DEFINITION AND FUNCTION OF CURRICULUM DESIGN

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SUMMARY

At present it is well to recognize that there is no consistently clear distinction in the use of much educational terminology. Many curriculum scholars in their writings called greater care in the definition of terms. They also noted that first and very important job in curriculum construction activity is the definition and consistent use of technical terms.

Because of the conflicting terminology in the literature, it seems necessary to define what curriculum design means when used and what its function is in curriculum construction activity. In short, the aim of this paper is to examine the definitions and functions of the curriculum design in order to give a consistent definition of curriculum design.

ÖZET

Program Tasarısının Tanımı ve Fonksiyonu

Eğitim terimlerinin çoğu zaman farklı farklı anlamlarda kullanıldığı bilinmektedir. Birçok programcı terimlerin tanımlanmasında dikkatli olunması, program yapma etkinliğinde ilk ve önemli işin teknik terimlerin tanımlanması ve tutarlı bir şekilde kullanılması olduğunu belirtmiştir.

Kaynaklardaki birbirleriyle çelişen terminology nedeniyle, program tasarısının (Curriculum Design) kullanıldığında ne anlama geldiği ve program yapma etkinliklerinde fonksiyonunun ne olduğunun açıkça belirtilmesi gerekir. Bu yazının amacı, program tasarısını (Curriculum Design) tutarlı bir şekilde tanımlıyabilmek için, program tasarısı (Curriculum Design) ile ilgili tanımları ve fonksiyonlarını incelemektir.

The design element is central to many applied fields and the term "Design" is usually used in construction to combine ideas, products, and functions to accomodate these elements into a form.

Like other fields, the term "Design" is used in the curriculum construction process. Curriculum design is the focus of all curriculum construction process, and

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it is the design that influences the organization of the curriculum plan and distinguishes one curriculum from another. What a curriculum looks like, what its components or elements are, and how these elements are organized is the subject of the curriculum design. Thus, curriculum design is the term that refers to the characteristics or features of the curriculum organization.

The term "curriculum design" was first used by Virgil E. Herrick in his article on "The Concept of Curriculum Design" in 1950. Since then, curriculum design has been treated by different writers on the subject in a variety of ways. According to Goodlad, there is a lack of agreement among the writers who talk about curriculum design, because the term carries quite different messages to them. However, those who have worked in the field of curriculum as specialists use special terminology —such as continuity, sequence, scope, correlation, integration, organizing principles, horizontal and vertical relationships— under the rubric of curriculum design[1].

More than any other theorist, Herrick helped to clarify the role and function of the design as an element in curriculum planning. He maintained that curriculum can be improved by considering decisions and the patterns of factors as part of the curriculum design, and defining the term, curriculum design, in a more precise way. As a result, he defined curriculum design as:

> a statement of the patterns of relationships which exist among the elements of curriculum as they are used to make one consistent set of decisions about the nature of the curriculum of the child[2].

Herrick insisted that an adequate curriculum design should define elements of the curriculum, indicate the pattern of relationships of these elements, and furnish "a consistent framework of values and their priorities for ... the teaching - learning situation"[3]. A curriculum design and its attendent theory should: (1) define for all the elements of the curriculum, (2) define the coherency of these elements to themselves and to their action points, (3) indicate and control the educational behaviors of the pupil[4].

A curriculum design is taken by Herrick to refer to a specific statement which indicates the organizing elements that are involved in curriculum, and their relationships as they are used by educators in making a consistent set of decisions about the educutional program. The distinctive features of a curriculum design are its elements and the over - all emphasis presented by their organization.

Herrick considered the problems of the various approaches-subject, broadfields, core, problem solving; the organizational patterns within a single subject field; teaching learning plans as the same problem of the curriculum design because

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1   John I. Goodlad, "Epilogue: Perspectives on Curriculum Design", in *Curriculum Design in a Changing Society*, eds. R.W. Burns and Gary D. Brooks (New Jersey: Educational Technology Publications Inc., Englewood Cliffs, 1970), pp. 350-353.

2   Virgil E. Herrick, "Concept of Curriculum Design", in *Strategies of Curriculum Development*, eds. Dan W. Andersen, James B. Macdonald, and Frank B. May (Ohio: Charles E. Merrill Books, Inc., 1965), p. 18.

3   Ibid., p. 17.

4   Ibid., p. 18.

all of the elements of the curriculum design are present at these planning and organizing levels[5].

