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Constructivist education : developing a constructivist kindergarten program

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Constructivist education : developing a constructivist kindergarten program

Abstract

This paper is a review of literature relative to the importance of using constructivist approaches in the kindergarten program. The primary focus of this paper was to look at the features of a constructivist approach. Advantages and criticisms of constructivism are included. This study also provides guidelines designed to help educators, specifically kindergarten teachers, implement constructivist approaches in their classrooms. The conclusion of this paper offers suggestions and cautions to educators on implementing these guidelines. Recommendations for further research in the area are stated.

**CONSTRUCTIVIST EDUCATION: DEVELOPING A CONSTRUCTIVIST
KINDERGARTEN PROGRAM**

A Graduate Literature Review

Submitted to the

Division of

Department of Curriculum and Instruction

In Partial Fulfillment

Of the Requirements for the Degree

Master of Arts in Education

UNIVERSITY OF NORTHERN IOWA

by


Carol J. Menefee

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This Literature Review by: Carol J. Menefee


Titled: Constructivist Education: Developing a Constructivist Kindergarten Program
which meets guidelines which were evident in the literature.

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ABSTRACT

This paper is a review of literature relative to the importance of using constructivist approaches in the kindergarten program. The primary focus of this paper was to look at the features of a constructivist approach. Advantages and criticisms of constructivism are included. This study also provides guidelines designed to help educators, specifically kindergarten teachers, implement constructivist approaches in their classrooms. The conclusion of this paper offers suggestions and cautions to educators on implementing these guidelines. Recommendations for further research in the area are stated.

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CHAPTER 1

INTRODUCTION

Historical Background

Friedrich Froebel was the founder of kindergarten in 1837. Froebel believed that young children are born with innate knowledge and skills. The role of the teacher is to help children become consciously aware of and able to use all they know. He created a curriculum that consisted of the Gifts, a carefully sequenced set of manipulatives, which were complemented by an equally sequenced set of handwork projects called the Occupations. He also introduced *play*, although it was much different from what we would consider play today. Froebel's curriculum design dominated the curriculum for fifty years (Seefeldt, 1999).

In the 1890s, a new generation of educators concerned with the well-being of young children and their families began to challenge the view of the child which was identified with the Froebelian curriculum. The followers of John Dewey found that the Froebelian curriculum did not offer what young children needed in their daily living. Dewey thought that a curriculum for young children should be experience based, and founded on certain human impulses. These impulses involved the following activities: to socialize, to construct, to inquire, to question, to experiment, and to express or to create artistically (Williams, 1999).

Open Education was popular in the late 1960s. It was based on the premise that children want to learn and will do so naturally if left to their own initiative. Open Education involved decentralized learning areas, which resulted in freedom of movement from area to area and even from room to room. Group and individual activities were included as well as unstructured periods of study.

In the 1970s and 1980s many criticisms concerning education were expressed. Most of

these were aimed at early childhood education (Seefeldt, 1999). The criticisms dealt with the growing trend towards a more formal, academic instruction of young children and requiring higher expectations of them.

The all day kindergarten movement renewed interest in placing traditional skills and subject matter in the kindergarten. This movement also caused much discussion between academic proponents and proponents of the developmentally appropriate curriculum. In 1986, the National Association for the Education of Young Children (NAEYC) defined its position by producing a policy statement, commonly known as the Developmentally Appropriate Practice (DAP) guidelines. Shortly after they were developed, these guidelines were the source of controversy as a result of *one size fits all* interpretation and the inadequate attention to diverse populations.

Today, Early Childhood Education focuses on the following questions: (a) What is an appropriate curriculum for young children?, and (b) What should young children learn and how should they be taught? For some educators, the answer can be found in the constructivist approach to learning.

Constructivist education is based on John Dewey's teachings and Piaget's research which reveals that children are active learners in their environment. Constructivist education is based on interest, experimentation, and cooperation (DeVries, Zan, Hildebrandt, Edmiaston, & Sales, in press).

Purpose of the Study

The purpose of this study is to examine the literature concerning constructivist education and to develop guidelines for developing a constructivist kindergarten program. This purpose will be achieved by addressing the following questions:

1. What are the features of a constructivist kindergarten program?
2. What are the advantages of a constructivist approach?
3. What are the criticisms of a constructivist approach?
4. What are some guidelines for implementing a constructivist approach in kindergarten?

Need for the Study

This study is needed because Constructivist Education is a force in Early Childhood Education. An understanding of its features, benefits, and problems is needed. Also, guidelines are developed in this study for developing effective constructivist programs in kindergarten.

