

TEACHING “ORGANIZATION METHOD OF SHAPING ACTIVITIES FOR PRESCHOOL CHILDREN” ACCORDING TO THE CDIO APPROACH

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ABSTRACT

In the context of Vietnamese education constantly innovating and receiving the advantages of the world's modern education, CDIO approach in teaching plays an important role, contributing to providing knowledge, skills, and developing qualities and capacities to meet the output standards of the preschool education training program for learners, meeting social requirements. In this article, the approach of CDIO applied in teaching “*Method of organizing shaping activities for preschool children*” has been studied, including the following contents: (1) An overview of the subject “Method of organizing shaping activities for preschool children” according to CDIO approach; (2) Teaching “*Method of organizing shaping activities for preschool children*” according to the CDIO approach, contributing to improving the quality of preschool education to meet the requirements of educational innovation in Vietnam today.

Keywords: CDIO; approach and innovation; preschool education; improve quality.

1. Introduction

Renovation of higher education is a trend of globalization and international integration in the era of industrial revolution 4.0 and poses challenges and opportunities for Vietnam's education. The purpose of CDIO approach is to apply teaching “*Method of organizing shaping activities for preschool children*” in higher education training and to provide solutions to improve the quality of training in preschool education, meeting the needs of preschools that currently lack teachers and the needs of society, which are very important and urgent factors for the development of an education.

CDIO is an integrated training program aimed at: Coordinate professional skills such as teamwork and communication; Promote active learning and through real-life experience; Continuous improvement through quality assurance process with high objective; Various forms of teaching organization are applied, projects are designed, built and evaluated by students themselves. Teaching according to the CDIO approach has been aimed at training preschool students to develop comprehensively in terms of knowledge, skills, qualities and practical capabilities, achieving output standards to meet social requirements.

2. Research content

2.1. Overview of the module “Method of organizing shaping activities for preschool children”

2.1.1. The role of the module

In the framework of the bachelor's degree program in preschool education, the module “*Method of organizing shaping activities for preschool children*” belongs to the specialized knowledge block and is a necessary subject and plays an important role. This module provides and equips students with theoretical knowledge about roles, programs, methods and forms of organization of shaping activities, methods and tricks to teach drawing, molding, tearing, and collage according to genres and ages for preschool children. Students' ability to self-study and self-research on the basis of critical thinking will be formed and developed, thereby being able to evaluate and solve problems on research questions, actively practice and cultivate personal and professional qualities. After completing the course, students have the ability to apply necessary knowledge and skills such as communication, group cooperation, pedagogical skills, etc. to design, organize, and conduct shaping lessons for preschool children, evaluate drawing, molding, tearing, collage activities according to genres and ages.

In addition, the module contributes to helping students understand the relationship, connection and continuity of the education system in the University Training Program, the preschool education sector with the Early Childhood Education Program. From updating and capturing information, official letters, circulars, etc., and following the innovation in early childhood education, after graduating, students will acquire qualities and competencies, meeting the output standards according to the preschool education training program and the requirements of society and the current trend of educational innovation and social context (Ministry of Education and Training, 2010).

2.1.2. Course Objectives

The module “*Method of organizing shaping activities for preschool children*” equips students with theoretical knowledge on methods of organizing shaping activities, develop and practice the following practical skills:

- Understand the concepts and roles of shaping activities for comprehensive education; understand the principles of curriculum development, appropriate selection of methods of organizing shaping activities; flexibly apply knowledge, skills and methods of organizing shaping activities in designing, discussing and doing exercises.

- Developing personal and professional skills and ethical qualities: sense of independence, autonomy, responsibility, creative thinking in the learning process, contributing to building friendly relationships, behave and communicate in accordance with the pedagogical and social environment (Nguyen Thi Thanh Giang, Thai Manh Thuy, 2019).

- Practice teamwork skills; application of informatics in learning, research, lesson planning; practical experience through making and implementing plans appropriate to the discipline; demonstrate the ability to form ideas; Practice teaching lessons in class and

lessons in preschool, actively and creatively in learning, innovating teaching methods of shaping lessons (Nguyen Thi Thanh Giang, Thai Manh Thuy, 2019).

- Recognizing the actual influence of shaping activities on society and the opposite impact of society on early childhood education: identify the role of shaping activities in the comprehensive development of preschool children; improve teaching in practice, evaluating the quality and the development of aesthetic perception for preschool children, meeting the requirements of society and innovation of the Early Childhood Education Program. (Nguyen Thi Thanh Giang, Thai Manh Thuy, 2019).

2.1.3. Course learning outcome

**In terms of quality:* Learners actively and voluntarily learn, cultivate personal qualities, develop professional knowledge, have a sense of discovery, creativity in learning, practicing teaching. At the same time willing to help share experiences with friends during their studies and after graduation (Nguyen Thi Thanh Gian, Thai Manh Thuy, 2019).