Thus, Herrick gave curriculum designers a definition of curriculum design and a series of essential characteristics of design. In terms of the function of the curriculum design, he stated that design: (1) defines the elements of the curriculum and their pattern of relationships, (2) shows the means for selecting and organizing learning experiences, and (3) indicates the roles of teachers, students, and others in the curriculum planning process[6]. His eleven propositions regarding the role and function of the curriculum design emphasized that design must make clear the bases upon which curriculum decisions are made; must consider more than one dimension to give direction to general education program; must provide the bases on which learning experiences are planned, selected, and organized; must give perspectives for the improvement of single phase curriculum programs; must guide instructional planning by showing the approaches used for selecting and organizing learning experiences; must make clear both horizontal and vertical continuity; must show the roles and responsibilities of the teachers and staffs in the curriculum development process[7].

Taba built on Herrick's definition of curriculum design and stated it in a way that contained some of the other considerations stressed by Herrick. She defined curriculum design as:

> a statement which identifies the elements of the curriculum, states what their relationships are to each other, and indicates the principles of organization for the administrative conditions under which it is to operate. A design, of course, needs to be supported with and make explicit a curriculum theory which establishes the sources to consider and the principles to apply[8].

A curriculum design, according to Taba, is a framework, pattern, and organization of the curriculum. The role and function of the curriculum design should be: (1) the identification of the major elements of the curriculum, (2) the making explicit the bases and sources of the selection of elements of the curriculum, (3) the identification of both the relationship amongst the elements and their supporting principles and the sources to indicate priorities to be considered, (4) the indication of the basic principles of organization - centers for organizing curriculum experiences, organizing principles such as scope, sequence, continuity of learning, and integration of knowledge, and (5) the indication of administrative conditions and instructional rasources which are necessary for implementation[9].

Thus, Taba's interpretation of curriculum design differs from Herrick's. Taba included these three other considerations which are actually proposed by Herrick for building an adequate and effective design, namely - the requirements of the administrative conditions and instructional resources for implementation, the basic

5   Ibid.
6   Ibid., pp. 18-19.
7   Ibid., pp. 23-38.
8   Hilda Taba, *Curriculum Development: Theory and Practice* (New York: Harcourt, Brace and World, Inc., 1962), pp. 421.
9   Ibid., pp. 422-427.

organizational principles, and the supporting principles and sources of the elements of the curriculum.

Taba was generally interested with the problems of the design for the entire curriculum; and the issues and considerations which are pertinent to that design. In an illustration of a model for curriculum design, which included objectives, curriculum experiences, possible centers for organization, and a scheme of scope and sequence, she did not deal with instruction. She proposed a design for curriculum which showed the interaction of the identified elements.

Johnson addressed the meanings of curriculum design. Acoording to him, a curriculum design is "generically an organic arrangement or structure of elements, parts, or details"[10]. Johnson equated design with "pattern" and/or "pattern of organization". After examining different definitions of curriculum design, he mentioned three notions of curriculum design as:

(1) an arrangement of selected and ordered learning outcomes intended to be achieved through instruction

(2) an arrangement of selected and ordered learning experiences to be provided in the instructional situation

(3) a scheme for planning and providing learning experiences[11]

In Johnson's view, curriculum design is more useful as a reference to a cirriculum product than a process. He pointed up a necessity for making clear distinctions between curriculum and instruction. He mentioned that curriculum design is supported when curriculum is thought as "a plan or design", and concluded that "a curriculum design must be a plan of, or for, a plan"[12]. Johnson insisted that curriculum design is "a design for instruction"[13].

Goodlad saw curriculum design as an end product of a whole series of decisions on the "educational objectives which specify both behavior and content and their relationship to other curricular decisions: selection of learning opportunities, determination of sequences, evaluation of student progress, and so on"[14].

Goodlad and Richter considered the selection and organization of learning opportunities as "a process of defining the curriculum design for an institution or group of institutions"[15].

Oliver maintained that curriculum design is technological in its goals, and that technological modes should be examined in order to verify the curriculum design. He stated that:

10 Mauritz Johnson, Jr., "On the Meaning of Curriculum Design", *Curriculum Theory Network* 3 (Spring 1969), p. 3.

11 Ibid., p. 5.

12 Ibid., p. 6.

13 Ibid., p. 8.

14 John I. Goodlad, "The Curriculum", *The Changing American School, in The 65th Yearbook of the NSSE*, Pt. I (Chicago, Ill.: The University of Chicago Press, 1966), p. 56.

15 John I. Goodlad and Maurice N. Richter, *The Development of a Conceptual System for Dealing with Problems of Curriculum and Instruction*, Cooperative Research Project No: 454 (Los Angeles: University of California, 1966), p. 57.

The prerequisite task in providing the rigor of design is to develop a conceptual structure for identifying the ciritical dependent and independent events with which curriculum designers must deal. This conceptual structure would describe, in effect, what curriculum designers do, or ought to do[16].

Calfee offered a different view of curriculum design. He supported that curriculum design considers two major questions: "what shall be taught and how shall it be taught"[17]. Thus, Calfee tied together the what and how of teaching as the two main questions of curriculum design; and considered instruction as a part of the curriculum design.

