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THE RELATIONSHIP BETWEEN DETERMINANTS OF CLASSROOM LEARNING ENVIRONMENT IN RIVERS STATE SENIOR SECONDARY SCHOOLS.

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ABSTRACT

This study reviewed relationship between determinants of classroom learning environment in Rivers State senior secondary schools. Many variables interact in complex ways to give each classroom its distinct characteristics. Ideally, curriculum, instruction and instructional materials interact in the classroom to make different but essential contributions to an educational programme. A clear-cut distinction among the three components of an educational programme however, is not readily apparent in practice. The classroom, owing to the range of purposes, number of participants, and duration of existence, is a complex environment. To identify significant instructional cues in the classroom, the student must in turn develop an interpretive competence to navigate the complexities of the classroom. There are even some basis to argue that “common sense” understanding of teaching and learning are as powerful as any of the explanatory modes that have been developed in the behavioural science for the teacher to succeed. It is reasonable, therefore, to give “understanding” due emphasis as a goal for research and/or practical tool for teachers.

Keywords: *classroom learning environment, curriculum, instruction and instructional materials*

INTRODUCTION

The broad purpose of education, simply stated, is to facilitate the integration of a student's total personality. The process of education is a process of change. For example, the person who has learned something acts in a different fashion from the person who has not learned this same thing; the first person has been educated while the second person has not been educated. When teachers educate a student, they help him develop his own unique personality by bringing his ideas and feelings into communication with others, breaking down the barriers that produce isolation in a world where, for his own mental health and physical well-being, he must learn to be a part of mankind. (Federal Republic of Nigeria, 2004).

Many variables interact in complex ways to give each educational setting its distinct characteristics. Ideally, curriculum, instruction, and instructional materials make different but essential contributions to an educational programme. Tyler (1970) stressed that curriculum identifies what is taught, instruction encompasses planning and implementing the teaching and learning transactions, and instructional materials provide the physical media through which the intents of the curriculum, mediated instructionally, are experienced. It is important to note that a clear-cut distinction among the three components of an educational programme, however, is not readily apparent in practice.

Curriculum

Curriculum results from a preconceived idea or value position about the purpose of education and constitutes an educational programme for fulfilling that purpose. A curriculum is usually developed for a specific purpose, for example, the physical science curriculum. A curriculum developed with a given educational purpose in mind can encourage a particular learning environment.

Instruction

Ideally, curriculum design dictates instruction. Instruction is further mediated by the goals of each curriculum regarding the social aspects of learning. Instructional decisions that affect the learning environment arise from factors other than curriculum considerations. These other factors or influences include: (a) School and classroom organization; (b) Scheduling; (c) Teacher variables; (d) Pupil variables; (e) Administrative support and constraints, and (f) the general physical plant (custodial staff physical arrangement of classroom).

Such interference, mainly custodial staff arrangement of classroom can shift the instructional emphasis from hands-on activities in small groups to less active forms of involvement in learning. This in turn would create a different learning environment (Tyler, 1970).

Instructional materials

Over the years, textbooks have played a singular role in education. To this day, they are the curriculum in many classrooms. As such, the philosophy of education, the curriculum, and instructional practices in a school district emanate from them (Gage, 1963).

As teachers and administrators delegate this decision-making authority to instructional materials, textbooks and other supporting instructional materials tend to determine the learning environment. Some textbooks do not only suggest lack of *organization* but also lack of diversity and democracy, and a high degree of formality, goal directedness and competitiveness while *others* move from direct instruction /to facilitation as the need arises (students are grouped and regrouped according to individual needs of the students). The media employed also vary to accommodate learning styles. If these materials are used in the classroom as they were designed

to be used, the learning environment may not only be characterized as cohesive, diverse and democratic, but could possibly be perceived by some students as difficult and disorganized.

Curriculum, instruction, and instructional materials can do and exert separate influences on the learning environment (Nwafor, 2012).

Relationship and interaction among the determinants

Hypothetically, the effects of each of the three determinants being discussed in terms of classroom learning environment can be examined independently of the others by holding constant the other two determinants. This is shown as the open area labeled *Level 1* in the diagram below. At that level, curriculum, instruction and instructional materials have independent existence apart from each other and from the classroom.

