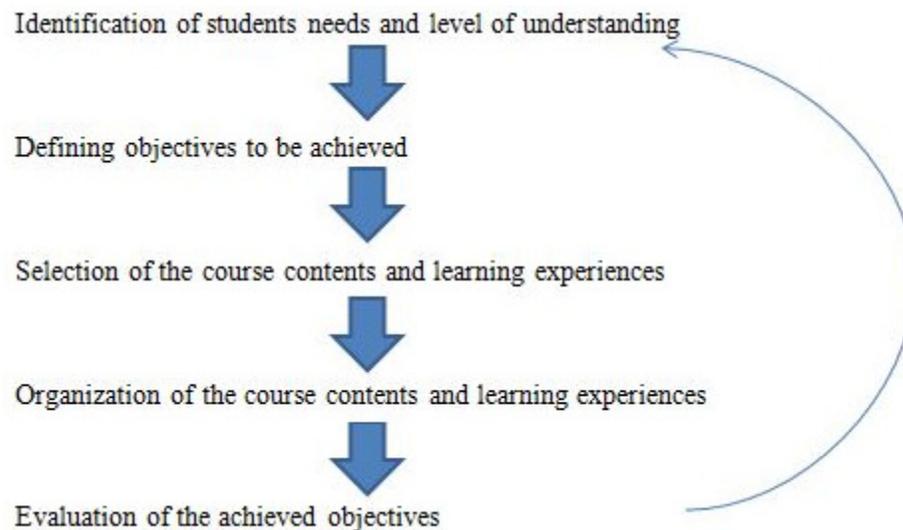
Besides adding more stages of curriculum development in Tyler model, Taba is a rational and objective model as Tyler but inductive and follow grass-root approach too. Tyler’s model look at administrator for curriculum development and teachers for its implementation but Taba emphasis for teachers input in curriculum planning and processing (Kliebard 1995). The model of Tyler put the pressure on importance of aims, evaluation and regulation whereas Taba’s rationale starts with the identification of needs in a particular society and the formulation of objective. This approach may be perfect, perhaps, for market oriented education, but inadequate for the development of responsible and creative individuals able to meet the challenges of the constantly changing circumstances.

Wheeler’s model is cyclical model which promotes the continued improvement by incorporating new information. Cyclical model also put much stress on the situational analysis. Evaluation is also the last stage of this model but it uses its feed back into objective of the curriculum. To summarize, Taba model is better than Tyler in the sense that it gives preference to the need of the

society before formulating the objectives and Wheeler’s model is better than Taba from the perspective of continued improvement in the curriculum after getting feedback through the means of evaluation. Based on the conceptual frame work and the important elements, sequence of the well know curriculum development models mentioned in this study, a modified curriculum development model can be developed. The proposed model in this study is cyclical and combines all the stages mentioned in Tyler, Taba and Wheeler’s models of curriculum development by covering all the important aspects of a curriculum process.

However, the curriculum development process should start with the learners’ need and their level of understanding. Students’ need helps in defining objectives and those objectives can be achieved through incorporating the different related course contents and learning experience. The stage of evaluation is the most important stage as it can highlight the weakness and strengths of the designed curriculum which can be addressed next time. Thus by bringing few modification leads to new curriculum model which can be illustrated through the figure below:

Figure 5: The proposed curriculum model based on Tyler, Taba and Wheeler



Discussion

Inductive model also referred as naturalistic and temporal, include three major elements: platform (principles), deliberation (Planning), and at the end the ultimate a curriculum design. These models are more descriptive and begins with the platform and end at the design after being processed (C Lunenburg 2018), Hilda Taba is a model of induction. The rational principles of Ralph Tyler are best illustration of deductive models which are also known as classical model which are perspective and linear (C Lunenburg 2018). Wheeler’s model as a continuum model shows a model which does not end at the stage of evaluation rather it states that the curriculum model should be improved after evaluating its objectives.

The best curriculum model should be according to the needs of learner at individual or class level, it should also take into account the available study environment, facilities and time as well. All the needs should be identified at first level and later the objective should be defined according to learner, environment, subject matter requirements and time as well. Further, a curriculum should also be interesting, motivational, flexible as well as practical so that it can be easily implemented.

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