In similar manner, Resnick supported instruction as a part of the curriculum design. He mentioned that curriculum design must consider "specification of what is to be learned"[18] and "the design of environments for learning and of components of these environments"[19]. He considered curriculum design in terms of science and art, and said that "curriculum design, ..., requires a delicate balance between artfullness and the scientific rigor. If either art or science is weak, a curriculum is less likely to be effective and attractive than if both are well combined in the design.."[20].

Pratt also described curriculum design in terms of science and art and defined it as "a deliberate process of devising, planning, and selecting the elements, techniques and procedures that constitute some object or endeavor"[21]. He insisted that curriculum design liberates the creativity of the teacher when it includes the elements of the situations in advance.

Orlonsky and Smith maintained that curriculum design is the output of the decisions of the decision makers, and they equated curriculum design with the "organization that puts the curriculum to work"[22]. In terms of the major concern of curriculum design, it was stated by Orlonsky and Smith that curriculum design deals with" (1) selecting the learnings considered most important, (2) establishing a sequence that is most effective, and (3) relating that sequence to other variables such as the motivation of learners and correlation with other knowledge"[23]. Thus, Orlonsky and Smith's view dealt with the instructional system-environment in

16   C.L. Oliver, "Toward Improved Rigor in the Design of Curriculum", in *Curriculum Design in a Changing Society*, eds. R.W. Burns and G.D. Brooks, (New Jersey: Educational Technology Publications Inc., Englewood Cliffs, 1970), p. 76.

17   Robert C. Calfee, "Information - Processing Models and Curriculum Design", in *Curriculum Design in a Changing Society*, eds. R.W. Burns and G.D. Brooks (New Jersey: Educational Technology Publications Inc., Englewood Cliffs, 1970), p. 282.

18   Lauren B. Resnick, *The Science and Art of Curriculum Design* (Washington, D.C.: NIE, 1974), p. 10.

19   Ibid., p. 2.

20   Ibid., pp. 35-36.

21   David Pratt, *Curriculum Design and Development* (New York: Harcourt and Brace Jovanovich, Inc., 1980), p. 5.

22   Donald E. Orlonsky and B. Othanel Smith, eds. *Curriculum Development: Issues and Insights* (Chicago: Rand McNally College Publishing Company, 1978), p. 269.

23   Ibid., p. 271.

which the curriculum is implemented. In similar manner, Wilson dealt with the environment in which the curriculum is implemented;[24] and Nelson proposed that management be concerned with design of situations and experiences which are clearly instructional[25].

Saylor and Alexander, who believed the utilization of more than one design theory for an adequate curriculum plan, defined curriculum design as "particular shape, framework, or pattern of learning opportunities" used in selecting, planning, and carrying forward educational experiences for a particular population[26]. From their point of view, curriculum design is the framework for teachers and learners to develop learning experiences. According to Johnson, this definition of curriculum design includes instructional planning too[27].

Beauchamp who saw curriculum design as a sub-theory of curriculum defined it "as the substance and organization of the goals and culture content so arranged as to reveal potential progression through levels of schooling"[28]. He distinguished two fundamental dimensions of curriculum design "... the total substance, the elements and the arrangement of the document ...; and the mode of organization of various parts of a curriculum, particularly the culture content"[29]. For him, the subject of the curriculum design is to determine the shape, elements, and organization of the curriculum, and it is the design characteristics that distinguishes one design from another[30].

A curriculum design is taken by Beauchamp to refer to a general educational plan used to make decisions about a program for pupils. It is a written document and is the output of the curriculum planning process. It involves two significant characteristics: (1) a statement about how to proceed in an educational situation, and (2) an organizational scheme to proceed consistently in an educational situation.

Like Herrick and Taba, Beauchamp insisted that the design and organization of the school should be in harmony.

In similar fashion, Hunkins described curriculum design as a written document which is the output of the curriculum planning process and which is a guide for the teaching-learning process. According to her, it is the design's role to deal with the elements of the curriculum and arrangement of these elements to provide an autonomous curricular content system. Like Herrick, she explained the function of the curriculum design as: (1) to identify elements of the curriculum, (2) to define the relationship amongst these elements, and (3) to predict and control be-

24   L. Craig Wilson, *The Open Access Curriculum* (Boston: Allyn and Bacon, Inc., 1971), p. 20.

25   Paul A. Nelson, "Curriculum Management by Design", *Educational Leadership* 30 (January 1973), pp. 313-317.

26   Galen J. Saylor and William M. Alexander, *Planning Curriculum for Schools* (New York: Halt, Rinehart and Winston Inc., 1974), p. 189.

