

Reflections on teaching and learning issues of integrated education in China based on UDL concept

Xianhao Wang^{1,*}, Lange Liu²

¹School of Teacher Education, Heze University, Heze, China

²School of Special Education, Daegu University, Gyeongbuk, Korea

Abstract. Universal Design for Learning (UDL) has the potential to provide equal learning opportunities to various kinds of learners, which not only help address differential treatment in segregated education but also provide students with the same quality education. This study compares the current problems of integrated education in China in order to explore the necessity and countermeasures for the application of UDL in integrated education in China.

1 INTRODUCTION

In order to allow students with disabilities to receive equal access to education, China has vigorously promoted the development of integrated education. Due to the obvious individual differences in cognitive ability and communication skills of students with disabilities. Therefore, if appropriate education is not provided for students with disabilities in regular schools, it is difficult for students with disabilities to participate in the classroom, and the result is bound to be negative. Therefore, how students with disabilities should learn, what they should learn, what the expected educational outcomes are and effective teaching methods should be emphasized in integrated education. At the same time, teachers need to move away from traditional delivery methods and provide appropriate education not only to students with disabilities, but also to the general student population. That is, the instructional curriculum, methods and strategies offered in inclusive education settings must be planned and implemented on the basis of universal learning design.

Because of the complexity of most curricula and the variety of issues students face, it is difficult to design a curriculum that satisfies everyone. Therefore, one of the best solutions for designing a curriculum that takes into account individual abilities and conditions and seeks solutions that minimize the pressure on teachers to teach is Universal Design for Learning. Universal learning design can be a very effective solution to various teaching problems in the process of integrated education.

The traditional Chinese educational philosophy favors teaching materials, designing curriculum and evaluating courses that do not meet the requirements of all students. Especially in the context of integrated education, it cannot help students with disabilities improve their learning. Second, Universal Design for Learning is still at the stage of concept construction and theoretical exploration.

Although some teachers have some understanding of Universal Design for Learning, there are many misused phenomena. Influenced by traditional values, some general teachers lack awareness of students with disabilities and believe that the inclusive education environment is not conducive to the development of general students. Thus, Universal Design for Learning brings about a paradigm shift and innovation in comprehensive thinking and practice, and educators must fundamentally shift the existing traditional philosophy of education.

2 THE STATE OF THE PROBLEM

2.1 Problems of the educational environment

The development of special education in China started relatively late compared to other countries, and there are not enough teachers with professional background in special education. In addition, there are ensuing problems such as insufficient budget for special education, inadequate special education facilities and equipment, parents of students with disabilities avoiding participation, developing unscientific individualized education plans, and poor teaching effectiveness [1][2]. In addition, there is a certain prejudice against carrying out integrated education because of issues such as whether students with disabilities have access to a good teaching environment when they enter ordinary schools, whether teachers can teach in a way that meets their characteristics, and also because many teachers are concerned about whether students with disabilities will be excluded from ordinary schools. In order to understand the level of understanding of ordinary students towards students with disabilities, some scholars have investigated and analyzed the three levels of awareness, emotion and behavior of students with disabilities with ordinary students as the target. The

*631426686@qq.com

study showed that ordinary students have negative emotions towards students with disabilities and the level of understanding of students with disabilities is quite low [4]. It has also been shown that satisfaction with integrated education is quite low, and representative issues that contribute to these factors include low parental awareness, insufficient special education teacher strength, and lack of awareness of people with disabilities [3].

In addition, there are difficulties in designing curriculum for students with disabilities due to insufficient support for special education teachers' training, teaching materials, and assistive learning devices [5]. Pursuing only the ideal and moral values of integrated education in an environment where it is not implemented makes it difficult to achieve actual educational outcomes and adds to the workload of special education teachers. The effectiveness of education depends to a large extent on the overall quality of teachers, and integrated education will cause dramatic changes in the teaching environment under the existing educational system, redemanding the roles and qualities that teachers should possess.

