

A NON-SCHOOL CURRICULUM MODEL ILLUSTRATED IN A MUSEUM SETTING

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What contribution can a school curriculum model make to the study of non-school curriculums? The question is necessary. Despite the plethora of non-school educational institutions and a growing awareness of the importance of non-school education, there is a lack of conceptual theorizing, model building, and systematic empirical inquiry into the curriculum of non-school education. Curriculum models need to be constructed that consider curriculum beyond its connotation as a phenomenon of schooling.

Cross believes that inquiry into "how learning actually takes place in everyday settings is a necessity."¹ Cremin notes, however, that non-school education will not be a compelling topic of research until education is seen as less restricted to academia.² He advocates a new definition that would project education "beyond schools and colleges to the multiplicity of individuals and institutions that educate." Baily offers such a comprehensive view of education in early American society—a view where education was construed as "the entire process by which a culture transmits itself across generations."³ Baily and Cremin's conception of education will require that non-school learning environments be investigated as systematically as schools have been studied and that models of curriculum, in its more global sense, be conceived. Specifically, formulating the new models and definitions will require three related courses of action:

1. *That the curriculum of non-school education be described and defined according to its unique elements and relationships.* Although non-school education has been described in general, the elements of its various curriculums have not been identified. Further, curricular elements as planned by non-school educators and as experienced by non-school learners have not been compared for differences in perspective that may affect learning.

¹K. Patricia Cross, *Adults as Learners* (San Francisco: Jossey Bass, 1982), p. 199

²Lawrence A. Cremin, *Public Education* (New York: Basic Books, 1976), p. 29

³Bernard Baily, *Education in the Forming of American Society: Needs and Opportunities for Study* (Chapel Hill: University of North Carolina Press, 1960), p. 14

2. *That heuristic models be generated for classifying and relating the elements and perspectives of non-school curriculums.* Existing classificatory schemes are based on school curriculum. Their applicability to non-school curriculums has not been studied, although such schemes could suggest starting points for the study of non-school curriculums. However, school curriculum models may not indicate elements and relationships relevant to a complete description of non-school environments and may not show the dynamic relationships among those elements.

3. *That school and non-school curriculum models be linked for a more holistic understanding of the entire educational milieu.* Conceptualizations of curriculum need to apply to a variety of learning situations, both to be truly descriptive of curriculum and to demonstrate the relatedness of schools and the myriad other institutions that educate. Schools and non-school educative organizations may share many of the same curricular elements; however, the importance and specific characteristics of those elements may vary considerably among the institutions. The agreements and discrepancies between school and non-school curriculums need to be studied so that the characteristics of the entire educational environment can be documented fully.

Only school curriculum has been described according to its elements and the perspectives of its teachers and learners. The approach to education advocated by Cremin, Leichter, and others is that institutions other than schools also have deliberately planned curriculums that can be defined, described, and compared.⁴

This view of education linking school and non-school settings has received new prominence lately. Fantini and Sinclair provide a solid background of ideas on this topic.⁵ More recently, Schubert and Melnick framed the general study of the "outside curriculum" of students' lives to include "(1) insights from curriculum knowledge that could illuminate the efforts of non-school educators, (2) insights of non-school educators and non-school situations that could illuminate the work of schools; and (3) strategies for school and non-school educators to share their expertise as they pursue together one of the most central problems of our age, namely, how to develop curriculums for and with children and youth to enhance the ability and outlook of subsequent

⁴Lawrence A. Cremin, *Public Education* (New York: Basic Books, 1976), p. 29; Hope J. Leichter, "Families and Communities as Educators: Some Concepts of Relationship," in *Families and Communities as Educators*, ed. Hope J. Leichter (New York: Teachers College Press, 1979), pp. 3-94.

⁵Mario M. Fantini and Robert Sinclair, "Education in School and Nonschool Settings," in *Education in School and Nonschool Settings*, 84th Yearbook of the National Society for the Study of Education, Part 1, ed. Mario M. Fantini and Robert Sinclair (Chicago: University of Chicago Press, 1985).

generations of human beings."⁶ Our study should be seen in this broader context of curriculum.

THE STUDY

The purpose of this study was to contribute to the conceptual linking of school and non-school education by using a school curriculum model as a springboard for studying curriculum in a non-school educative institution, the museum. (For this study, "non-school education" was defined as teaching and learning that is "recreational, voluntary, experiential, and perceptual" and occurs outside of school.) While we recognized that many museums have overtly pedagogical programs (classroom visits, public lectures), we did not intend to examine the school-like aspects of the structured and focused efforts of the part of the museum that explicitly purports to be educational. Rather, the study defined and described the non-school museum curriculum, compared that curriculum to the school model, and suggested modifications to the model to strengthen its applicability as a heuristic device for studying the similarities and differences among the various curriculums of educational settings.

Selection of the Institution

Curriculums can be found in a plethora of institutions: "families, churches, synagogues, libraries, museums, summer camps, benevolent societies, agricultural fairs, settlement houses, factories, radio stations, and television networks," among others.⁸ Museums were chosen for the study because of their vigorous, if recent, self-identification as educational institutions. Only in the last few decades have museums acknowledged their educational purpose.⁹ Acquisition, preservation, and research had traditionally been the roles of museums. Education was appended reluctantly to this list only because the public insisted on flocking to exhibit halls.¹⁰ Not until the late 1960s was education recognized as the paramount purpose of museums¹¹

⁶William H. Schubert and Carol R. Melnick, "Are You Doing Inquiry Along These Lines? Study of the 'Outside Curriculum' on Students' Lives," *Journal of Curriculum and Supervision* 2 (Winter 1987): 200-202

⁷Harry G. Miller, *Adult Education in Museums and Public Libraries* (Carbondale: Southern Illinois University, 1983) (ERIC Document Reproduction Service No. ED 231 986), p. 4.

⁸Lawrence A. Cremin, *Public Education* (New York: Basic Books, 1976), p. 29.

⁹Kenneth Hudson, *A Social History of Museums* (Atlantic Highlands, NJ: Humanities Press, 1975).

¹⁰Chandler G. Screven, *The Measurement and Facilitation of Learning in the Museum Environment. An Experimental Analysis* (Washington, D.C.: Smithsonian Institution Press, 1974).