27   Mauritz Jr. Johnson, "On the Meaning of Curriculum Design", *Curriculum Theory Network* 3 (Spring, 1969), p. 4.

28   George A. Beauchamp, *Curriculum Theory* (Wilmette, Ill.: The Kagg Press, 1975), p. 101.

29   Ibid., p. 102.

30   Ibid.

haviors of the pupils. In addition, she stated that curriculum design should provide suggestions for selecting and organizing of content, experiences, environment, materials and media; and indicate the roles of students, teachers, and other personal in the planning and implementation process[31].

McNeil defined curriculum design as:

> a statement of the relationships among purpose (functions, domains, goals, or objectives); organizing structures (subjects, courses, topics); organizing elements (skills, values, concepts); specific learning opportunities or activities; and the principles to be followed in order that learning opportunities have a cumulative effect (simple to complex)[32].

Thus, a curriculum design is taken by McNeil to refer to the relationships of the purposes, activities, and structure.

In terms of the function of the curriculum design, Doll stated that a comprehensive curriculum design should identify the elements of the curriculum; indicate the pattern of relationship amongst these elements; mention means for selecting and organizing learning experiences; emphasize both students' needs and subject matter for their own importance and worth; reveal the roles of teachers, students, and other staffs in curriculum planning; indicate the organizing centers around which the elements of the content are taught; and aid instruction[33].

Mannings, who proposed a person - oriented design, defined curriculum design as "the super structure of curriculum organization ... a structure that is developed with great sensitivity to internal and environmental needs ... an external manifestation of internal conditions"[34]. Thus, he considered curriculum design as an instrument which is related to the purposes and controls the quality of the program. He stated that curriculum design should provide problem solving opportunities for children, indicate vertical placement of the pupil, emphasize teacher - student planning, provide a humanistic setting, indicate the elements of content, be flexible to provide learning experiences according to individual differences, and "represent an articulated overall plan through which the learner move from level to level smoothly, continuously and with a minimum of institutionalized confusion"[35].

According to Macdonald, curriculum designs are "value oriented statements" and designs "attempt to project a theoretically based pattern of experiences as desirable"[36].

31   Francis P. Hunkins, *Curriculum Development: Program Improvement* (Columbus, Ohio: Charles E. Merrill Publishing Company, A Bell and Howell Company, 1980), pp. 179-230.

32   John D. McNeil, *Curriculum: A Comprehensive Introduction* (Boston: Little, Brown and Company, 1981), pp. 194, 195.

33   Ronald C. Doll, *Curriculum Improvement: Decision Making and Process,* 5th ed. (Boston: Allyn and Bacon Inc., 1983), p. 194.

34   Duane Mannings, *Toward a Humanistic Curriculum* (New York: Harper and Row, Publishers, 1971), p. 18.

35   Ibid., p. 42.

36   James B. Macdonald, "Curriculum Theory", in *Curriculum Theorizing: The Reconceptualists,* ed. W. Pinar (Berkeley, California: McCutchan Publishing Corporation, 1975), p. 11.

Useful definitions of curriculum design would specify the principles and procedures by which different organizational patterns of the curriculum can be identified and classified. In this vein, Walker defined curriculum design as:

> the set of abstract relationships embodied in the designed object. The design is the theoretically significant output of the curriculum development process. When it is embodied in material form, a curriculum's design, like an automobile design, presents itself as a single entity, a Gestalt, which must be represented in some schematic way if we are to deal it analytically[37].

In the literature, although design has been treated by different writers in different ways, there is a degree of agreement that in a broad sense, curriculum design deals with the elements of curriculum and their relationships; and it is a framework for organizing curriculum.

The organization of anything includes: "a. the identification of the parts or aspects to be organized, b. the identification of the organizing foci for relating the parts, and c. a pattern of relationships or a structure within which relationships can be seen and new patterns can evolve"[38].

It is, then, the verifiability of a given design which has power for clarification of its parts, and if presented schematically helps make explicit the criteria by which elements of a curriculum can be identified, classified, and organized into a comprehensive wholes.

In conclusion, under the discussion held above, the definition of curriculum design would be:

Curriculum design is a preliminary sketch which indicates the identification, selection, arrangement, and organization of the elements of curriculum within the relationships to sources and organizing principles along with the administrative conditions necessary to operate.

To be consistent, a curriculum should be constructed according to the curriculum design. In the light of the above definition of the curriculum design, how a curriculum would be constructed, will be considered deeply in another publication.

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37 Decker F. Walker, "A Naturalistic Model for Curriculum Development", *School Review* 80 (November, 1971), p. 53.
38 Virgil E. Herrick, "Problems of the Curriculum Theorist", in *Strategies of Curriculum Development*, eds. D.W. Andersen, J.B. Macdonald and F.B. May (Columbus, Ohio: Charles E. Merrill Books Inc., 1965), p. 12.