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Developing Multiple Intelligences through Dance: An Inclusive Teaching Model for Vocational Students with Special Educational Needs

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Abstract

This paper explores the application of Howard Gardner's multiple intelligences theory in dance teaching within higher vocational special education. The research aims to break away from the traditional educational model that emphasizes linguistic and logical intelligences, and to construct a more personalized and multi-dimensional teaching system. By combining literature analysis with classroom practice, the study analyzes the positive impact of multiple intelligences on the development of students with special needs through case studies of dance courses, focusing on aspects such as bodily, musical, spatial, and interpersonal intelligences. The findings reveal that dance, as a non-verbal and interdisciplinary form of education, can effectively stimulate students' intellectual potential, and enhance their physical coordination, social skills, and emotional expression. Additionally, personalized curriculum design and group collaborative teaching models contribute to boosting students' selfconfidence and learning motivation. The conclusion indicates that the multiple intelligences theory provides a scientific basis and practical pathways for dance teaching in special education, possessing extensive promotional value, and aiding in the transition of special education from "compensatory teaching" to "developmental education."

Keywords

Multiple Intelligences Theory; Special Education; Dance Teaching; Personalized Education

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1. Introduction

With the increasing social concern on educational equity and quality, the government has continuously introduced relevant policies to promote the development of special education in recent years^[1]. According to documents such as the Special Education Enhancement Plan (2021-2025)

and the Special Education Development Plan Second Session (2017-2020), there is an emphasis on innovating educational models in special education, improving educational quality and meeting the personalized needs of special students. Traditional special education models often concentrate too much on the cultivation

of basic skills while neglecting the development of students' overall qualities and multiple intelligences. Therefore, breaking away from traditional educational models and utilizing innovative theories and methods to achieve an effective transformation in special education has become an important issue in current educational reform^[2]. This paper aims to promote the development of special education towards a more comprehensive and personalized direction by exploring the application of multiple intelligences theory in dance teaching.

2. Problem analysis

2.1. Limitations of traditional special education

For a long time, China's special education system has exhibited significant limitations in curriculum design and teaching methods. Traditional special education primarily centers on "remedial education," emphasizing the training of foundational knowledge and skills, particularly focusing on the development of "hard skills" such as language expression and mathematical logic, while neglecting the individual differences among students in terms of their intelligence structures. Although this "uniform standard" teaching model addresses basic learning issues for students with special needs to some extent, it is insufficient in meeting their diverse developmental needs related to cognitive styles, emotional expression, and social interactions. Specifically, the traditional teaching model overly emphasizes the imparting of subject knowledge, employs a singular teaching approach, and mostly bases evaluation systems on assessments of language and logical abilities. This educational tendency not only suppresses the development of other intelligences in students but also marginalizes those who may be weaker in language and logic yet possess potential in areas such as music, physical movement, and spatial awareness. Moreover, due to the traditional education's focus on results over processes, students with special needs often lack a sense of participation and achievement during their learning processes, which can lead to diminished motivation, reduced self-confidence, and even a dependency mindset. The special education population inherently encompasses cognitive, emotional, and physical diversities, and their learning characteristics necessitate individualized and flexible teaching support. However, in practice, many special education teachers find it difficult to address students' intelligence differences due to constraints imposed by curriculum standards, limited teaching resources, and rigid assessment systems. Teachers often lack the sensitivity to recognize individual differences and the ability to tailor their instruction accordingly, resulting in students not being able to fully utilize their strengths during the learning process. Therefore, it is imperative to re-examine the issues of "standardization" and "uniformity" prevalent in traditional special education and to introduce more inclusive and developmental educational concepts to address the prevailing bias toward certain types of intelligence. Only through systematic reforms across multiple dimensions—teaching philosophy, content, and methods—can we break the misconception that has historically prioritized skill development while neglecting potential, thus providing a broader developmental space for students with special needs.

