

A Study of the Information Technology Integrated Aesthetic Teaching Implemented by Preschool Teachers in New Taipei City

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Abstract

The purpose of this study was to understand the current status of the implementation of aesthetic education in information technology by preschool teachers in New Taipei City by exploring the relevance of influencing factors in the application of information technology to aesthetic teaching. A self-developed questionnaire was used as a research tool. The subjects were preschool teachers in New Taipei City, and stratified random sampling was conducted.

Key words: Information technology; aesthetic; aesthetic teaching; preschool teacher

Introduction

This study begins with an introduction of Taiwan's preschool teaching model, and subsequently discusses how current information technology can be integrated in order to popularize and vitalize aesthetic education.

Purposes of the study:

- To understand the current status of the implementation of aesthetic education in information technology by preschool teachers in New Taipei City.
- To explore the relevance of influencing factors in the application of information technology to aesthetic teaching.

Literature Review

1. Taiwan's preschool teaching model

This study begins with an introduction of Taiwan's preschool teaching model.

- Unit teaching

During unit teaching, a systematic and planned unit teaching design is utilized, and the age, ability, needs, and learning interests of a young child are also considered, so as to establish an integrative link between life and education and enable a young child to learn problem solving methods

- Learning zone teaching

Learning zone teaching is centered on the young child, emphasizes actual hands-on experiences in place of representational memory, and utilizes unstructured but creative teaching aids to satisfy the learning curiosity of a

young child and develop his or her independent exploration and thinking abilities.

- Thematic teaching

A teacher will first observe the interests expressed from time to time by a young child or establish a "theme" based on the young child's life experiences.

- Project teaching

A project is a purposeful activity or experience whereby a young child can decide on the activity plan and steps to carry out, and is motivated to learn.

When conducting aesthetic teaching activities, several common teaching principles can be implemented: Experiences, relevance to life, gamification, diversity.

2. Significance of integrating information technology into teaching

Taiwan has an extremely competitive infrastructure for information and communication technology [1]. E-learning is becoming to a major teaching model in schools today, even preschool too. Geist [2]; Clement & Nastasi [3] examined the use of tablets by preschool children and found that educators were still in the exploration and development stage with respect to tablet use in the classroom, although an increasing number of schools and classes are starting to use these information tools in innovative ways. For instance, teachers were using tablets to help young children develop and enhance their investigative and data searching skills with regard to class content. Using these devices, the young children were able to easily review their own actions and answers before working on the next problem, which increased their exploration and helped to unleash their creativity and intellectual potential.

3. Defining the integration of information technology into teaching

- Information technology is a type of teaching tool and a resource used by teachers to support teaching activities.
- Information technology is considered to be a learning medium that helps students to learn and enhances learning outcomes.
- Information technology is a supporting resource that teachers utilize, based on their teaching needs, for non-fixed teaching processes.
- The use of information technology helps to raise the teaching effectiveness of teachers.

A topic worthy of further exploration is the autonomy and

freedom that preschool teachers enjoy with respect to the use of information technology in their classes, and more specifically, the ways in which they integrate information technology into teaching when there are no fixed teaching contents, teaching objectives, and teaching resources. Even though many studies have indicated that information technology can be integrated into the various stages of teaching, they also found that issues such as a lack of software and hardware, insufficient administrative support, a lack of professionalism among teachers, and a lack of willingness among teachers can hinder this process.

4. Application of information technology in preschool teaching

Information technology is not affected by time and space constraints; offers immediate, swift, and convenient usability; and provides visual content that is rich, diverse, and interesting [4],[5].

This study utilized the dimensions of teaching that integrate information technology as the basis for exploring the integration of information technology into teaching [6], such as internet search engines, computer software, information equipment and hardware, multimedia software, digital information equipment, social platforms.

5. The concept of aesthetic education for young children

Dewey, J. et al. [7] proposed that we should develop a sense of aesthetics through everyday experiences, and allow these experiences to form an aesthetically “complete experience [8].” A complete experience involves the balanced interaction of four elements, namely, consummation, unity, doing, and undergoing [9].

Research Questions

- Does utilizing the information technology affect aesthetic teaching performance?
- Does using the information technology to teach for the aesthetic teaching improve students’ learning effectiveness?

Research methods

Research participants: The research sample for this study consisted of 149 preschools in New Taipei City and a total of 1,214 teachers. 36 preschools (three from each of 12 administrative districts) were randomly sampled. These preschools were contacted via phone and invited to participate in the questionnaire survey. They were then briefed on the study's purpose and requested to provide consent, after which the questionnaires were delivered and collected in person or via mail.

Conclusion

With regard to the survey results, background characteristics of teachers in public preschools in Taipei, information technology integration into aesthetic education, and aesthetic education content are discussed first. Afterward, current state of information technology integration into aesthetic education and aesthetic education content factors were summarized and

discussed.

- Significant positive correlation between the use of aesthetic education activities and aesthetic education content factors
- Significant positive correlation between teachers’ elementary knowledge of information technology and aesthetic education content factors.
- Significant positive correlation between equipment and administrative resources and aesthetic education content factors.
- Significant positive correlation between the current state of information technology integration into aesthetic education and aesthetic education content factors

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