** In terms of knowledge:* Analyze the concept, characteristics and role of shaping activities in children's development, its role in preparing children to enter high school; Determining the purpose, principles, structure of the program of shaping activities, distinguishing the types of shaping activities in preschool; Be able to make presentations on the concept of teaching methods and techniques; Understand the forms of organization of shaping activities for preschool children; Analyze the roles, characteristics, tasks, content, and methods of organizing activities of drawing, molding, tearing, and collage by genres and ages for preschool children.

** In terms of skill:* Be able to apply knowledge of Psychology, education, and fine arts in determining age characteristics, purposes, tasks, methods and forms of organizing shaping activities for children. Having skills in analyzing and evaluating the role of shaping activities in the comprehensive development of preschool children; Be able to determine the goals and contents of the preschool education program (Nguyen Thi Thanh Giang, Thai Manh Thuy, 2019). In addition, students have the skills to identify, solve problems, plan, design, organize practice lessons, evaluate results, teamwork skills; Apply information technology to prepare documents, lectures, designing teaching materials; presentation skills; Multimedia social and pedagogical communication skills.

2.1.4. Contents of the course

The module “*Method of organizing shaping activities for preschool children*” provides specialized knowledge, used for students majoring in Early Childhood Education, including the following: Roles, characteristics, program contents, methods and forms of organizing drawing, molding, tearing and collage activities for children. Since then, students will be able to analyze and explain basic issues and realize the important role of fine arts for the comprehensive development of preschool children. At the same time, students can experience pedagogical training sessions, apply knowledge, skills and pedagogical skills to design, organize, implement and evaluate shaping activities for children.

2.2. Organizing the teaching of the module “Method of organizing shaping activities for preschool children” according to the CDIO approach

2.2.1. Requirements on organization of teaching according to CDIO approach

** Overview of CDIO*

CDIO is an acronym for Conceive, Design, Implement and Operate, is an initiative of the engineering blocks of the Massachusetts Technical University (USA), in collaboration with Swedish universities. This is a solution to improve training quality to meet social requirements on the basis of determining output standards to design training programs and methods according to a scientific process. CDIO is logically built and can be applied to develop standard procedures for many different areas of training (Crawley, 2016).

An increasing number of universities around the world are now adopting CDIOs, notably in the United States. There are now more than 100 universities around the world applying the CDIO training model. In Asia, Singapore is the first country to apply the CDIO training method, which has been successfully applied in 5 schools and 15 majors since 2007. In 2010, Singapore was awarded the “Excellent training in chemical engineering” award by IchemE (S'pore) organization thanks to the application of the CDIO process. In Vietnam, there are currently a number of universities officially implementing CDIO, including Vinh University.

** Approaching CDIO in outline drafting:*

The CDIO outline helps to answer the questions “What to do” and “How to do it”? which can be applied to suit their needs and conditions for universities in Vietnam. The core of CDIO is the CDIO outline, a statement of the Training Program's goal, and the set of 12 CDIO standards designed to achieve that goal. These standards include the philosophy of the program, the development of the training program in the workspace, and practical experiences, teaching and learning methods to enhance the capacity of lecturers, assessment and verification. CDIO outline assessment helps answer the question what knowledge, skills and attitudes do students need to achieve upon graduation? The CDIO standards help answer the question, how can we better ensure students acquire those skills, knowledge and attitudes? (Huy Kieu, 2022).

Approaching CDIO in the process of drafting the course outline “Methods of organizing plastic activities for preschool children” needs to meet the following requirements:

(1) General information: It is necessary to have sufficient information about the lecturers, information about the course.

(2) Brief description of the course: Including the role and position of the module in the training program, for training majors, characteristics of the course, knowledge, skills, and professional experiences that students learn and practice through this module.

(3) Course Objectives: General description of the knowledge/skills/attitudes to be achieved (in line with the output standards, training program and competency level).

(4) Course output standards, teaching methods and assessment methods.

(5) Evaluation of learning results and assessment criteria including regular and end-of-term assessment sheets.

(6) Learning materials: Textbooks, Reference materials.

(7) Specific teaching plan for each week, number of lessons per week, specific

activities of each week of lecturers and students.

** Requirements to organize the teaching according to CDIO approach*

The world is standing in the context of Industry 4.0 with many opportunities and challenges. The outstanding features of this revolution are reflected in the core contents: artificial intelligence (AI), Internet of Things (IOT) and big data (Big Data). The Industrial Revolution 4.0 focuses on research to make leaps and bounds in many fields, showing a rapid increase in knowledge as well as the fields of training to meet the requirements of increasingly diverse social development with many different levels. In fact, the training program and practical skills for learners have not changed much compared to the past, so CDIO can help us integrate the training program without having to increase training costs or time. In which, CDIO promotes knowledge and skills, forms qualities and capacities, meets output standards for learners, and meets social requirements.

Globalization and international integration have posed a requirement on human resources, which are content-responsive global citizens set forth by the United Nations Educational, Scientific and Cultural Organization (UNESCO). Currently, there are many views that the goal of the training process is not to teach students what to know, but to teach students what to do when they go to work. Applying CDIO approach in training will help learners develop comprehensively in terms of qualities and capabilities with “hard skills” and “soft skills” to always adapt to the changing working environment. Innovating teaching methods according to CDIO approach is very necessary, helping lecturers understand the CDIO program with full specific criteria and standards. To be really effective, the process of organizing, operating, implementing teaching activities of teachers and learning activities of learners plays a decisive role.