2.2. Theoretical value of multiple intelligences theory

The multiple intelligences theory was first proposed by American psychologist Howard Gardner in 1983, representing a profound reflection on and subversion of traditional views of intelligence. This theory posits that human intelligence extends beyond logicalmathematical and linguistic abilities to encompass multiple dimensions, including bodily-kinesthetic, musical, spatial, interpersonal, intrapersonal, and naturalistic intelligences. Each individual develops at different levels across these types of intelligence, suggesting that education should respect and leverage students' intelligences rather than judging all students' learning abilities according to a uniform standard. The introduction of this theory provides new theoretical foundations and practical directions for special education, significantly promoting the development of educational equity and personalized teaching. In the field of special education, the incorporation of multiple intelligences theory has significant practical importance. Students with special needs often find themselves at a "disadvantage" under traditional standards, yet they may possess remarkable strengths in certain nonmainstream intelligences, such as bodily-kinesthetic or musical intelligence. The multiple intelligences theory emphasizes that "every type of intelligence has its value," effectively breaking the previous labeling mindset of "superior and inferior intelligences" and allowing for the rediscovery and exploration of the potential of students with special needs. It advocates for a shift among teachers from "deficit compensation" to "strength enhancement," thereby constructing a student- centered teaching model that meets their developmental needs based on diversity. Theoretically, multiple intelligences theory is highly inclusive and adaptable. It not only highlights the variety of intelligences but also asserts that intelligence can develop continuously through environmental factors and teaching strategies. Therefore, education should not perceive students' intelligences in a static manner; instead, it should utilize diverse teaching designs and assessment methods to help students grow in different areas of intelligence. This dynamic view of development is particularly suitable for special education environments, providing teachers with theoretical support for individualized instruction and making teaching more scientific and precise. Furthermore, the multiple intelligences theory offers new ideas for constructing educational assessment systems. Traditional grading often overlooks students' capabilities in non-cognitive areas, whereas assessments from a multiple intelligences perspective are more comprehensive and developmentoriented, emphasizing process evaluation combined with diversified assessment methods. This approach not only helps students form positive learning attitudes but also enhances their self-awareness and sense of achievement.

In summary, as a theoretical system that signifies educational reform, the multiple intelligences theory provides a theoretical tool for breaking the traditional framework in special education. Its core concepts closely align with the principles of "respecting differences and developing potentials" in special education, demonstrating extensive theoretical value and practical application prospects across multiple dimensions, including teaching philosophy, curriculum design, classroom practice, and assessment methods.

3. Practical pathways: constructing a personalized dance teaching model

3.1. Tailoring dance curricula based on individual students' intelligence strengths

In vocational special education, each student possesses different strengths in intelligence, which necessitates the customization of dance curricula to accommodate individual differences and maximize student potential. Grounded in the multiple intelligences theory, educators should conduct an in-depth analysis of students' intelligence structures and design curricula across multiple dimensions—such as bodily-kinesthetic, musical, spatial, and logical intelligences—to stimulate holistic development. Personalized instruction is especially critical in special education, as it enables students to learn at their own pace and in ways best suited to their abilities, thereby achieving optimal learning outcomes.

Students with strong bodily intelligence can quickly grasp dance movements and enhance their bodily coordination and rhythmic sense through imitation and practice. These students may be encouraged to participate actively in dance rehearsals and choreography creation. Teachers can employ high-intensity movement training and skill enhancement to provide them with a sense of achievement in dance expression. For students who excel in musical intelligence, teachers can foster their sensitivity to music through activities centered on rhythm and melody perception, allowing them to harmonize accurately with the rhythm during dance performances, thereby showcasing the organic combination of music and dance. Students with strong spatial intelligence have a good perception of the relationship between space and movement. Their ability to utilize space effectively and convey a sense of ethereal movement is a key strength in dance. Therefore, during instructional processes, teachers can guide students by engaging them in activities that involve dance formations and spatial transitions, helping them better understand and leverage space, ultimately enhancing their expressiveness in group dances. "Tailored" personalized course design is key to leveraging students' strengths based on their intelligence specialties while minimizing weaknesses. Customizing both teaching content and teaching methods not only enhances students' motivation and confidence but also allows them to feel respected and valued in the learning process^[7]. Through personalized dance courses, special education students can overcome physical and mental barriers, find their own place in the world of art, and gain a sense of self-identity that dance brings.

3.2. Strengthening collaboration and interaction to foster students' interpersonal intelligence

Collaboration and interaction are essential components of dance instruction, particularly in the context of special education. As a collective art form, dance inherently emphasizes cooperation and interactivity. Through rehearsing and performing group dances, students can not only promote physical coordination but also significantly enhance their interpersonal intelligence. Interpersonal intelligence refers to an individual's capability for effective communication and interaction with others in a group, encompassing various abilities such as cooperation, leadership, conflict resolution, and emotional understanding. In dance classes for special education, through teamwork, students are better able to understand others, express themselves, and strengthen their sense of belonging to the group.