Teachers face difficulties in four areas: psychosocial, physical space, teaching, and organization and management in the process of integrated education. Problems such as complex teacher-student relationships and classroom management, lack of competence in dealing with emotional and behavioral problems of students with disabilities, lack of teamwork, and lack of communication and information resource channels in schools emerged [6]. Special education teachers must strive to improve the quality of education in order to meet the teaching needs of students with different disabilities in a complex integrated education situation. Collaboration between special education teachers and general education teachers is also important; most special education teachers believe that they cannot solve teaching problems independently, but are skeptical of integrated education collaboration. It can be seen that cooperation requires multiple efforts and support.

2.2 Problems of educational methods

The educational methods of integrated education in China are based on individualized education and differentiated instruction. The educational approach is a general term for the set of tools that teachers use to understand the learning content used. China's approach to the implementation of integrated education specifies a variety of delivery formats and delivery methods for students with disabilities. One study showed that 61% of teachers believed that the teaching methods for regular students were also applicable to students with disabilities, but had difficulties in meeting the learning needs of students with disabilities. In order to receive education appropriate for students with disabilities, 39% of teachers used teaching methods that were not exactly the same as those used for regular students, but they were only formalistic methods, and few special education methods matched the cognitive and interactional characteristics of students with disabilities [7]. The traditional teaching methods in China are mainly for general students and require uniform teaching

materials, uniform syllabus, educational objectives and uniform evaluation criteria, which are contrary to the goals of integrated education and must be specialized and refined under the general teaching methods. To change teaching methods, a combination of teaching methods is needed to meet the learning needs of all students and achieve common progress in order to be successful.

In the 1990s, several cities in China, such as Beijing, Shanghai, and Guangzhou, began to popularize differentiated instruction in regular schools. However, we are already implementing differentiated instruction in practice when most students are solving more complex problems and when grading standards are raised or lowered depending on the student's ability and effort. Certainly, such instructional adjustments indicate that teachers recognize individual student differences, but this instructional strategy is only partially differentiated. Differentiated instruction differs from past education for students with disabilities in that there is a reduction in learning objectives for students with disabilities, a reduction in the content of the course of study, or a curriculum adjustment so that the reduction in instruction can, in the long run, narrow the learning gap between students with disabilities and regular students, thus pursuing the most basic spirit of equality and justice in integrated education.

In addition, the biggest concerns of most teachers when implementing differentiated instruction are poor instructional management and difficulties in student control. Especially for newly appointed teachers, maintaining good quality of teaching and learning while completing the content in the classroom can be a daunting challenge in itself. In this context, the implementation of differentiated instruction becomes even more difficult. On the other hand, there is a lack of successful experience in implementing differentiated instruction in China, and there are no successful cases to learn from in the context of integrated education.

2.3 Problems of educational content

To adapt students with disabilities to the general education environment in regular schools, the focus must be on the actual academic progress and achievement of the individual student, but the educational design in regular schools in China does not take into account the diversity and differences of students and focuses on developing a homogenized curriculum. Also, because educational standards are not uniform, teachers need to select materials and design instructional content that will meet actual curriculum expectations. Some general education teachers blindly pursue new educational content and do have certain excessive demands when implementing integrated education.

The existing general education curriculum in Chinese general schools is too rigid, emphasizes systematic teaching of sub-disciplines, is detached from the students' life experiences, and faces great challenges of integrated education such as various physical and information barriers. As long as the curriculum meets the special education requirements of students with disabilities, students with disabilities will be able to fully learn and develop. However, the current teaching materials in Chinese general schools do not meet the needs of students with disabilities; instead, they are based on the general education curriculum, which remains a unified national textbook. Uniform teaching materials can achieve uniform

educational goals and standards and facilitate the management of teaching schedules in schools. Due to differences in cognitive and comprehension abilities, uniform teaching materials create many difficulties for students with disabilities to learn.

