

Practical Study of Interdisciplinary Integration of Art Teaching in Primary and Secondary Schools

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Abstract

Art serves as a vital source of pure morality and enriched spirituality. School-based art activities are essential pathways for nurturing aesthetic education, which play a crucial role in developing students' core competencies and instilling them with the correct values, essential qualities, and key skills required for future development. Furthermore, such activities contribute significantly to enhancing national cultural literacy and promoting the development of socialist culture. In the technological age, the limitations of a singular disciplinary perspective have become increasingly evident. In the face of complex contemporary challenges, the depth and breadth of knowledge encompass more than any single discipline can address. The traditional approach of teaching individual subject matters no longer fully aligns with the contemporary theme and does not cater to the students' needs for learning and development. Starting with the reinforcement of the mutual integration and mutual promotion of various subject matters, this is a research of interdisciplinary integration teaching models, particularly focusing on the integration of the Arts discipline with other subjects.

Keywords

Interdisciplinary Teaching; Multiple Disciplines; Arts Curriculum; Interdisciplinary Curriculum.

1. Rationale for the Research

1.1. The Societal Demand for Interdisciplinary Teaching

In recent times, there has been explosive growth in knowledge, accompanied by significant changes in the production of knowledge. The boundaries between disciplines have become increasingly blurred, resulting in cross-disciplinary interactions. Consequently, school curriculum structures are evolving from previous subject-focused and highly specialized approaches towards more integrated formats. Arts, being the sole visual discipline, holds vital significance in facilitating interdisciplinary integration teaching.

1.2. Analysis of the Shortcomings of Traditional Subject-based Teaching

In primary and secondary education, subject-based teaching predominates, and subject-based curricula, with their long-standing historical importance in the realm of education, have well-acknowledged merits. However, they are not without their flaws. These shortcomings manifest in the following ways:

Limited Scope of Knowledge: Real-world understanding of phenomena often requires multidimensional and multifaceted perspectives. Subject-based curricula fragment interconnected and relevant knowledge, hindering the development of a cohesive knowledge network of students.

Increasing Knowledge vs. Limited Curriculum Space: The more finely subjects are subdivided, the greater the number of subject categories and, consequently, the courses that schools must offer. However, in a rapidly evolving society, the explosion of knowledge compounds the

contradiction between the boundless knowledge available and the limited capacity of schools to accommodate it. Therefore, it is imperative to shift from the idea of transmitting all knowledge to students to cultivating their capacity for learning and knowledge construction.

2. Research Objectives

Starting with the reinforcement of the interrelationship, integration, and mutual promotion of various subject matters, this research aims to explore models of interdisciplinary integration teaching involving the Arts discipline and other subjects. It seeks to identify efficient instructional models that enhance students' core competencies and cultivate their correct values, essential qualities, and key skills for future development. Furthermore, it aims to provide recommendations for teachers engaged in interdisciplinary art education activities and suggest strategies for comprehensive curriculum development in schools.

3. Practical Exploration of Interdisciplinary Integration Teaching in Arts

How can Arts effectively engage in interdisciplinary integration teaching? What knowledge connections exist, and which subjects should be integrated in interdisciplinary fusion? What is the basis for interdisciplinary integration, and which models can be employed? How should disciplinary knowledge be introduced, organized, and presented? What are the strategies and effective paths for interdisciplinary integration in Arts education? These are the questions we need to explore. This research can be divided into three phases based on approximately three years of practical exploration.

3.1. First Phase: Exploring Arts with Single Subjects

3.1.1. Arts + Music: "Peking Opera Masks"

Frequent singing of the Peking Opera song "Saying the Peking Opera Masks" in music class prompts curiosity about what these masks actually looked like. Teaching students to draw Peking Opera masks in art class while singing the song in music class allowed for a deep visual and auditory understanding of these masks. This approach effectively deepened students' knowledge of Peking Opera masks and enhanced their understanding of traditional Chinese culture.

3.1.2. Arts + Biology: "Drawings of Microorganism"

Microorganisms, though pervasive in everyday life, often go unnoticed due to their microscopic size. Microorganisms are only visible under a microscope, but can you imagine creating art of these tiny life forms? We developed the course "Artistic Journey of Microbial Painting" to transform microorganisms into artistic masters. This course combines basic microbiology knowledge and artistic creativity, providing students with an opportunity to explore the fascinating world of microbiology and art.