Limitations of the study

Limitations of this literature review included the following: (a) sources were not available in the University of Northern Iowa Library, (b) there are many definitions and programs of Constructivist Education, and (c) the focus of the philosophies vary from program to program.

Definitions

Terms used in this study will be defined to mean the following:

Age Appropriateness-knowledge about age-related human characteristics.

Child-Centered Curriculum-a curriculum which encourages the learning to come from within the child.

Child Developmentalist-a person who studies the development of children.

Constructivist Education-focuses on how children learn best. Children are actively involved in interpreting their experiences and constructing their own knowledge.

Developmentally Appropriate-the process of professionals making decisions about the well-being and education of children based on three things: individual appropriateness, age appropriateness, and social/cultural influences. (Bredekamp & Copple, 1997)

Direct Instruction-the teaching of a child by a teacher directly instructing a lesson.

Early Childhood Professional-a person who has knowledge about teaching young children and keeps others informed of appropriate teaching practices.

Hands-On Activities-activities which allow children to manipulate the objects in their environment to help them learn.

Individual Appropriateness-to know each child on an individual basis to know what their strengths and interests are and plan accordingly.

Reconceptualists-a group of early childhood professionals who are voicing their concern of Constructivist Education. They wanted an emphasis on political, cultural, gender, and other social issues.

Sociomoral Environment-a classroom environment which helps students develop moral and social judgment and fosters cooperation between students and teacher.

CHAPTER II

REVIEW OF LITERATURE

Features of a Constructivist Approach

Educators for centuries have assumed that children acquire knowledge by internalizing it from the environment. The constructivist approach stresses that children actually acquire knowledge not by internalizing it directly from the outside, but by constructing it from the inside by interacting with their environment (Kamii, Manning, & Manning, 1991). The most obvious example is when children start talking. Children do not begin talking the way adults talk. Rather, children learn by constructing and correcting one level after another of wrong forms of their native speech.

Children also learn to construct their own knowledge of many other subjects, such as physics, astronomy, meteorology, biology, geology, and social institutions before they enter any type of formal schooling. It is known that children construct their own knowledge, intelligence, and morality in their day to day living. Many of these ideas are never taught to them in a formal way. Constructivist education is based on Piaget's work that children actively construct their knowledge, intelligence, and morality (DeVries & Zan, 1994).

According to Piaget (1950), there are three types of knowledge. They are the following: (a) physical, (b) logico-mathematical, and (c) social conventions. Physical knowledge is the knowledge of objects in external reality. Logico-mathematical consists of relationships caused by the individual. Social knowledge is the conventions imposed by people. The teacher teaches each type of knowledge differently so it is important for the teacher to know the difference. If the teacher is teaching social knowledge, then he/she will directly teach or show the children.

Physical knowledge is taught by the teacher assisting the children in finding opportunities to act on objects and find out reactions. Logico-mathematical is taught by a teacher providing experiences through which children can reorganize their own knowledge. (DeVries, Zan et al., in press).

Constructivist teachers are serious-minded about children's literacy development, number and arithmetic, science, social studies, and fine arts; however, they use methods that do not impede intellectual and sociomoral development (DeVries & Zan, 1994). The constructivist teacher must learn to distinguish what must be constructed and what must be instructed. In a constructivist classroom, the goal of academics is approached indirectly and children learn through the context of personal and group experiences (DeVries & Zan).

Research conducted on the features of a constructivist approach has revealed several overarching principles that are evident in a constructivist, developmentally appropriate classroom. The first feature to be discussed is an integrated curriculum.

It is accepted by researchers that an integrated curriculum gives children a deeper understanding of the skills and concepts of each area without the restrictions imposed by subject area boundaries (Bredekamp & Copple, 1997). The curriculum is based on child's interests rather than adult definitions of academics. An integrated curriculum includes many experiences that develop attitudes, skills, and knowledge; and it helps children make connections across the curriculum (Nebraska Department of Education, 1998). In an integrated curriculum, children's learning in traditional subject areas occurs through projects, themes, or topics that reflect children's interests and suggestions. The role of the teachers is to guide students' involvement and to enrich them by extending their ideas, by engaging them in conversation, and by challenging their thinking (Soderman, Gregory & O'Neill, 1999). The key to planning an integrated child-

centered curriculum is balance--a balance among large group, small group, and individual activities; a balance in curriculum and content areas; and a balance between teacher-directed and child-initiated experiences (Schwartz & Pollishoke, 1990).