¹¹Lola E. Rogers, *Museums and Related Institutions* (Washington, D.C.: Department of Health, Education, and Welfare, 1969)

Selection of the School Curriculum Model

Since museum (and other non-school) curriculum models were unavailable, the study used a school curriculum model as a heuristic device. Several models were considered, including Tyler, Saylor and Alexander, McNeil, and Tanner and Tanner.¹² The difficulty in using these and similar models for inquiry into non-school curriculum is that they are prescriptive models of the curriculum-planning process. These models focus on prescribed, sequential steps for planning curriculum, instead of focusing on the analytic components of any curriculum. Moreover, their emphasis is on " 'should' questions and decisions rather than on descriptive 'is' questions and decisions."¹³ Since little is known about the curriculum of non-school environments, it would have been premature for this study to use a model that makes judgments on what, if anything, educative institutions should be teaching.

Another difficulty inherent in many curriculum models is their acceptance of, and reliance on, four curriculum variables: goals (or objectives), teaching strategies, learning activities, and evaluation. The problem here for inquiry into non-school curriculum is twofold. First, the existence of these variables in non-school curriculums cannot be taken for granted, as it is in school curriculums. For example, this study revealed that objectives and evaluation may be missing from the museum curriculum. Second, these models do not suggest or explore additional variables that may affect learning in the non-school setting.

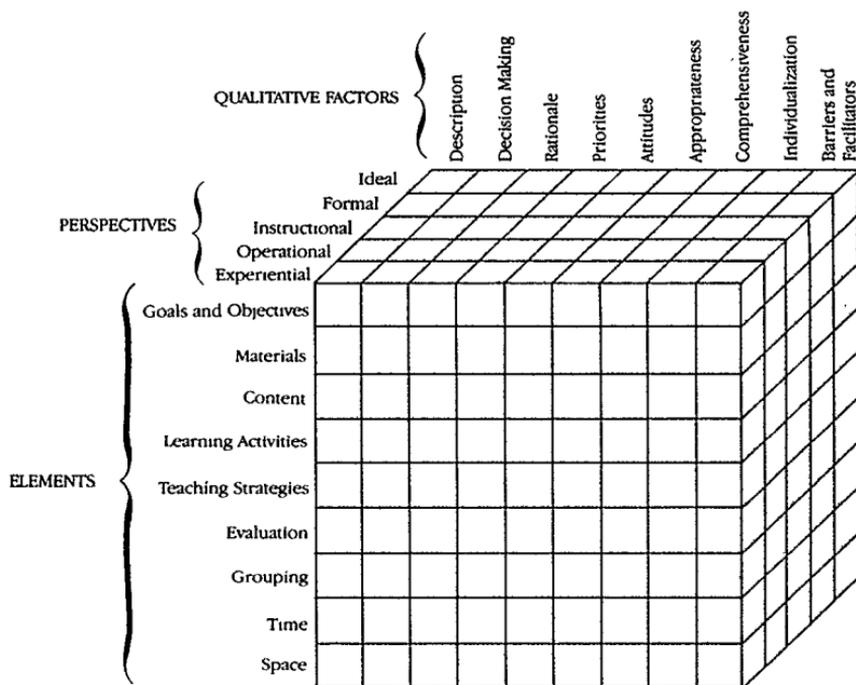
Since prescriptive curriculum models could not meet the basic descriptive needs of non-school curriculum inquiry, this study turned to a descriptive curriculum model. The model proposed by Goodlad, Klein, and Tye for *A Study of Schooling* is also concerned with school curriculum (see Figure 1).¹⁴ However, three factors made *A Study of Schooling's* model a more appropriate heuristic tool for studying non-school curriculum. First, the model is descriptive. Its authors used it as a guide for data collection and analysis, not as a prescription of how curriculum should be planned. The model was developed as a heuristic device and was used as such in this study of museum curriculum. Second, the model suggests the existence of several additional curriculum variables:

¹²Ralph W. Tyler, *Basic Principles of Curriculum and Instruction* (Chicago: University of Chicago Press, 1950); J. Galen Saylor and William M. Alexander, *Curriculum Planning for Modern Schools* (New York: Holt, Rinehart, and Winston, 1966); John D. McNeil, *Curriculum* (Boston: Little, Brown, 1985); Daniel Tanner and Laurel N. Tanner, *Curriculum Development* (New York: Macmillan, 1980).

¹³James B. MacDonald, Bernice J. Wolfson, and Esther Zaret, *Reschooling Society: A Conceptual Model* (Washington, D. C.: Association for Supervision and Curriculum Development, 1973), p. 5.

¹⁴John I. Goodlad, M. Frances Klein, and Kenneth A. Tye, *Curriculum Inquiry* (New York: McGraw-Hill, 1979).

Figure 1. A Study of Schooling's Model for Curriculum



1. *goals and objectives*. the intended learning outcomes
2. *materials*. the objects in the learning environment
3. *content*. the subject matter and processes of the materials
4. *learning activities*. the experiences designed to facilitate learning
5. *strategies*: the methods of instruction
6. *evaluation*: the methods for gathering data to assess learner progress
7. *grouping*: the formation of groups to promote learning
8. *time* the scheduling and use of time in the learning environment
9. *space*. the arrangement and use of space in the learning environment

While the nine curriculum variables of *A Study of Schooling's* model may not exhaust the possibilities, and while they all may not apply to non-school curriculums, they at least suggest a broader scope for research than do the four variables found in several other models. Finally, *A Study of Schooling's*

model suggests that various actors in an educational environment may have different perspectives on their common curriculum.