In addition, Chinese students with disabilities undergo a rigorous examination and review before enrolling in school, and experts believe that they need to keep up with the curriculum of regular classes before they can participate in integrated education learning life. In integrated education classes, students' abilities vary significantly, students have different educational needs, and materials need to be improved according to the differences of students with disabilities. There is also a need to add content that will improve adaptive and social skills. Although society's perception of people with disabilities and their treatment have been gradually changing, they actually encounter more difficulties in the process of integrating into society, and in order to solve these difficulties, they must gain experience in their daily lives and work hard to cope with them. The content of education in ordinary schools tends to ignore the adaptive ability and social interaction ability of students with disabilities, and the content of teaching materials is unreasonable, which is not conducive to the growth and development of students with disabilities and goes against the concept of integrated education.

The implementation method of integrated education clearly stipulates that teachers can adjust the teaching contents appropriately according to the actual situation of students with disabilities. However, the results of one study showed that 67% of teachers still used the same content as the general students, and the educational objectives were completely inapplicable to students with disabilities and tended to ignore the significant differences of students with disabilities. 22% of teachers used strategies such as keeping or unconditionally reducing the curriculum content and changing the learning order of educational contents [8].

In fact, regardless of the presence of students with disabilities in the classroom, when implementing the national curriculum or selecting materials for inclusive education, teachers should adjust the educational content as appropriate or provide additional study guides or materials for students with high ability to guide students who have learning difficulties after class. However, when adjusting educational contents, reasonable design also requires much effort in order to enable students with disabilities to develop as well as ordinary students and integrate into mainstream society.

3 RECOMMENDATIONS

First, Universal Design for Learning emphasizes that every learner has equal opportunities to learn, and that Universal Design for Learning can truly reflect the current state of learning abilities of students with different backgrounds and ability levels, which is consistent with the philosophy of educational engineering and with the general trend of today's inclusive education. As an instructional design concept, Universal Design for

Learning has been developed in foreign countries for more than 20 years, and many scholars abroad have specifically applied Universal Design for Learning to teaching and learning and achieved results, but at present, Universal Design for Learning in China still remains at the stage of conceptual and theoretical exploration. There is a lack of empirical research and teaching practice on Universal Design for Learning. As a brand new concept, Universal Design for Learning in China requires a team of scholars to form a long-term collaboration to leverage the power of technology in education and conduct more in-depth research. Moreover, Chinese law is still stuck on the regulations related to the construction of the environment for facilities for people with disabilities. In order to advance the development of Universal Design for Learning, it is necessary to incorporate it into law, strengthen legal support, and provide legal guidance.

Second, according to domestic and international research, instruction using Universal Design for Learning can have a positive impact on improving students' classroom participation, interactivity, classroom execution behaviors, improvement of social skills, and academic achievement. In addition, in order to reduce the differences in perceptions of Universal Design for Learning, general and special education teachers should work together, and relevant agencies should be supportive. To this end, pre-professional training for preparatory teachers should include a component of Universal Design for Learning. Training opportunities related to this should be provided to support general and special education teachers in planning, preparing, and evaluating teacher content based on the Universal Design for Learning approach in an effort to increase student engagement in instruction.

Third, Universal Design for Learning can help teachers organize and present a variety of information, encourage students to provide and express a variety of expressions, and support student participation in the classroom, not only to increase student motivation, but also as a tool for teachers to improve their teaching methods. In fact, Universal Design for Learning has had a positive impact both as a tool for teachers to review their own lessons or to support self-reflection, and to improve their teaching skills. Therefore, presenting teachers with specific options for using the UDL in a variety of ways so that it can be used more positively in the educational setting can help improve not only the quality of teaching and learning, but also teachers' pedagogical skills.

Fourth, most schools within China have now established an Internet-based educational environment that not only encourages teachers to use computers for teaching and learning, but also implements a variety of training to improve teachers' information use skills. This is one of the most important tools for the implementation of Universal Design for Learning (UDL), and therefore, if UDL is examined in conjunction with educational information infrastructure and teachers' information use skills, greater synergy will be achieved.

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