Another principle of Constructivist Education is that students are self-directed rather than teacher-directed, in most cases. Students are active and self-regulating by helping make classroom rules, by determining what they will study, and by having large portions of their day as child-directed times (DeVries, Zan et al., in press). Children are given choices about what they will do and with whom they will do it, but the choices they make are expected to be good *learning* choices, for they should be ones that have educational value (Soderman et al., 1999).

Teachers act as facilitators, or guides, during these choice times. They use children's interests and the way they learn as a guide and provide concrete materials and activities for the children to construct their knowledge.

Another way children learn to self-regulate is by helping the teacher to make the rules for the classroom. When children help develop the rules, they develop morality on the inside (DeVries, Zan et al., in press). They internalize these rules by their day-to-day social interactions. These classroom rules help provide the structure that serves as the foundation for the learning situation.

The student's point of view is very important in a constructivist atmosphere, according to research (Brooks & Brooks, 1999). These perspectives are the teacher's cues for developing the lessons. They provide valuable information on how to follow-up their lessons. The teacher's ability to uncover the students' conceptions and points of view is achieved by the questioning and the problems posed by the teacher (Brooks & Brooks). The classroom environment must encourage children to give their responses and their points of view.

The sociomoral atmosphere of the classroom is yet another principle of Constructivist

Education. A moral classroom begins with the teacher's attitude of respect for children, and for their interests, feelings, values, and ideas. This respect is shown in three ways: (a) in classroom organization, (b) in classroom activities, and (c) in teacher interactions with children (DeVries & Zan, 1994). The teacher's respect for children is the foundation for creating a safe and secure environment where children can grow academically and socially. A sociomoral classroom is a precondition for optimal learning. The sociomoral atmosphere infiltrates every aspect of the child's development. It is the entire network of interpersonal relations in the classroom. It influences social, moral, intellectual, personality, and emotional development (DeVries, Zan et al., in press). The sociomoral environment encourages children to be self-regulating and to act autonomously. It helps children construct the moral judgments needed in the classroom and for life. Children are encouraged to cooperate with one another, as well as the teacher and other adults in the classroom.

Advantages of a Constructivist Approach

When outcomes from DAP classrooms are compared to those in highly academic, didactic environments, the didactic contexts have shown increased levels of stress in children (Soderman et al., 1999).

Research looking at direct-teaching versus process-oriented and individualized reading programs indicate that preschool and kindergarten children in the direct instruction settings are better at letter identification (Kostelnik et al., 1999). At the end of second grade, children who have been in DAP settings for at least three years have significantly higher scores in reading achievement than children from direct instruction settings (Kostelnik et al.).

Teachers who were surveyed say they favor the constructivist approach and active involvement from children that is fostered through a DAP perspective; however, they continue to struggle with the principles advocated by such programs (Soderman et al., 1999).

Students in a constructivist approach learn to think for themselves. They do not need to wait for the teacher to tell them what to think or do. Self-regulation is an important advantage in the constructivist approach. These students learn to articulate their ideas clearly and revisit and revise their constructions. Students are more willing to accept challenging academic tasks, have a more positive attitude about school, and are generally more socially skilled with better work habits (Soderman et al., 1999).

Criticisms of a Constructivist Approach

Although few child developmentalists, reconceptualists, and early childhood professionals would argue that an overemphasis on academic, skill-based instruction is in the best interest of children, a growing number of early childhood educators have expressed concern that the framework of DAP or constructivism is too limited (Decker & Decker, 1997). Beginning in 1989, a group of early childhood educators who call themselves reconceptualists, raised concerns about DAP. The reconceptualists' wanted political, gender, and other social issues in children's education. They viewed constructivism as a well-intentioned, white, liberal, or progressive education trend. Their view is that DAP only considers one cultural view, and that it does not prepare children to live in a democracy. Reconceptualists criticized DAP for using child development as the basis for young children's education. When they use child development as the basis, reconceptualists feel they ignore gender, politics, cultural and historical context. Reconceptualists do not believe that DAP looks at the research currently available on how children learn (Decker & Decker).

According to Brooks & Brooks (1999), there are two main criticisms that have emerged about the constructivist approach. The first criticism says that constructivism is too permissive and gives students too much choice. In this criticism, it is felt that the teacher is not in charge and the environment is seen as chaotic and has no structure. These critics also feel that students are

allowed to do whatever they choose.