1. the *ideal* perspective of educational philosophers
2. the *formal* perspective of curriculum planners
3. the *instructional* perspective of teachers' intentions
4. the *operational* perspective of teachers' actions
5. the *experiential* perspective of learners

Variables and Perspectives

This study used the nine curriculum variables from *A Study of Schooling's* model. Museum and educational literature had validated that these variables might be present in museum curriculum: educational and recreational goals,¹⁵ including the debate over the place of behavioral *objectives* in the museum curriculum;¹⁶ the educational merits of various verbal, visual, auditory, and tactile *materials*, especially the controversy over labels and other text;¹⁷ the

¹⁵Minda Borun, *Measuring the Immeasurable: A Pilot Study of Museum Effectiveness* (Philadelphia: Franklin Institute, 1977) (ERIC Document Reproduction Service No. ED 160 499); Arminta Neal, *Exhibits for the Small Museum* (Nashville: American Association for State and Local History, 1976); Shirley B. Neill, "Exploring the Exploratorium," *American Education* 14 (1987): 6-13; Barbara Y. Newson and Adele Z. Silver, eds., *The Art Museum as Educator* (Berkeley: University of California Press, 1978); Bonnie Pitman Gelles, "United States of America," in *Museums and Children*, ed. U. K. Olofsson (Paris: UNESCO, 1979), pp. 165-179.

¹⁶Beverly Baker and Jean Sellar, "Science Comes Alive in the Natural History Museum," *Curriculum Review* 22 (December 1983): 71-74; Chandler G. Screven, "Exhibit Evaluation—A Goal-Referenced Approach," *Curator* 19 (December 1976): 271-290; Alberta P. Sebolt, "Museums and Learning," in *Museum School Partnerships: Plans and Programs*, ed. Susan N. Lehman (Washington, D.C.: McNaughton and Gunn, 1981); Harris H. Shettel, "Exhibits: Art Form or Educational Medium?" *Museum News* 52 (September 1973): 32-41.

¹⁷Edward P. Alexander, *Museums in Motion* (Nashville: American Association for State and Local History, 1979); Jeffrey Birch, "A Museum for All Seasons," *Museum News* 60 (March-April 1982): 24-28; Marlene Chambers, "Is Anyone Out There?" *Museum News* 62 (June 1984): 47-54; Marya Clowes and Lee Wolff, *A Preliminary Evaluation of the "Birds in Canada" Exhibit* (Ottawa: National Museum of Natural Sciences, 1980) (ERIC Document Reproduction Service No. ED 198 043); Kenneth Hudson, *A Social History of Museums* (Atlantic Highlands, N.J.: Humanities Press, 1975); John J. Koran, Jr., Jeffrey R. Lehman, Lynn D. Shafer, and Mary Lou Koran, "The Relative Effects of Pre- and Postattention Directing Devices on Learning from a 'Walk Through' Museum Exhibit," *Journal of Research in Science Teaching* 20 (No. 4, 1983): 341-346; Russell L. Lewis, *Manual for Museums* (Washington, D.C.: National Park Service, 1976); Chandler G. Screven, "Instructional Design," *Museum News* 52 (January-February 1974): 67-75; Chandler G. Screven, *The Measurement and Facilitation of Learning in the Museum Environment: An Experimental Analysis* (Washington, D.C.: Smithsonian Institution Press, 1974); Harris H. Shettel, *An Evaluation of Visitor Response to "Man in His Environment" Final Report* (Chicago: Field Museum of Natural History, 1976) (ERIC Document Reproduction Service No. ED 141 078); Adele Z. Silver, "The Museum as Educator," *Principal* 63 (September 1983): 22-26; Robert M. Smith, George F. Aker, and J. R. Kidd, eds., *Handbook of Adult Education* (New York: Macmillan, 1970); John Whutman, "More Than Buttons, Buzzers, and Bells," *Museum News* 57 (September-October 1978): 43-50; Robert L. Wolf, Mary Ellen Munley, and Barbara L. Tymitz, *The Pause That Refreshes: A Study of the Discovery Corners in the National Museum of History and Technology* (Washington, D.C.: Smithsonian Institution Press, Office of Museum Programs, 1979) (ERIC Document Reproduction Service No. ED 196 772).

interdisciplinary *content* of the museum,¹⁸ *learning activities* engaged in by museum visitors, including an almost-legendary aversion to reading,¹⁹ the problem of applying *teaching strategies* in a teacher-less environment,²⁰ and the possibility of visitors acting as teachers for each other,²¹ the lack of much formal *evaluation* of the museum's educational effectiveness, including the debate over testing visitors to determine how much they learned,²² how visitors *group* themselves,²³ the brief *time* that museum visitors spend at displays,²⁴ and the effectiveness of various arrangements of the exhibit *space*.²⁵

¹⁸Ellie Caston, "An Interdisciplinary Approach to Education," *Museum News* 57 (March–April 1979): 50–53; Marcia C. Linn, "Evaluation in the Museum. Focus on Expectations," *Educational Evaluation and Policy Analysis* 5 (Spring 1983): 119–127.

¹⁹Minda Borun and Margaret Miller, "To Label or Not to Label?" *Museum News* 58 (March–April 1980): 64–67; Anna DuTerroil, *Museum Education: Recent Trends in Learning Environments* (San Antonio: University of Texas, 1975) (ERIC Document Reproduction Service No. ED 113 229); Marcia C. Linn, "Exhibit Evaluation—Informed Decision Making," *Curator* 19 (December 1976): 291–302; S. M. Nair, "The Museum and the Child in the United States and India," *Museum* 31 (No. 1, 1979): 164–167; Barbara Y. Newsom, "The Museum as Educator and the Education of Teachers," *Teachers College Record* 79 (February 1978): 485–497; Russell B. Nye, "The Humanities and the Museum. Definitions and Connections," in *Museums, Adults, and the Humanities*, ed. Ziporah W. Collins (Washington, D.C.: American Association of Museums, 1981), pp. 5–15.

²⁰Dolo Brooking, "Play, in All Seriousness," *Museum News* 56 (May–June 1978): 21–24; Albert Heine, *Museums and the Student* (Corpus Christi, Tex.: Friends of the Corpus Christi Museum, 1976) (ERIC Document Reproduction Service No. ED 134 508); Abigail Housen, "What Is Beyond, or Before, the Lecture Tour? A Study of Aesthetic Modes of Understanding," *Art Education* 33 (January 1980): 16–18; Kenneth Hudson, *Museums for the 1980s* (New York: Holmes and Meier, 1977); Nina Jensen, ed., "Children, Teenagers, and Adults in Museums," *Museum News* 60 (1982): 25–30; Hope J. Leichter, "Families and Communities as Educators: Some Concepts of Relation ship," in *Families and Communities as Educators*, ed. Hope J. Leichter (New York: Teachers College Press, 1979), pp. 3–94.