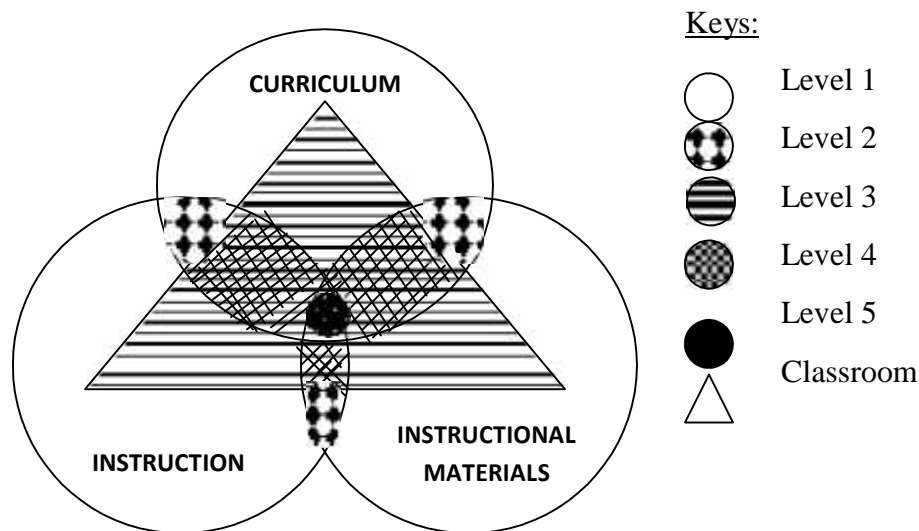


Figure 1: Diagram showing relationship of the determinants of the classroom learning environment. **Source:**Walberg, H.J. (1969:529)

The dotted portions of the diagram, *Level 2*, represent the relationship between any two determinants apart from classroom practice. The horizontally stripped lines, *Level 3*, represent each determinant as it interacts with the classroom independently of the other two (for example, curriculum, instruction, and the classroom; instructional materials and the classroom). *Level 4*, shown as vertically stripped zones, indicate the interaction of two of the determinants within the classroom setting (for example, curriculum, instruction and the classroom; instructional materials and the classroom). *Level 5*, the solid portion of the diagram, is set within the classroom and is intersected by all three determinants with all possible interactions.

As the diagram in level 5 indicates, these relationships are interactive and nonlinear, and the interaction constitutes an independent variable that influences the dependent variable of achievement and attitude. Ikejiani (1964); Sjogren (1970); Nwana (1982); and Hassan (1984),

observed that extensive data on achievement and attitude measured by self-concept test, learning environment scales, and interview support the conclusion that purposeful attention to design

changes in curriculum, instruction and instructional materials did have immediate and long range consequences for the experimental students.

Classroom tasks and students' abilities

The structure of classroom tasks

The classroom as an information system exhibits three general characteristics: First, there appears to be an abundance of information resources. That is, classrooms contain a complex array of interacting objects and media, including textbooks, workbook exercises, bulletin board displays, films, and tests besides the range of verbal and non-verbal behaviours of the teacher and students. Any one of these may assume instructional significance depending on particular sets of circumstances.

Second, not all elements of the classroom are equally reliable as instructional cues. Teacher's instructions, for example, are sometimes ambiguous and incomplete, and teacher's feedback is not always consistent or accurate. There is also evidence that instructional materials used in classrooms, even in early primary classes, place extraordinary complex logical demands on pupils. Thus, despite all the resources, a particular instructional task may be inadequate.

Finally, since the classroom is a mass-production system, the degree to which the level of information and flow of activities necessarily match the individual student's interests or abilities, is limited. What this shows is that the classroom environment itself is problematic (Green, 1971).

With special reference to academic outcomes, the formal structure of classroom tasks can be defined as An exchange of performance for grades . This exchange seems to operate at two levels. At the first level, students are required to answer questions, participate in discussions and complete assignments, and evaluative feedback is provided on a fairly continuous basis while performing these tasks. Exchanges during class sessions are typically characterized by a degree of informality, and every student is not required to contribute to each exchange.

At the second level, worksheets are distributed, and examinations are administered periodically to provide a more formal basis for the performance-grade exchange. Exchanges on tests differ in several respects from those conducted during class sessions. For example, the conditions are more standardized, the results are more likely to be recorded and used as formal evidence to classify a student, and students can seldom avoid participation.

The distinction between these two levels of exchange is important because it is possible that differences in performance expectation can exist. A teacher may conduct inquiry exercises or test for verbatim recall of answers that were previously generated in class.

The cumulative results of participation in the performance-grade exchange can affect the way a student is classified within the school. To the extent that school records are used as screening devices by employers and college registrars, the performance-grade has long-term consequences

for a student's access to educational and occupational opportunity. In a more immediate sense, however, the results of the exchange would seem to be important in determining a student's role

in the social system of the school. It is important to remember, however, that classrooms are not single-purpose learning environments. By their very nature, they afford a variety of opportunities for student engagement (Power, Kohlberg and Reiner, 1986).

Perceptual problem solving in the classroom

Teachers strive to help students achieve a variety of goals, both personal and academic. Prominent among these many aims is that students will learn how to approach, sustain and achieve learning outside school. Whether this objective is phrased as learning how to learn, achieving self-directed inquiry, or promoting positive transfer, the emphasis given to it in recent curricular and instructional reform has been warmly welcomed (Nwana, 1982:38).

The student is an intriguing puzzle for teachers and researchers. Sometimes when teachers have arranged the best teaching imaginable, students do not get the point. And even when teachers feel they have performed poorly in students' instruction, they often learn in spite of their (teachers') failure. Why?