The other main criticism is that constructivist approaches to education lack rigor. The people expressing this criticism state that teachers do not teach the basic skills, facts, and knowledge that are needed. Instead, the curriculum is based on students' interests which can result in gaps in their knowledge (Brooks & Brooks, 1999).

CHAPTER III

GUIDELINES FOR DEVELOPING A CONSTRUCTIVIST KINDERGARTEN PROGRAM

This chapter will provide guidelines for developing a constructivist kindergarten program. There are two overarching tenets which are important in a constructivist classroom. The first tenet premise is that children construct their own knowledge, and the second premise is that students have choices. These tenets are basic in any constructivist classroom. Some of the following guidelines have been stated as principles by other authors. It is important in a constructivist program that these principles, as well as other major ideas, are considered when developing guidelines.

Developing a Sociomoral Cooperative Environment is Vital

The first guideline is developing a sociomoral cooperative environment. This guideline is most important because it involves all aspects of the child's development. Also, this guideline is needed for optimal cognitive and social development. Many opportunities need to be provided for meaningful discussions and explorations, both teacher to child and child to child interaction. Cooperative and collaborative learning are essential in a constructivist program. According to DeVries and Zan (1994), there are four goals of a sociomoral classroom. They are the following: (a) self-regulation, (b) self respect and efficacy, (c) emotional competence, and (d) cultural competence. The classroom should be shaped into a harmonious community of learners where adults and children are independent, contributing to one another's understanding in meaningful activities (Soderman et al.,1999).

Teachers Need to Foster Children's Self Choices

The second guideline is to foster children's self choices by offering them a variety of valuable learning opportunities and giving them ample time to explore the choices. Teachers should strive to achieve a balance between guiding children's learning and following their lead. Children should be able to choose from a variety of possibilities during activity time. During this activity time, children should be self-directed. Constructivist teachers usually try to include at least one physical-knowledge activity, an art activity, and a group game in the activity block. In addition, there should be blocks, pretend play, cooking and writing centers, and an extensive library of books and other materials and activities from which to choose (DeVries, Zan et al., in press).

An Integrated Curriculum is Necessary

The third guideline is developing an integrated curriculum. An integrated curriculum allows for a more in-depth, organized coverage of topics that must be included in a curriculum. According to DeVries, Zan et al., (in press) and Hart, Burts, and Charlesworth (1997), curriculum content should be evaluated by asking these questions:

- (1) Have all areas of the curriculum been incorporated that can be?
- (2) Is open inquiry promoted or is this an activity which needs to be lead to help children comprehend a specific idea?
- (3) Does the activity allow for a wide range of responses and experiences?
- (4) Are the activities appropriate to the abilities of the students and do they offer variety for the wide range of interests of the students?
- (5) Does the activity provoke children's natural curiosity, engage their attention, and sustain their interest?
- (6) Does the activity allow for children's thinking?

In DAP's Guidelines for Best Practice (Hart, Burts, and Charlesworth, 1997), the following guidelines in developing curriculum for young children are as follows:

The curriculum reflects children's natural learning which means that it is incorporated and integrated into all areas of development, curriculum is based on teacher observations and evaluations observing the children, active involvement in the environment and making connections with materials and people (adults and children) is favored over adult-established concepts of success and completion, learning materials are relevant to young children because they are concrete and real, teachers should have a range that is wider than the students in the classroom to accommodate individual differences, and teachers are always adjusting curriculum activities and materials to adjust for complexity and challenge of each activity as needed (p. 40).

Dynamic Assessment Strategies Must Be Followed

The fourth guideline is to use dynamic assessment strategies. In constructivist classrooms, assessment should center on the children and the curriculum. Assessment can be defined as the process by which we observe, document, and interpret what children know, what they do, how they reason, and how the activities and instructional practices in the classroom facilitate or impede their learning (DeVries, Zan et al., in press).

According to DeVries, Zan et al., (in press) there are seven principles that guide assessment and document children's learning. They are the following:

- (1) Assessment is a part of daily classroom activities.
- (2) Evidence is collected by many different assessment means.
- (3) Systematic observation is done on a regular basis.
- (4) Assessment is on-going.
- (5) Children's actions and words are used to examine their reasoning.

(6) The curriculum content is examined by what children are doing and saying.

(7) Assessment involves many people who are involved with the child, as well as the child themselves.

DeVries, Edmiaston, Fitzgerald and Zan (in press), offer a self-evaluation which allows teachers who are implementing constructivist approaches to examine the following areas in their classrooms: (a) social, (b) linguistic, (c) intellectual, (d) curriculum, (e) physical, and (f) materials. These areas can be rated on a scale of 1 to 5. Teachers can then make appropriate adaptations to their programs based on this self-evaluation.