Teachers can design group cooperative dances, requiring each student to play different roles within the team and participate in the entire process of creation, rehearsal, and performance. Through interaction with

others, students learn how to leverage their strengths within a group and collectively complete an artistic task. In this process, they not only need to coordinate their own body movements but also engage in effective communication and cooperation with their teammates, thereby enhancing their interpersonal intelligence. "Dance is not just a collection of movements; it is a bond of emotion and trust between people." Through collective dance, students can feel the power of the group and enhance their ability to collaborate with others. In some special education classes, students often face feelings of loneliness and low self-esteem; however, the interactivity of group dance provides them with an opportunity to showcase themselves and integrate into the collective. Cooperative dance can not only improve students' social skills but also help them build trust and facilitate emotional exchange, allowing them to find a sense of belonging and confidence within the group. Through interaction and collaboration, special education students can understand the importance of teamwork, learn how to communicate with others, handle conflicts appropriately, and comprehend the emotions of others. These abilities are not only beneficial for their dance learning but also play a positive role in their future social adaptation and career development.

Table 1. Relationship between dance curriculum design and students' intelligence specialties

Student intelligence specialty	Teaching content	Course design focus
Bodily-kinesthetic intelligence	Dance movement imitation and skill training	Enhance body coordination and movement expressiveness
Musical intelligence	Rhythm training and music perception	Integrate music with dance to enhance rhythm perception ability
Spatial intelligence	Dance formations and space utilization	Training in spatial awareness and layout
Interpersonal intelligence	Group cooperative dance and collective performance	Strengthen teamwork and interpersonal communication skills

Table 2. Impact of collaboration and interaction on students' interpersonal intelligence

Collaboration type	Interaction form	Aspects of improved interpersonal intelligence
Group cooperative dance	Joint creation, rehearsal, and performance	Enhance teamwork, communication, and emotional expression abilities
Cooperative tasks	Division of labor and mutual support	Increase trust and conflict resolution abilities
Collective activities	Group dance performance and team interaction	Strengthen sense of belonging and group consciousness

3.3. Innovative classroom practice: the integration of interdisciplinary teaching and dance

Innovative teaching is at the core of educational development, especially in special education, where interdisciplinary integration can not only broaden students' perspectives but also help them grow in multiple areas. In dance teaching, interdisciplinary integration is particularly important; elements from subjects such as music, language arts, and psychology can enrich classroom content and enhance students' overall quality. The combination of dance teaching with other disciplines can not only expand students' cognitive and expressive abilities but also provide them with a more comprehensive learning experience. Teachers can introduce basic concepts of music into dance courses, such as rhythm, melody, and harmony, allowing students to understand the fundamental structure and forms of expression in music while learning dance [8]. The combination of music and dance can help students improve their sense of rhythm, enhance their musical intelligence, and also provide more inspiration and motivation for choreography. At the same time, the introduction of language arts can enhance students' verbal expression skills and literary literacy, particularly in emotional expression during dance performances, where linguistic assistance often helps students better understand their roles and emotions. Knowledge of psychology can also support dance teaching by helping students regulate their emotions, relieve stress, and increase their self-identity and confidence through dance activities. In the process of dance performance, the principles of psychology can help students adjust their mindset, learn to cope with stage pressure, and enhance psychological resilience. The interdisciplinary combination makes dance teaching extend beyond just movements and performance, promoting comprehensive development in various aspects for students.

4. Case analysis: practice of multiple intelligences in dance classes

4.1. Course design and implementation: successful practices of personalized teaching

In vocational special education, the successful implementation of personalized teaching models can not only increase student participation and learning outcomes but also enable students to learn more effectively according to their individual intelligence specialties. Dance curriculum design grounded in multiple intelligences theory emphasizes customization according to students' individual differences and unique needs, providing one-on-one or group-oriented customized instruction to ensure that every student can progress in a way that suits them best. By integrating students' intelligence specialties, dance courses can stimulate students' intrinsic potential and enhance their capabilities in various areas.

In our school's dance curriculum design, a course module focused on body training and dance techniques

module focused on body training and dance techniques
has been developed specifically for students with strong
bodily-kinesthetic intelligence. Through regular basic
dance training, enhancing rhythm and coordination,
students are able to master fundamental dance movements
in the shortest possible time, which helps them excel in
group performances. For students with strong musical
intelligence, the curriculum emphasizes the integration
with music, incorporating extensive rhythm training and
melody perception exercises. By sensing the melodies and
rhythms in music, students can better synchronize their