²¹Marcia C. Linn, "Evaluation in the Museum. Focus on Expectations," *Educational Evaluation and Policy Analysis* 5 (Spring 1983): 119–127; Margaret A. Ramsey, "Space for Learning," *Museum News* 52 (January–February 1974): 49–51.

²²Laurie P. Eason and Marcia C. Linn, "Evaluation of the Effectiveness of Participatory Exhibits," *Curator* 19 (March 1976): 54–62; Michael Q. Patton, *Qualitative Evaluation Methods* (Beverly Hills, Calif.: Sage, 1980); Chandler G. Screven, "Instructional Design," *Museum News* 52 (January–February 1974): 67–75; Chandler G. Screven, *The Measurement and Facilitation of Learning in the Museum Environment. An Experimental Analysis* (Washington, D.C.: Smithsonian Institution Press, 1974); Harris H. Shettel, "Exhibits. Art Form or Educational Medium?" *Museum News* 52 (September 1973): 32–41; George W. Tressel, "The Role of Museums in Science Education," *Science Education* 64 (April 1980): 257–290; Rudolph H. Weingartner, "What Museums Are Good For," *Museum News* 62 (August 1984): 34–39; Robert L. Wolf, "A Naturalistic View of Evaluation," *Museum News* 58 (July–August 1980): 39–45.

²³David L. Boggs, *Learning Derived by Visitors to the Ohio Historical Center* (paper presented at the Adult Education Research Conference, Minneapolis, April 1977) (ERIC Document Reproduction Service No. ED 139 998); Duncan F. Cameron, "A Viewpoint: The Museum as a Communications System and Implications for Museum Education," *Curator* 11 (March 1968): 33–40.

²⁴David L. Boggs, *Learning Derived by Visitors to the Ohio Historical Center* (paper presented at the Adult Education Research Conference, Minneapolis, April 1977) (ERIC Document Reproduction Service No. ED 139 998); Minda Borun, *Measuring the Immeasurable: A Pilot Study of Museum Effectiveness* (Philadelphia: Franklin Institute, 1977) (ERIC Document Reproduction Service No. ED 160 499); Marya Clowes and Lee Wolff, *A Preliminary Evaluation of the "Birds in Canada" Exhibit* (Ottawa: National Museum of Natural Sciences, 1980) (ERIC Document Reproduction Service No. ED 198 043); Maureen Gaffney, ed., *The Basics of Film Programming with a Special Emphasis on Museums* (New York: Media Center for Children, 1982) (ERIC Document

The variables were considered from two perspectives, the "formal" perspective of museum staff and the "experiential" perspective of museum visitors. Three additional perspectives from *A Study of Schooling's* model were not used. An "ideal" perspective has not been formulated for museum curricula, and the absence of overt, classroom-like teaching at most museum displays makes both the "instructional" and "operational" perspectives problematic. Also, the model's qualitative factors were beyond the basic descriptive scope of this study.

Method and Sample

Two methods of naturalistic inquiry—observation and interview—were selected for this investigation. Previous studies had found these methods useful for inquiry into the museum environment.²⁶ Also, the principles of naturalistic inquiry were congruent with the purposes of this study in two ways.²⁷

Reproduction Service No. ED 241 007); Hope J. Leichter, "Families and Communities as Educators: Some Concepts of Relationship," in *Families and Communities as Educators*, ed. Hope J. Leichter (New York: Teachers College Press, 1979), pp. 3–94; Marcia C. Linn, "Exhibit Evaluation—Informed Decision Making," *Curator* 19 (December 1976) 291–302; Marcia C. Linn, "Evaluation in the Museum: Focus on Expectations," *Educational Evaluation and Policy Analysis* 5 (Spring 1983): 119–127; Barbara Y. Newsom and Adele Z. Silver, eds., *The Art Museum as Educator* (Berkeley: University of California Press, 1978); Chandler G. Screven, *The Measurement and Facilitation of Learning in the Museum Environment: An Experimental Analysis* (Washington, D.C.: Smithsonian Institution Press, 1974); Harris H. Shettel, "Exhibits: Art Form or Educational Medium?" *Museum News* 52 (September 1973) 32–41; Harris H. Shettel, *An Evaluation of Visitor Response to Man in His Environment. Final Report* (Chicago: Field Museum of Natural History, 1976) (ERIC Document Reproduction Service No. ED 141 078).

²⁶Marcia C. Linn, "Exhibit Evaluation—Informed Decision Making," *Curator* 19 (December 1976): 291–302; Ross J. Loomis, "Social Learning Potentials of Museums," in *The Museum as a Learning Environment* (symposium conducted at the annual meeting of the American Educational Research Association, Chicago, April 1974) (ERIC Document Reproduction Service No. ED 093 787); Harris H. Shettel, *An Evaluation of Visitor Response to "Man in His Environment" Final Report* (Chicago: Field Museum of Natural History, 1976) (ERIC Document Reproduction Service No. ED 141 078).

²⁷Margaret A. Ramsey, "Space for Learning," *Museum News* 52 (January–February 1974) 49–51; Edward S. Robinson, "Exit the Typical Visitor," *Journal of Adult Education* 3 (October 1931) 418–423; Edward S. Robinson, "Psychological Studies of the Public Museum," *School and Society* 33 (January 1931): 121–125; Harris H. Shettel, *An Evaluation of Visitor Response to "Man in His Environment" Final Report* (Chicago: Field Museum of Natural History, 1976) (ERIC Document Reproduction Service No. ED 141 078); Harris H. Shettel, Margaret Butcher, Timothy S. Cotton, Judi Northrup, and Doris C. Slough, *Strategies for Determining Exhibit Effectiveness* (Washington, D.C.: Department of Health, Education, and Welfare, 1968) (ERIC Document Reproduction Service No. ED 026 718); Robert L. Wolf, Mary F. Andis, Carey E. Tisdal, and Barbara L. Tymitz, *New Perspectives on Evaluating Museum Environments: An Annotated Bibliography* (Washington, D.C.: Smithsonian Institution Press, Office of Museum Programs, 1979) (ERIC Document Reproduction Service No. ED 196 771); Robert L. Wolf, Mary Ellen Munley, and Barbara Tymitz, *The Pause That Refreshes. A Study of the Discovery Corners in the National Museum of History and Technology* (Washington, D.C.: Smithsonian Institution Press, Office of Museum Programs, 1979) (ERIC Document Reproduction Service No. ED 196 772).

