

Academic Support and Student Participation in Outcomes-Based Education among Higher Education Institutions in China

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Abstract:

This study explored the practical application of outcomes-based education (OBE) in higher education, aiming to propose a teaching model and application program more suitable for Chinese education. This study employed a quantitative research method using a questionnaire survey to assess academic support and student participation in OBE. Specifically, it aimed to describe the respondents' profiles in terms of sex, age, educational background, and years of experience. It then examined the academic support provided by teachers using OBE, focusing on professional competence, personal competence, and personality development. Furthermore, the study assessed student participation in OBE concerning skill, emotion, interaction, and performance. It also tested for differences in responses regarding academic support and student participation when grouped by profile variables, and explored the significant relationship between academic support and student participation. Based on the findings, a teaching improvement plan was proposed.

Keywords:

Academic support
Student participation
Outcomes-based education

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1. Introduction

In today's society, with the rapid growth of China's economy and the continuous improvement of social civilization, people's needs and expectations for education have also risen. China's investment in and emphasis on education has long been more than simple numerical growth, but a solid step toward quality and

internationalization. In October 2015, to further clarify the direction and goals of development, China's State Council issued the Overall Program for Coordinating and Promoting the Construction of World-Class Universities and First-Class Academic Disciplines ^[1]. This program is a comprehensive plan for China's education system to promote the construction of world-class universities and

first-class academic disciplines in China. The program clearly states, “By the middle of this century, the number of first-class universities and first-class disciplines in China and their overall strength will enter the forefront of the world, laying a solid educational cornerstone for the great rejuvenation of the Chinese nation, to build itself into a higher education powerhouse.”

Under this grand blueprint, “double first-class” construction has become an important strategic direction. This is not only a quantitative improvement, but also the pursuit of quality. The development of higher education, from the beginning to maturity, and then to excellence, is always inseparable from the persistence and pursuit of quality. This transformation is not only reflected at the policy level but also fully demonstrated in specific practices. For example, the Fourteenth Five-Year Plan and the Ministry of Education’s 2021 Work Points both explicitly take the quality improvement and innovative development of higher education as a core task ^[2].

In this line, of course, the quality improvement of higher education stems first and foremost from the quality of learning and capacity development of each student. To better meet this need, more higher education institutions have begun to accept and practice advanced education concepts such as “outcome-oriented education,” “output-oriented education,” or “results-oriented education.” For example, in 2021, to promote the reform of education quality, Central South University (CSU) issued the “Implementation Measures of CSU on Improving Output-Oriented Teaching Evaluation Mechanism (Trial)” ^[3]. This student-oriented and pragmatic teaching evaluation mechanism has become an important tool for promoting education and teaching reform, providing clear guidance and breakthroughs for building a high-quality education culture and system.

However, research on academic support and student participation in OBE in Chinese education has been mostly limited to software applications in engineering disciplines. Less research has been conducted on the impact of OBE on student participation in higher education. This study examined academic support and student participation in OBE in higher education institutions to determine the impact of teachers on OBE outcomes and the effect of student participation on OBE outcomes, which will help expand the use of

OBE in higher education, improve the current situation where OBE is limited in Chinese education, and provide theoretical support and suggestions to schools that want to improve their teaching outcomes through OBE in the future.

2. Literature review

2.1. Academic support in outcomes-based education

Cuseo stated that academic support involves helping and encouraging students to learn, enhancing their learning abilities, and improving student outcomes through the provision of academic support and services. For example, through the guidance and training of teachers, provide scientific and effective courses and learning resources ^[4]. Joubish and Al-Khaldi noted that Gentry and Mckinnon had pointed out that academic support can promote the implementation of OBE. Additionally, academic support would help implement the OBE teaching model and positively influence the learning outcomes of students ^[5].

The educational model is known as outcomes-based education (OBE), which focuses on learning outcomes to plan, implement, and assess educational events Zhao and Shao stated that the OBE model can bring many positive effects to higher vocational colleges. It can improve students’ ability of innovation and entrepreneurship, and can also help improve and innovate teachers’ teaching and assessment methods. Additionally, it can also improve the quality of education as mentioned by Pradhan ^[6].