Table 3. Teaching effects of combining interdisciplinary teaching with dance

Combined discipline	Teachingactivity	Teaching effect
Music	Integration of musical rhythm, melody, and dance movements	Enhance sense of rhythm, improve musical intelligence
Language arts	Emotional expression in dance and language integration	Improve verbal expression, emotional understanding, and literary literacy
Psychology	Emotional regulation and psychological adjustment through dance	Increase self-confidence, reduce psychological stress, promote emotional well-being

dance movements, thus improving their expressiveness and artistic perception abilities in dance. On the other hand, for students with strong spatial intelligence, the course design includes more challenging dance formation designs and spatial movement training. Teachers create various dance formations and spatial transition exercises to develop students' spatial awareness and coordination skills [9]. In these courses, students not only need to position themselves in specific spatial locations but also consider the distance and cooperation with other classmates, thereby enhancing their spatial perception and teamwork abilities. "Personalized course design can truly meet each student's needs, allowing them to leverage their strengths and address their weaknesses in dance learning." This customized teaching based on multiple intelligences theory not only helps special education students achieve breakthroughs in dance skills but, more importantly, boosts their self- confidence, social skills, and problem-solving abilities. By aligning with students' individual strengths, the design and implementation of the dance curriculum facilitate the maximization of each student's development.

4.2. Practical effects and changes in students

In the practice of personalized dance courses guided by multiple intelligences theory, the changes in students are reflected not only in the improvement of dance skills but also significantly in their growth in emotional, social, and psychological aspects. Through long-term classroom practice, students' personalized needs have been met, their intelligences stimulated, and particularly profound impacts have been made in areas such as self-confidence, teamwork, and emotional expression.

The personalized design of the dance curriculum allows each student to develop in their strengths. For students with strong bodily-kinesthetic intelligence, their progress in basic skills and dance techniques is very significant; many have been able to break through their movement bottlenecks in a short period, showcasing excellent dance performances. At the same time, students with strong musical intelligence, through the integration with music, have not only enhanced the artistry of their dance but have also learned how to express emotions in their performances. Dance has transformed from simple movement imitation into an expression of emotion and a manifestation of art.

Students with strong spatial intelligence demonstrate exceptional spatial awareness and teamwork abilities through practicing dance formations and spatial transitions. These students are able to accurately grasp their positions in space during group dance performances, maintaining a harmonious collaboration with their teammates. Their performance is reflected not only in the enhancement of dance skills but, more importantly, in their ability to develop interpersonal communication and teamwork skills during collective activities.

"Through the practice of multiple intelligences in dance classes, students have not only improved in artistic expression but, more importantly, their overall qualities have developed comprehensively." For example, a previously introverted student A gradually integrated into the group through collective dance rehearsals, learning to communicate and collaborate with others. Through the study of dance courses, he has become more confident in social interactions and has demonstrated stronger social skills in daily life. The dance curriculum also

Table 4. Matching of personalized dance curriculum design with students' intelligence specialties

Student intelligence specialty	Curriculum design content	Key training areas
Bodily-kinesthetic intelligence	Basic skills training, dance techniques, and bodily expression	Physical coordination, movement fluidity
Musical intelligence	Music rhythm training, melody perception combined with dance	Rhythm perception, integration of movements with music
Spatial intelligence	Dance formation design and spatial transitions	Spatial awareness, coordination among formations and participants
Interpersonal intelligence	Group cooperative dance, collective performances	Teamwork, social interaction, emotional expression

plays a positive role in students' mental health. Many special education students are able to gradually overcome feelings of loneliness and inferiority through interactions with peers and by mastering each dance movement [10]. Through training in emotional expression via dance, students have found self-identity in their performances, with many becoming more optimistic and experiencing significant improvements in their mindset.

5. Conclusion

This study explores the application paths and practical outcomes of multiple intelligences theory in dance education for vocational special education. Through problem analysis and practical exploration, it has been discovered that traditional teaching models in special education tend to emphasize skills while neglecting potential and individual differences. The introduction of multiple intelligences theory provides both theoretical

foundations and methodological support for educational reform. Dance, as an interdisciplinary art form that integrates bodily, musical, spatial, and interpersonal intelligences, not only aids in the healthy development of students' physical and mental well-being but also offers a robust framework for personalized teaching. The study indicates that constructing a personalized dance curriculum oriented towards intelligence specialties can effectively stimulate students' learning interests and potentials, and enhance their expressive abilities, social skills, and sense of self-identity. Additionally, through teaching methods such as group dance and collaborative choreography, students further develop their teamwork and interpersonal communication skills. Clearly, the deep integration of multiple intelligences theory with dance education not only promotes a transformation in the concepts of special education but also provides a practical example for the diversification of future educational models, exhibiting broad promotional value.

-- Disclosure statement ------

The author declares no conflict of interest.

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