²⁸Michael Q. Patton, *Qualitative Evaluation Methods* (Beverly Hills, Calif.: Sage, 1980).

First, the study was concerned with gathering descriptive data to ground a model (or models) of non school curriculum. Naturalistic inquiry aided this descriptive process by focusing on the educational environment. The approach allowed hypotheses and questions to be redefined and refocused and so was appropriate for a study in which questions emerged and changed as the nature of curriculum in museums became clear. The purpose of this study was not to experiment with the particular outcomes that museum curriculum might produce.

Second, this study was concerned with categorizing the descriptive data, an analysis procedure appropriate for data gathered through naturalistic inquiry. The analysis worked back and forth between data and categories, modifying the latter until all the former were classified. Although this investigation began with *A Study of Schooling's* curriculum categorizes, its purpose was to build a classificatory model that would describe curriculum in museums and would be useful as a heuristic device for curriculum (both school and non-school) in general.

The appropriateness of naturalistic inquiry notwithstanding, the question remained whether its methods belonged in a study that also used *A Study of Schooling's* model. Could inquiry be both emergent and preconceived? A principle of naturalistic inquiry is that few a priori assumptions are made about the characteristics and relationships of the settings. However, the naturalistic inquirer needs some framework with which to make sense of the mass of data that typically results from this approach. "The researcher is making interpretations and must have some conceptual scheme to do this."²⁸

A conceptual scheme can be devised in two ways. One method is to use interpretations and categories indigenous to the setting. This *emic* approach requires the researcher to categorize the data as a "native" would.²⁹ For this study, data would have been gathered only according to the visitors' and curators' interpretations of the museum curriculum. Although this approach to framework building elicits "natural" interpretations, it overlooks the probability that the "natives" may not be aware of their behaviors or may not have bothered to label or categorize them.³⁰

The method of using only emic frameworks also hinders future studies of the same phenomenon (e.g., curriculum) in different settings. If each setting required its own emic model, cross-comparisons among the myriad school and non-school curriculums would be difficult. Curriculum models might not even be amenable to validation over time; the educational environment may have changed enough to require an entirely new model for the same setting.

²⁸Robert C. Bogdan and Sari K. Biklen, *Qualitative Research for Education: An Introduction to Theory and Methods* (Boston: Allyn and Bacon, 1982), p. 32.

²⁹Michael Q. Patton, *Qualitative Education Methods* (Beverly Hills, Calif.: Sage, 1980).

³⁰Pertti J. Pelto, *Anthropological Research* (New York: Harper & Row, 1970).

A second approach to frameworks is to use those based on existing theories and data. While these *etic* models give a framework for interpreting new data, they run the risk of serving as inappropriate pigeon holes if used rigidly.

This study sought to alleviate the emic versus etic problem by considering its *etic* framework, *A Study of Schooling's* curriculum model, as mutable. Indeed, the study found that three major revisions were necessary before that model could be used as a heuristic device for non-school curriculums. First, the definition of several of the variables needed to be broadened beyond their use in school curriculum. Second, relationships among the variables needed to be indicated. Finally, the relative strength of each variable needed to be shown (including the possibility of showing that the variable was absent from the curriculum). The findings called for restructuring *A Study of Schooling's* model in the light of new data on non-school curriculum but also indicated that the basics of the model (its variables and perspectives) could be retained in a more global heuristic device.

Data were gathered from interviews with 12 museum staff members (directors, curators, and curators of education) and from observations of 1,686 visitors in museums in Los Angeles between July and October 1984. The museums included five science-technology museums, three art museums, and two historic houses. Visitors were observed for a total of 16 hours in each museum. A 10-month pilot study had indicated that a sufficient number of visitors could be observed in that time to give an accurate profile of visitor experiences with the museum curriculum. The pilot study also indicated that, in small exhibit rooms and with a coded observation checklist, the observer could watch all visitors; therefore, there was no sampling of visitors in this study.

Instrumentation

An observation guide and an interview guide were used to document the nine curriculum variables as experienced by museum visitors and as planned by museum staff. The guides were arranged in nine sections corresponding to the nine variables. (The interview guide had an additional section on exhibit conceptualization that asked for the criteria that staff members considered as they planned displays. This extra item was crucial to the study, for it was here that variables important to non-school curriculum but not included in *A Study of Schooling's* framework might emerge.) Notations in most sections of the observation guide were made in code so that visitors who happened to see the guide would not be tempted to alter their behavior. Codes were empirically grounded during the pilot study, and new behaviors that emerged during the full study were added as they were observed. The observation and interview guides used *A Study of Schooling's* curriculum variables for museum visitors' "experiential" perspective and staff members' "formal" perspective in the following manner:

1 *Goals and objectives.* Visitors gave six reasons for coming to museums. knowledge for themselves, knowledge for their child, knowledge for their guest, as a diversion on the way to another destination, as a shelter from the weather, and as a diversion from boredom. The purposes of this variable were to determine both the visitors' and the staff members' goals (educational and otherwise) for a museum visit and to determine whether other elements in the museum curriculum, such as time spent at displays, might vary according to the visitor's goal (This was the only item on the observation guide for which the observer directly questioned the visitors. All other items were completed by unobtrusive observation.)

2. *Materials:* The types of materials available at displays were noted, including explanatory and interpretive text, natural or man-made objects, models, manipulables (objects that could be touched or operated), and audio or audio-visual presentations. The variable was used to inventory the types of materials in the museum curriculum, to determine the process staff members used to select exhibit materials, and to determine whether visitor activity would vary according to which materials were available.

3 *Content* The content of each display was described on the observation guide. The interview question asked for the process by which exhibit content was chosen in the light of the staff members' goals for the museum experience.