Ho and Watkin through a survey of the University of Hong Kong, further studied the role of teaching support in OBE, pointing out that academic support under the OBE mode is conducive to promoting students’ learning and developing employability, helping students understand and learn, and promoting students’ academic ability. According to research on South African institutions, it is pointed out that academic support such as rich teaching methods, effective training, guidance, effective assessment, and feedback will promote student success in the OBE environment ^[7].

Moreover, it has been discovered that strong academic support plays a positive and vital impact in attaining learning objectives under the OBE model, improving academic outcomes and job readiness. In

addition, the study pointed out that academic support should be improved promptly based on student performance and should be closely linked to OBE as stated by Sivapalan, Rahim, and Abdullah^[8].

Tam's review examined OBE within the context of higher education, emphasizing its student-centered approach and the shift from traditional teaching methods to a focus on measurable student outcomes. It synthesizes literature on the development, principles, and application of OBE, and discusses the critical perspectives on its implementation. Tam developments in quality assessment and curriculum improvement, outlining the principles of OBEs and their role in curriculum design. Critical analysis shows that while OBEs are valuable for student learning, their application requires sensitivity to conceptual diversity in defining learning outcomes^[9].

A teacher's professional competence includes their ability to manage a classroom, implement efficient instructional methods, assess and provide feedback, and possess a high level of professional knowledge. The professional competence of teachers in higher education institutions played an important role in the realization of OBE, and there was a close relationship between them. Teachers' professional competence would affect the achievement of OBE, and higher teachers' professional competence can promote the effective implementation of OBE.

Gravett and Demircan asserted that implementing teaching strategies in line with the OBE model would enhance students' learning outcomes, skills, and broad development^[10]. To support the achievement of learning objectives and enhance the school impact, a teacher's teaching methods to instruction in the OBE mode should align with the educational goal effect. The choice of scientific and efficient teaching strategies has a significant impact on students' learning leads based on the OBE model as concluded by Tan in 2017^[11].

It is stated that in the OBE model, teachers' assessment and feedback competence have a significant impact, as this ability may recognize students' development, and timely evolution of students' learning, and have a beneficial impact on improving students' learning outcomes. Conversely, with weak assessment and feedback ability, it was challenging for teachers to achieve learning objectives and to judge students' learning

situations accurately.

The personal competence of teachers was beneficial to achieving OBE goals because strong personal competence of teachers was helpful to students to promote students' learning and achieve learning outcomes in OBE mode. Hildebrand and McMillan (2018) claimed that the strong personal competence of teachers can effectively implement teaching work, make reasonable assessments to students, and give reasonable guidance plans and suggestions, as a result, the strong personal ability of teachers is conducive to promoting OBE model^[12].

A teacher's personality development plays a vital role in the way and attitude of teaching. Positive teacher personality development, such as a positive working attitude, positive encouragement of students, and student-centered teaching methods, will promote the effective implementation of OBE. The personality development of good affinity, patience, and tolerance teachers can establish a good relationship with students, which is conducive to teaching activities.

2.2. Student participation in OBE

Liu and Li stated that student participation plays an important role in colleges and universities. Student participation can improve learning efficiency, cultivate students' critical thinking and problem-solving abilities, bring them happiness, and improve self-confidence. Therefore, student participation affects students' development^[13].

Ghenghesh stated that there is a link between student participation and OBE. OBE is an educational model that emphasizes students' learning goals and ability to achieve them. The participation of students contributes to the successful implementation of OBE. Only through the participation of students can there be learning outcomes, and the objectives proposed by OBE can be achieved by cultivating students' abilities, improving students' skills, and giving feedback and assessment^[14].

Kahu pointed out that student participation refers to the degree of positive performance of students in their studies and campus life. It can be characterized particularly by the degree of students' active learning, active involvement in learning, performance in the classroom, performance of contact with teachers, and performance in campus activities^[15].

Gasparini and Zuccala in 2021 claimed that student participation involves students' involvement in academic aspects, school life, and social life, and pointed out that student participation will affect students' academic performance and overall ability development, and active participation is conducive to students' success ^[16].