CHAPTER IV

SUMMARY, RECOMMENDATIONS, AND CONCLUSION

Summary

The purpose of this study was to read and critically analyze the literature that examines Constructivist Education. This study also gives guidelines designed to help educators, specifically kindergarten teachers, implement constructivist approaches in their classrooms.

Four questions were addressed. The first question was the following: What are the features of a constructivist program?

Historically, kindergarten programs have been the topic of debate as to what should be taught and what methods are best for teaching young children.

The constructivist approach stresses that children actually acquire knowledge not by internalizing it directly from the outside, but by constructing it by interacting with their environment (Kamii et al., 1991). Constructivist Education is based on interest, experimentation, and cooperation (DeVries, Zan et al., in press). Piaget's research that children actively construct their knowledge, intelligence, and morality is the heart of a constructivist approach (DeVries & Zan, 1994).

Features of a constructivist approach are the following: (a) an integrated curriculum, (b) students are self-directed, (c) activities are carefully chosen, (d) students' points of view are important, and (e) the development of a cooperative sociomoral environment. Constructivist Education looks at the physical environment, the social environment, and the curriculum.

The second question asked the following: What are the advantages?

Children who are in a constructivist approach show lower levels of stress compared to a more teacher-directed approach (Soderman et al., 1999). Students also learn to self-regulate, and are able to accept more challenging tasks. They learn to articulate their ideas clearly and make sense of their constructions.

The third question was as follows: What are the criticisms of a constructivist approach?

Some early childhood professionals feel that a constructivist approach lacks structure, child-centered classrooms are chaotic, and that few skills are being taught. They criticize DAP for taking child development as the basis for young children's education and that it does not look at the recent research on children's learning. They view it as a progressive education trend that does help children learn how to live in a democracy.

The fourth question sought to learn: What are some guidelines for implementing a constructivist kindergarten program?

Four guidelines are given for implementing a constructivist approach. They were: (a) developing a cooperative sociomoral environment, (b) fostering children's self choices, (c) developing an integrated curriculum, and (d) to use dynamic assessment strategies.

Teachers need to develop a cooperative sociomoral environment in their classrooms. This guideline is the most important because it involves all aspects of the child's development and is needed for optimal cognitive and social development.

In a constructivist classroom, many opportunities for self choices embedded in a variety of learning experiences, with time to adequately explore the choices, are needed for children.

Teachers need to provide an integrated curriculum which allows for more in-depth coverage of topics.

Teachers need to use dynamic assessment strategies which center on the learner and the curriculum.

Conclusions

Constructivist Education is a relatively new approach in education and requires educators to look at *how* children construct knowledge. Since it is not a set curriculum, it requires educators to spend a great deal of time on research and curriculum development and to examine the way they teach.

The information compiled in previous chapters indicates that a constructivist approach helps children construct a more meaningful knowledge base, and it looks at how children and adults interact with each other in the classroom.

When reviewing the literature currently available, there are many different programs which call themselves constructivism; yet each one seems to have a different focus on their philosophy, which makes it difficult to develop a set of guidelines that would encompass all constructivist programs.

A constructivist approach is difficult because many educators have not been trained in using these principles, and it requires more time to orchestrate the learning environment and plan learning experiences. However, taking the extra time and putting forth the effort will benefit young children and will help them become independent and lifelong learners.

Recommendations

Having completed this study, several recommendations are suggested to help educators develop some constructivist guidelines in their classrooms.

First of all, before an educator completely changes to a constructivist approach, he/she needs to read the literature and develop an approach concerning how he/she will develop his/her

constructivist classroom. Teachers should not attempt to change everything at once, but rather move slowly and self evaluate as they go. Educators should implement only one or two guidelines at a time so they are able to reflect on what is working. It is recommended to move slowly and carefully when implementing constructivist ideas.

A supportive administration is also needed to help an educator move forward using some of the constructivist approaches. Teacher training in a cooperative and collaborative way is essential. A peer who has a similar philosophy is also important for providing ongoing dialogue and feedback.

Long term changes can result when teachers, parents, and administrators agree on common goals, foster strong relationships, circulate relevant information, learn from practical experiences, and devote time to shared inquiry.

Continued research needs to be done in the field of Constructivist Education and Developmentally Appropriate Education to determine their effectiveness over a long period of time and to see if students are developing the knowledge needed for them to be contributing citizens in the future.

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