4. *Teaching strategies:* In the absence of overt "teaching" (except for tours and lectures), museum staff members used other strategies to catch and hold the visitors' attention and to "teach" the museum content. The purposes of the variable were to discover these strategies and to determine whether visitors would assume the role of teacher for each other.

5. *Learning activities:* Seven types of visitor behavior were observed: reading general information, reading directions for manipulables, operating manipulables, watching another visitor operate manipulables, watching and listening to audio-visual presentations, listening to audio presentations, and touching displays (Of course, visitors engaged in many more activities—sleeping, eating—and this study's lack of a post test of knowledge gained by visitors prevented complete assurance that any of the activities led to learning. However, Linn, in a study that relied on observing similar activities, notes that "this information does not directly indicate learning, but it characterizes the conditions of learning."³¹ Other studies have regarded reading, touching, and watching as learning activities.³²) This variable was used to inventory visitors'

³¹Marcia C. Linn, "Exhibit Evaluation—Informed Decision Making," *Curator* 19 (December 1976) 291-302.

³²David L. Boggs, *Learning Derived by Visitors to the Ohio Historical Center* (paper presented at the Adult Education Research Conference, Minneapolis, April 1977) (ERIC Document Reproduction Service No. ED 139 998), Adele Z. Silver, "The Museum as Educator," *Principal* 63 (September 1983). 22-26

activities and activity sequences, to determine whether other variables in the museum curriculum (e.g., goals or use of materials) were related to activity level, and to validate pilot-study findings that indicated a wide gap between visitors' behavior and staff members' expectations for that behavior.

6. *Evaluation*: The pilot study and the museum literature indicated that museum staff members usually do not test visitors to determine knowledge gained. Attendance figures often are the sole means of evaluating museum exhibits. The variable was used to determine whether any other evaluation devices were used and to test the accuracy of the visitors' evaluative comments. For example, visitors may quickly judge a manipulable to be "out of order" when in fact the device is merely slow to operate.

7. *Grouping*: Three types of visitor grouping were noted: sequential, in which one intact group (e.g., a family) moved from display to display, mixed, in which groups formed and dissolved at displays; and loner, in which an individual visitor experienced displays without joining a group. The purposes of the variable were to determine the frequency of each type of grouping, to relate grouping to other variables (e.g., time spent at displays), and to determine whether staff members believed that a group experience was an important part of the museum visit.

8. *Time*: The museum literature had indicated that visitors spend an average of 30 seconds at displays.³³ The observation guide noted whether visitors spent more or less than 30 seconds at displays and whether audio or audio-visual presentations were attended to for the whole or a part of their duration. The variable was used to test the literature findings, to test the applicability of "time on task" to this non-school curriculum, and to validate pilot-study results indicating that museum staff members greatly overestimate the amount of time visitors will attend to displays.

9. *Space*: A blank area on the observation guide was provided for drawings of the floorplans of the exhibit areas. These maps were used to indicate the number of visitors observed at each display and to determine the flow of visitor traffic in the exhibit areas. The interview question asked for the staff members' rationale for the arrangement of the exhibit space.³⁴

SUMMARY OF FINDINGS

Seven critical findings of this study affect a conceptual model of non-school curriculum:

³³Kenneth Hudson, *A Social History of Museums* (Atlantic Highlands, N.J.: Humanities Press, 1975).

³⁴For further detailed discussions of the conduct of this study—including sampling, instrument development, data collection procedures, findings, and methods used to interpret results and draw conclusions—see Valorie Beer, *Curriculum in Museums* (doctoral dissertation, University of Southern California, School of Education, 1985); Valorie Beer, "Great Expectations Do Museums Know What Visitors Are Doing?" *Curator* 30 (September 1987): 206–215

1 *That visitors experience two-thirds of museum displays for less than 30 seconds or not at all and museum staff members consistently overestimate the time that visitors will spend at displays.* From a curriculum standpoint, this finding is crucial. Time on task is short in museums. Although 36 percent of displays are seen for more than 30 seconds and 21 percent for less than 30 seconds, 43 percent of displays are skipped entirely. Further, the gulf between actual and expected time at displays is striking: Staff members believe that visitors will spend up to 5 minutes at each display. The time that visitors spend at displays varies with materials and content. Displays with a combination of materials or with disturbing or unusual content are somewhat more successful at capturing and holding visitors' attention.

2. *That visitors are most likely to touch or manipulate objects and least likely to read accompanying labels, text, and directions.* At displays with manipulable objects, visitors most often learn to operate the device either by trial and error or by watching other visitors operate it, not by reading the directions. Moreover, at manipulable displays that are inoperative and are clearly marked as to their condition, visitors manipulate the devices anyway, regardless of the Out of Order signs. Visitors also touch displays, even when that activity is discouraged by signs or guards.

3. *That materials and content have such a close relationship that often it is difficult to distinguish their separate relationships with the other variables, especially space.* Museum staff members consider both content and materials the foundations on which displays are created and select them together according to two criteria: that the content and materials "fit" with the theme of the museum and the existing displays and that they appeal to the public. Visitors' attention to displays cannot be consistently attributed to content or materials alone. Large displays and those with manipulable or movable materials are experienced most frequently, but attention-getting content also is popular. (The problem with displays that feature attention-getting content or materials or both is that other displays in the same exhibit space seem to suffer from the association. Although many visitors see the attention-getters, the displays that surround the attention-getters are seen by the fewest visitors.)

4. *That the visitors do not interact with other groups or individual visitors.* Only 1 percent of visitors interact with other visitors at displays. Staff members, too, place little emphasis on grouping visitors who are not already with an organized tour or class. One staff member commented on the difficulty of providing a meaningful group experience for visitors with diverse goals and backgrounds.

5 *That visitors and staff have a variety of goals other than knowledge acquisition for the museum experience and that visitors with knowledge goals behave much the same as do visitors with other goals.* Although museum staff members most often mention that they want their visitors to gain knowledge,

only half of the visitors have this goal for themselves. From a curriculum standpoint, however, the important finding is that visitors who state that they come to the museum to learn do not behave much differently on the other variables than do visitors who come for casual or social goals. The proportion of visitors who stay longer than 30 seconds at displays is relatively higher only for those visitors whose goal is to gain knowledge for themselves. Yet visitors who come to the museum with that goal skip as many displays as do visitors who do not come to learn. Finally, visitors with knowledge goals do not engage in more activities at any given display than do visitors who come for other reasons.