In the course "Artistic Journey of Microbial Painting", students learn about thematic design and artistic creation and get to know the basic knowledge of microorganisms and experimental practices. This course helps students discover the joy of life sciences and artistic creation, and inspires them to love art and life sciences, and guides them to use their artistic and scientific knowledge and their sense of creativity to discover and solve problems, which enhances their ability to use their knowledge comprehensively, and cultivate and improve their overall qualities.

3.2. Second Phase: Arts Integration with Multiple Disciplines

3.2.1. Arts + Multidisciplinary Integration: "Pebble Art Creation and Appreciation"

The theme of this course is pebble art creation, which integrates various subject matter knowledge such as geography, natural sciences, social sciences, and language arts, aiming at the

course development. Through this course, students learn about the cultural significance of pebbles, their naming in different cultures, local history, geography, and the geological formation of pebbles. By providing a comprehensive introduction from various disciplines, students are able to construct a well-rounded knowledge system, promoting their holistic development.

3.2.2. Arts + Multidisciplinary Integration: "Designing the 90th Anniversary Mascot for Chongqing No.1 Secondary School"

Apart from integrating with other subjects, Arts can play a significant role in the development of school-based interdisciplinary courses. In the course "Designing the 90th Anniversary Mascot for Chongqing No.1 Secondary School," a school's history, culture, and organizational spirit are encapsulated in a mascot. This mascot represents the amalgamation of knowledge from different subjects. Arts not only contribute to the fusion of subject knowledge but also support the visual representation and presentation of integrated knowledge.

Comprehensive Arts Education in Chongqing Fengmingshan Primary School, with the art course as a lever, prompts the aesthetic education curriculum construction and implements aesthetic education in all other disciplines, which fulfills the task of fostering virtue through education by educating and moralizing students. It also guides the development of curriculum resources across various subjects.

3.3. Third Phase: Comprehensive Arts Education

Through further exploration, it was discovered that Arts can not only be integrated with other subjects but also lead the development of curriculum resources in other subjects. One such initiative is comprehensive Arts education, where Arts serves as the central discipline. This approach fosters interdisciplinary teaching by encompassing overarching concepts, major units, and thematic course structures.

4. Methods of Interdisciplinary Integration in Arts Teaching

4.1. Development of a Comprehensive Curriculum Planning Scheme

This scheme unifies national foundational courses, extracurricular extension courses, and comprehensive practical activities. It merges nationally structured courses, content-expanding subject courses, and theme-oriented comprehensive practical activities. This integrated approach ensures comprehensive development while preserving teaching hours and minimizing the burden on both teachers and students. The scheme entails a holistic integration of curriculum functions, objectives, resources, and teaching staff to facilitate school-based curriculum development and implementation.

4.2. Breaking Down Disciplinary Barriers

The initiative involves breaking down not only knowledge barriers but also personnel barriers between disciplines. It fosters interdisciplinary research communities in schools, promoting cooperation among teachers. Collaborative, interdisciplinary teaching requires teachers to complement each other's strengths, minimize weaknesses, and cultivate students' integrated thinking, thereby enhancing students' overall development.

The key to an integrated interdisciplinary curriculum lies in integrating the knowledge resources of different disciplines, breaking down the clear-cut disciplinary boundaries, and allowing students to experience the intrinsic connections between the knowledge of different disciplines, and the complete world of experience. Teachers should break the boundaries of grades and teaching and research groups to actively cooperate in interdisciplinary co-operative teaching and research.

4.3. Professional Development for Teachers

In the context of collaborative teaching, traditional teaching, where educators operate in isolation, is being replaced by collaborative teamwork. Schools encourage teachers to engage in interdisciplinary collaborative research through activities such as collective lesson planning, peer assessment, and collaborative teaching. Additionally, they implement "mentoring" programs, further strengthening communication among teachers to achieve the goal of full participation, collective discussion, and collaborative teamwork.