2.2.2. Methods of organizing teaching of the module “Method of organizing shaping activities for preschool children” according to CDIO approach

Through practical participation in teaching, research, the author and colleagues have been applying a number of measures on teaching organization to improve the quality of teaching and learning, thereby developing the quality and capacity to achieve the output standards of the module “Method of organizing shaping activities for preschool children” which includes:

** Organize subject-integrated learning for students* (parallel implementation of theory and practice): The renovation of many forms of theoretical learning and the combination of practical training, child care and education, teaching practice, etc. has shown its effectiveness.

** Apply positive methods and techniques:* Renovating training methods according to the guidance of the university, changing the perspective and teaching methods in a positive and flexible way, creating a friendly and open learning environment with students, being creative in applying and interweaving and integrating teaching methods such as discussion and group work, case study, project-based teaching, etc. in order to change the learning atmosphere, create excitement for students in receiving knowledge, aking the learner as the center. The results show that students promote initiative in learning, actively thinking to receive knowledge, proactively arranging self-study and form habits of mind training, problem analysis skills, the ability to receive, express, organize and process information.

To achieve high efficiency in teaching according to CDIO approach, it is necessary to effectively use information technology, the internet, and supporting software to perform the management work, deploy the teaching and learning process. In addition, lecturers also need to be active in exploiting relationships with employers to bring students to reality and introduce jobs to students after graduation.

** Applying experience - practice in teaching:*

In order to effectively promote the CDIO approach to teaching in order to develop the quality, capacity, and output standards for learners, it is necessary to have the “collaboration” of learners with teachers. Students need to be consulted to clearly define learning goals and tasks. In the process of learning the module “*Method of organizing shaping activities for preschool children*”, in parallel with learning theory, experience – practice has been applied. Students are allowed to participate in pedagogical training and practice at the Practical Kindergarten of Vinh University, where students can apply their knowledge and skills in practice. Specifically, students attend sample teaching hours and directly participate in teaching activities at preschools. In addition, classroom lectures are conducted regularly, contributing to increasing students' initiative, creativity and flexibility. On the other hand, students develop skills such as reasonable time management, self-study, equip themselves with foreign languages, informatics, supplement professional skills, be active in self-study, practice skills so that after graduating from school to know how to apply knowledge, skills, teaching methods ... in the process of teaching the subject of fine arts in preschool.

** Evaluate students' learning outcomes in rubrics:*

To evaluate objectively and fairly, rubric has been applied when evaluating midterm and final exams, individual assignments and group assignments. The publicity of the assessment form is also a motivation to encourage learners to constantly strive to improve themselves.

3. Conclusions

CDIO approach teaching is an advanced training model for higher education. The training program is clearly designed, scientifically, systematically and closely integrated into the subjects. In each subject, students have the opportunity to experience learning to develop qualities and competencies, to achieve output standards in terms of professional knowledge, personal and communication skills, product-creation skills, etc. Applying CDIO in training has been gradually operated and has solutions to improve the quality of teaching and learning in general and the module “*Method of organizing shaping activities for preschool children*” in particular. The results obtained have been positive feedback from employers about graduates after 2-3 years. However, approaching CDIO requires a roadmap, investment and coordination of many factors in the organizational system, the training units to continue to improve, have initiatives to contribute to improve the quality of training in the form of CDIO approach.

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TÓM TẮT

DẠY HỌC MÔN “PHƯƠNG PHÁP TỔ CHỨC HOẠT ĐỘNG TẠO HÌNH CHO TRẺ MẦM NON” THEO TIẾP CẬN CDIO

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Trong bối cảnh giáo dục Việt Nam không ngừng đổi mới và tiếp nhận những ưu điểm của nền giáo dục hiện đại thế giới, sự tiếp cận CDIO để ứng dụng trong dạy học đóng một vai trò quan trọng khi cung cấp những kiến thức, kỹ năng, phát triển phẩm chất, năng lực nhằm đạt các chuẩn đầu ra chương trình đào tạo Giáo dục mầm non (GDMN) cho người học, đáp ứng yêu cầu xã hội. Trong bài viết này, chúng tôi nghiên cứu việc tiếp cận CDIO áp dụng trong giảng dạy môn “Phương pháp tổ chức hoạt động tạo hình cho trẻ mầm non” bao gồm các nội dung: 1) Khái quát về môn “Phương pháp tổ chức hoạt động tạo hình cho trẻ mầm non” theo tiếp cận CDIO; 2) Tổ chức dạy học môn “Phương pháp tổ chức hoạt động tạo hình cho trẻ mầm non” theo tiếp cận CDIO góp phần nâng cao chất lượng GDMN đáp ứng yêu cầu đổi mới giáo dục ở nước ta hiện nay.

Từ khóa: CDIO; tiếp cận, đổi mới; giáo dục mầm non; nâng cao chất lượng.