6. *That visitors do occasionally act as teachers for each other by interpreting, expanding on, or offering alternative explanations for displays.* Twenty percent of visitors act as teachers, offering examples, personal anecdotes, or alternative explanations of the displays. Often, these teachers use questioning strategies to test their "learners'" understanding of the display. Most of these visitor-teachers act in that role only for the companions with whom they come to the museum; only 4 percent "teach" to strangers.

7. *That neither museum staff members nor visitors are much interested in evaluating the displays or the knowledge that might be gained from them.* Half of the museum staff members in the study made no attempt to evaluate their displays or the visitors' learning from them. The other half relied on visitors' unsolicited oral or written comments. Eleven percent of the visitors made evaluative comments. These findings are consistent with the observation that museum displays are difficult to evaluate because the personal nature of the museum experience precludes much agreement on the criteria for a "good" exhibit.³⁵

IMPLICATIONS OF THE FINDINGS

These major findings indicate that *A Study of Schooling's* separation of perspectives is useful in describing a non-school curriculum. Although museum staff members and visitors agree on some elements, such as evaluation and grouping, in some areas the museum curriculum as experienced is not congruent with the curriculum as planned. The reason for this discrepancy is that the primary target of the staff's curriculum often is not the visitor. Museum curriculum often is planned to impress and attract other museum professionals; specialists in artistic, historic, or scientific fields; funding agencies; or private donors.³⁶ The separation of perspectives helped to reveal a major

³⁵Harris H. Shettel, *An Evaluation of Visitor Response to "Man in His Environment" Final Report* (Chicago: Field Museum of Natural History, 1976) (ERIC Document Reproduction Service No. ED 141 078).

³⁶Marlene Chambers, "Is Anyone Out There?" *Museum News* 62 (June 1984) 47-54, Marcia C. Linn, "Evaluation in the Museum. Focus on Expectations," *Educational Evaluation and Policy Analysis* 5 (Spring 1983): 119-127.

difference between school and museum curriculum: From the schoolteacher's perspective, students are essential to the curriculum, though the same cannot be said for museum visitors from the staffs' perspective.

The findings also indicate that many of the curriculum variables from *A Study of Schooling's* model can be found in a non-school curriculum. However, the problem with a discussion of the individual variables is that it is a disjointed and superficial approach to the complexity of curriculum in museums. The major findings from this study are concerned not with the separate variables but with their interactions and relationships. The critical drawback in using *A Study of Schooling's* model to describe curriculum is that the model fails to depict interrelationships among curriculum variables.

TRANSFORMATION OF THE MODEL

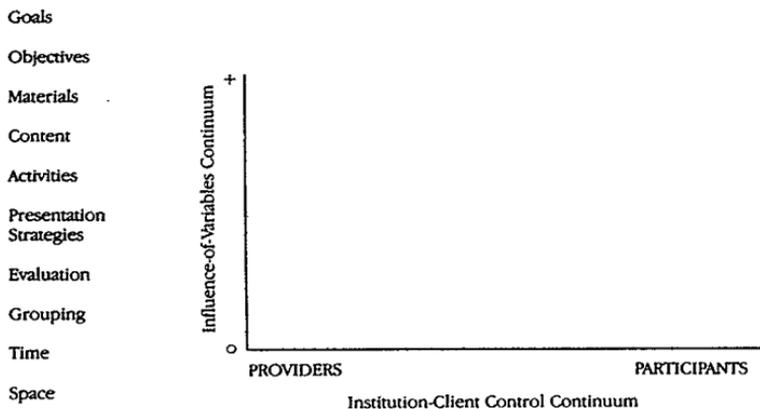
The discussion and findings suggest that perhaps what is needed is a model that describes curriculum in terms of how, not where, it occurs. A focus on the configuration of the curriculum itself would permit curricular, instead of organizational, comparisons. The present classification of curriculum by institution only stereotypes those institutions as places where one type of learning predominates.

The model needs to depict the relative influence of the curriculum elements in various educational environments. Thus, elements that are effective in one environment might be transferred to another environment. For example, the museum's effectiveness in using objects to present information may help schools make more use of objects in a discursive curriculum.

The model also needs to indicate whether the variables are under the control of the providers (teachers, staff) or the participants (students, visitors). This distinction will help the providers determine which curricular elements they can control. For example, museum visitors show a distinct preference for displays that do not involve text. Museum staff members may not be able to change the visitors' inclination to touch instead of read; however, staff members might direct their efforts to improving the collection of objects rather than writing more labels to explain it. With modification, *A Study of Schooling's* curriculum variables can be used in a heuristic device for describing various configurations of curriculum. The transformed model would have 10 variables:

- *goals*: the general outcomes that the institution and its clientele wish to achieve
- *objectives*: the specific learning outcomes expected by an institution, its clientele, or both
- *materials*: the man-made and natural objects in the learning environment
- *content*: the topic with which the materials are concerned
- *activities*: the experiences that result in knowledge gain

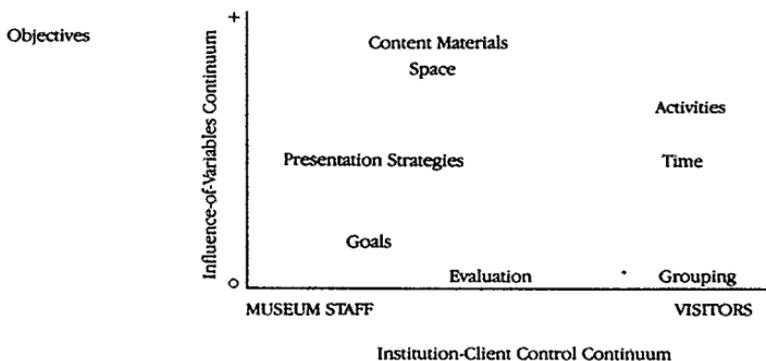
Figure 2. A Model for a Curriculum of Educational Settings



- *presentation strategies*: the selection and arrangement of the other elements that result in knowledge gain
- *evaluation*: the gathering of data to judge the effectiveness of the other elements in communicating information
- *grouping*: the use of existing groups or the formation of new groups in the learning environment
- *time*: the use of time, either scheduled or unscheduled, in the learning environment
- *space*: the arrangement and use of the environment of the institution

Some of the variables retain the definition from *A Study of Schooling*, others require modification. For example, goals do not need to include learning as the primary outcome, since knowledge can be gained even if the institution is not usually characterized as an educational one. Goals and objectives have been separated in recognition of this study's finding that both are not required for an organization to be characterized as an educational institution. The definition of materials includes discursive objects, such as text, that explain and interpret other objects.