Cognition, perception and learning

Like all human beings, students in classroom are constantly thinking. If we grant the assumption that their thinking is focused on school learning, it seems reasonable to expect that there are probably at least three goals of their cognitive process, whether consciously recognized or not. One goal is to determine what is supposed to be learned, that is, curriculum to be tested. Students need to develop or if already developed, bring to use a perceptual scheme for the content of instruction. A second goal is to achieve an understanding of how learning should happen, that is, the mental processes students use to learn the curriculum. A conceptually parallel scheme must be brought to bear on perceiving the intentions of the teacher's actions (or the textbook features). Third, once the student has decoded teaching to make clear what is to be learned and how one must go about learning it, then thinking centres on actually applying those mental operations to the content so that actual learning takes place. Finally, once these perceptual problems are solved, the student must engage in mental operations to bring about learning.

Perception is an active process of extracting information from environment and giving this information psychological meaning. It is clear that we see human learning, in all its manifest forms, to be a process of construction. It is built up inside the mind of the perceiver and operates to give texture to the environment. Thus, perceiving is the basic cognitive activity out of which all others must emerge. Perception is also where cognition and reality meet (Bloom, 1954; Bruner, 1964; and Ijejerika, 1995). Schemata are abstract, that is, personally constructed representations of generic concepts underlying objects. These representations contain slot for each component of a particular area of knowledge. The product of perception is a psychologically meaningful representation of a part, not all, of the information in the perceiver's

immediate environment. First, a psychologically meaningful representation is achieved and second, only part of the information in the environment is included in the representation.

In contrast to perception, other cognitive processes relate directly to learning result in relatively permanent changes in the way information is represented in cognitive structure, and subsequently permit changes in behaviour. Another approach to helping students solve the perceptual problem about the content to be learned might make use of already existing perceptual schemata to lessen the complexity of content or make salient crucial element of content. One application of this approach involves directly instructing students about what is relevant before teaching it. This creates or engages a perceptual schema that matches the teaching rather than taxing the learner to develop a functional schema while also trying to learn the content. It is possible that students must not only achieve meaningful perceptions of what they are to learn, but also must face some kind of issue in incoming information to know how the teacher has structured the experience to promote learning in the classroom.

Perceiving teacher’s intentions

If, for example, a teacher says, This is important , it is practically a foregone conclusion that students will somehow emphasize the content referred to by the teacher’s statement.

Table 1: Proposed answer to cognitive question about the teacher’s intentions

Part of Lesson	Teacher Behaviour	Intended Mental Response
A. Preview	<ol style="list-style-type: none"> 1. Names major concepts in the lesson. 2. Gives defining attributes. 3. Gives an example. 	<ol style="list-style-type: none"> 1. Learn, label, listen for different concepts. 2. Test ability to recognize 3. Test ability to recognize concept attributes in real examples, associate label with attribute.
B. Transition	<ol style="list-style-type: none"> 1. Names concept just finished and gives an example. 2. Signals a change in topic. 3. Names new concept and gives example. 	<ol style="list-style-type: none"> 1. Review concept label and attributes in example. 2. Switch attention. 3. Review concept label attributes and examples.
C. Review	<ol style="list-style-type: none"> 1. Gives a new example of a concept. 2. Names concepts 	<ol style="list-style-type: none"> 1. Analyse the example for attributes; predict what the concept is. 2. Review concept label, note problem if prediction incorrect.

Indeed, when 1000 senior secondary school students in 50 classrooms in Rivers State of Nigeria were informed about the structure of contents they were to learn, not only did they slightly outperform uniformed counterparts (control group) after a first attempt to learn, but they kept gaining over them in two later subsequent opportunities to continue learning of similar content areas. Presumably, their perceptual schema for recognizing important contents grew more efficiently than the control group.

CONCLUSION AND RECOMMENDATION

The classroom, owing to the range of purposes, number of participants, and duration of existence, is a complex environment. To identify significant instructional cues in the classroom, the student must in turn, develop an *interpretive* competence to navigate the complexities of the classroom. To use the classroom environment efficiently, a student must transform the complexities of the setting by constructing a cognitive system to give meaning to the individual objects and events that occur. From this perspective, academic achievements are dependent not simply on a student's ability to learn the subject/matter, but also on a more general understanding of how classrooms work.

The information-processing activities of a student are not simply a function of the range of available stimuli or even of the student's personal preferences, rather, they are shaped by the structure of tasks in a given classroom. From an ecological perspective, what students learn in the classroom is a function of the operations that they perform in accomplishing tasks. Green (1971) asserted that whether or not teachers succeed in facilitating genuine learning in their students is largely dependent upon the quality of their social interactions with their students. There are even some basis to argue that common sense understanding of teaching and learning are as powerful as any of the explanatory models that have been constructed in the behavioural science. It is reasonable, therefore, to give understanding due emphasis as a goal for research and/or practical tool for teachers.

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