Groccia proposed that students' active participation in academic and social activities is directly related to their academic and personal development, emphasizing the importance of investing time and effort and argued that educators should provide multiple opportunities to encourage student participation both within and outside of the curriculum ^[17].

George *et al.* examined the relationship between student participation and academic outcomes, particularly grades and intentions to study abroad among college freshmen. It was found that highly engaged students performed better in their first year of college and were more likely to continue their studies, even after controlling for other factors (e.g., high school grades and socioeconomic status) ^[18].

Fredricks and McColskey claimed that student participation has been a hot topic in educational research in recent years, but how to measure it remains a challenge. They conducted a comparison, including observation, teacher report, and student self-report. The study found that while all methods have value, they each have strengths, weaknesses, and limitations. Therefore, it is best to use multiple methods to get a full picture of student participation ^[19].

OBE can positively promote the development of skills because OBE values the learning effect of students and the development of students' abilities. Under the OBE model, the teaching activities and assessment methods designed by educators are conducive to the improvement of students' skills and abilities, as well as the improvement of students' practical skills. Gene stressed that the implementation of OBE can better develop students' skills. Under the scientific learning design, students actively participate in and implement skill participation, which can provide students with opportunities for skill development. It is conducive to the improvement of students' comprehensive skills ^[20].

Emotional participation involves students' interest and enthusiasm in studying as stated by Wang *et al.* ^[21].

It is suggested that we should actively promote the participation of emotion in OBE teaching. It is pointed out that the participation of emotion can promote the improvement of students' learning effect and ability. The participation of emotion is beneficial to improve learning efficiency, help students build self-confidence, and cultivate the ability to cooperate and communicate. However, teachers are also required to pay active attention to guiding students' emotional participation.

Interactive participation involves the degree of participation of students in interacting with others, and the forms of interaction are students' answering questions, participating in cooperation, participating in discussions, etc. Wu and Liang pointed out that in OBE mode, interactive participation can help students learn from each other, develop communication abilities, and improve students' critical thinking and problem-solving abilities ^[22].

Schunk and Usher pointed out that performance participation refers to the participation of students in behavior, such as answering questions, participating in cooperation, participating in activities, taking tests, etc. Through his research investigation, performance participation has a positive impact on OBE ^[23]. Stronger student performance participation is more likely to participate in cooperative activities and conduct critical thinking, which is conducive to improving students' skills and abilities. He also suggested that higher performance participation has better academic performance, similarly mentioned by Phelps and Schunk ^[24]. Chen and Zhang claimed that performance participation is beneficial to improve students' enthusiasm and improve their learning motivation, thereby promoting students' learning ^[25].

Martin in 2023 proposed ways to increase student participation by encouraging students to collaborate, share their ideas and experiences, and develop a thinking routine to stimulate student participation. She also proposed ways to increase students' participation in learning and school life through silent participation by having students complete some assignments by providing written answers to questions ^[26].

3. Conclusion

In terms of academic support, the majority of the teacher respondents place special emphasis on developing

students' career skills and sharing industry information in their professional competencies. They have positive attitudes toward providing academic support to students, especially in promoting personal growth and providing challenging support, but place relatively low emphasis on encouraging students to engage in community service.

In terms of student participation, most of the teacher respondents provided support in promoting students' personal development. The most highly valued area was encouraging students to demonstrate individual characteristics, while a relatively weak area was helping students to recognize and develop their interests and passions. Teachers' sex, age, and teaching experience had no significant effect on their assessment of student participation in OBE. However, teachers' educational backgrounds posed a significant difference in their assessment of individual student competence. In terms

of professional competence, teachers with a master's degree or higher assessed students' skill participation, effective participation, and interactive participation more thoroughly than teachers with a bachelor's degree or less. Regarding personal competence, teachers with a master's degree or higher assessed students' skill participation and affective participation higher than teachers with less than a bachelor's degree, but there was no significant difference in their assessment of students' interactive participation.

There is a high correlation between academic support and student participation in outcome-based education thus, the better the academic support, the higher the student participation. A teaching improvement plan was proposed to enhance academic support and student participation in OBE.

Disclosure statement

The author declares no conflict of interest.

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