These 10 elements can be positioned on a curriculum configuration model (Figure 2) to describe a particular curriculum in terms of (1) the relationships among the elements, (2) the relative influence of those elements, and (3) whether the elements are under the control of the institution or its clientele. The model has one axis for the institution-client continuum and one for the influence-of-variables continuum. Relationships are indicated by placing the terms in proximity to each other. The curriculum elements are listed

Figure 3. Example: The Model for a Curriculum of Educational Settings—Museums

at the side, to be inserted into the model in an arrangement that describes a particular curriculum configuration. Variables can also remain at the side to indicate that they are not present in a curriculum. Perhaps a more complex matrix was suggested by the specific findings of this study, but such a matrix poses the dangers of being overly prescriptive and of being misconstrued as applicable only to museum curriculum. We opted, therefore, for a more general heuristic device to guide subsequent curriculum description efforts.

Figure 3 shows the model completed for the curriculum configuration that this study found for museums. Although the study looked at museums that professed an educational purpose, the overt teaching and school-like aspects of those museums were not the focus of this study. Figure 3 illustrates the non school curriculum of the museum as applied to the general heuristic model suggested by the findings.

Materials and content are close together at the top center of the model. They were the variables with the most influence on the museum curriculum. They are close together because their separate influences often could not be determined. The two elements are between *provider* (museum staff) and *participant* (visitors) because they are important to both museum staff members and visitors. The variable of space has been located with materials and content to indicate that its influence sometimes is inseparable from the other two.

On the other hand, the model indicates that the relationship between activities and presentation strategies is not so close. Museum visitors rarely respond to some of the staff members' strategies, such as introductory displays with text. Museum staff members do not anticipate some of the visitors' activities, such as watching other visitors to learn how to operate manipulables.

Activities and presentation strategies in the museum curriculum often are influenced by the available materials and content, so the former have been placed under the latter on the model. Visitors are in control of the time in the museum, staff members consistently overestimate the time that visitors spend at displays. Therefore, the variable of time is on the participant end of the continuum, and also near activities, to show the relationship between those two variables.

Goals, grouping, and evaluation have little influence on other variables and on the museum curriculum as a whole. Therefore, they are separated and near the bottom of the continuum. Visitors are in control of grouping and rarely alter their groups within the museum. Staff members and visitors have comparable attitudes toward evaluation, so that element has been placed between participants and providers.

This study did not find objectives in the museum curriculum. The variable remains outside the model.

UTILITY OF THE TRANSFORMED MODEL

The findings indicated that there is sufficient difference between school curriculum and at least one non-school curriculum to warrant consideration of a broader curriculum model. The one that we suggested here has both conceptual and practical value, and while the model does not claim broad empirical generalizability (since the findings are of museum curriculums only), it does suggest conceptual generalizability for future investigations of non-school curriculum. The model is a dynamic portrayal of relationships among curriculum variables that can guide up-front thinking about how other curriculums might be studied, as well as retrospective comparisons of those curriculums.

This aspect of the model—its ability to depict changing relationships among curriculum variables—increases its power over the discrete, one-at-a-time look at variables provided by *A Study of Schooling's* model. Also, our model suggests ways of changing the dynamics of a curriculum, or rearranging the variables to heighten or minimize relationships. The model is a correlated (perhaps causal?) picture of interactive and dynamic curriculum.

Besides these conceptual strengths, the model has four specific practical advantages for studying curriculum across institutions. First, the model is designed to be a flexible device for describing curriculum configurations. The variables can be placed in the model in different arrangements, depending on their interactions with other variables and according to their relationship with providers and participants. Variables also can remain outside the model if they do not apply to a particular curriculum. Different configurations can then be compared to determine agreements and discrepancies among configurations and to highlight arrangements from one configuration that could be applied to another.

Second, the model shifts the emphasis from the place where curriculum occurs to the curriculum itself. Although the study was concerned with museum curriculum, the focus of the results was on a curriculum *configuration* that happened, in this case, to characterize the curriculum in *some* museums. Other museums may not fit this configuration, or this configuration may fit institutions other than museums. The curriculum of one type of institution may vary from setting to setting, so it is of little use to classify types of curriculum primarily by institution.

For example, *schools* involve a variety of curriculum approaches. Universities are institutions of discourse, but trade schools are institutions of practice. The two curriculums have different goals and use different materials, content, and activities to achieve them. To say that each has a school curriculum ignores the significant differences between them.

A third advantage, related to the second, in describing curriculum by its configuration is that it allows comparisons more useful than those made on an institutional scale. For example, schools are not museums, and a comparison of their unique organizational structures (i.e., one has "teachers," the other often does not) says little about the type of education that occurs in each. However, a comparison of the curriculum configurations of several schools and museums may indicate ways for schools to improve their spatial arrangement or for museums to improve their evaluative techniques.

Fourth, describing curriculum configurations alleviates the situation in which one type of curriculum is considered the negative of another: school or non school curriculum, formal or informal curriculum. Such dichotomies ignore the range of diversity in types of curriculum and institutions of learning. The transformed model suggests that various curriculums can be described according to their own characteristics, without reference to the curriculum of schools.

Finally, the model contributes to the integration of educational programs that link schools and non-school environments. It provides a grounded conceptual springboard for holistic inquiry into the everyday settings that include but also lie beyond the traditional repositories of education and curriculum. The promise of joining school and non-school curriculum models is the enrichment of all the learning environments that we experience.

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