In interdisciplinary integration courses with Arts, the combination, expression, and applications of knowledge in all disciplines can be realized through artistic creation practices.

4.4. Diverse Assessments

Teaching assessments are a critical aspect of interdisciplinary courses, which should be multifaceted, scientifically grounded, comprehensive, and timely. Schools should establish an integrated curriculum mechanism that ensures the overall feasibility of curriculum design, from the establishment of curriculum concepts, and planning to curriculum implementation, arrangements of class hours, and quality assessments.

5. The Role of Arts in Interdisciplinary Integration Teaching

5.1. Acting as a Bridge

In daily life, Arts are integral to various aspects, including clothing, food, shelter, transportation, and aesthetics. Art originates from life and is closely related to realities, which can connect with any subject matter, effectively bridging knowledge from various disciplines and creating an organic whole from different subjects.

5.2. Serving as a Visual Display

In the teaching process, most subjects rely on text and abstract symbols as their foundational bases. Knowledge is typically conveyed through textual descriptions. However, Arts is inherently a visual discipline, and nearly all subject matter knowledge can be visually displayed through Arts. For students, visual elements often lead them to a deeper understanding than textual descriptions, making lessons more efficient and engaging. In Interdisciplinary Integration Teaching, knowledge from all disciplines can be expressed in the form of arts or presented in combination with Arts; and research results from those disciplines can also be displayed in Arts.

5.3. Facilitating Expression and Creativity

Artistic creation involves a creative thinking process and expressive communication, making it the ideal way to nurture students' creativity and imagination. Interdisciplinary courses with Arts can help students form a holistic knowledge framework. For educators, they should consider whether the knowledge they transfer is meaningful and practical in real life, and whether they can apply it effectively.

By joining the interdisciplinary integration program in the subject of Arts, the integration of knowledge from various disciplines and the expression of knowledge from various disciplines can be accomplished through the creation of arts, and the integration of knowledge and the actual expression and application of knowledge can be formed in the creative practice of arts.

6. Future Outlook

6.1. Deep Integration of Science and Technology with Education

"Education, technology, and talent are the fundamental and strategic pillars of building a socialist modernization country on all fronts." Education, talent, and technology are a triadic

whole. Technological advancement relies on talent, and talent cultivation depends on education. Education serves as the foundation for nurturing talent and fostering technological innovation. Simultaneously, technological innovation infuses new energy into education. In particular, the introduction of new technologies such as artificial intelligence and big data will profoundly impact digital education. Looking forward, we should seize the historical opportunities of the digital age, align our educational goals with the future needs of talent and their holistic development, and vigorously implement a digital education strategy. This will ensure that education is more people-centered, precise, equitable, of higher quality, and a catalyst for cultivating outstanding talents in the digital economy era.

6.2. Flexible Curriculum Design

School transformation centers on curriculum development. In recent years, there has been a growing trend of schools independently developing their curricula to meet the needs of school and student development. The democratization of curriculum creation is already underway. Future curricula will be designed based on the specific needs of students, discarding the notion of transmitting all knowledge to students through schools. Instead, there will be a stronger focus on developing students' core competencies, instilling correct values and essential qualities, and fostering key skills for their future. The design of curricula will also depend on teachers' individual circumstances. The curriculum is dynamic, with teachers as the central figures. The presence of different types of teachers will lead to different types of curricula.

6.3. Boundless Schools of the Future

With rapid technological advancements, teachers are gradually losing their advantage over knowledge, and the rise of Massive Open Online Courses (MOOCs) means that learners are no longer tied to fixed schedules, locations, or uniform content. This transformation is not merely technological but signifies a change in the relationship between teaching and learning. Schools need to adapt to the changing times, leverage the power of the Internet, and apply the concept of "Internet+" to construct schools of the future without boundaries. This chiefly manifests in curriculum content having no boundaries, teaching methods having no boundaries, learning environments having no boundaries, and learning resources having no boundaries. With the internet, schools can transcend time, space, stages of development, interpersonal connections, and disciplinary domains, creating an educational system that synchronizes with societal developments and produces citizens who are deeply motivated, capable of adapting to society, leading society, and contributing to its development, thus embodying the fundamental mission of fostering ethical citizens.

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