

Core Competencies of Open Education Teachers in the Perspective of Lifelong Education—Insights from OECD and EU Teachers' Core Competencies

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Abstract: The open education teaching mode centers on the student, carrying out high-quality teaching activities and training applied talents to serve local economic construction. High-quality teachers are essential for this process. Improving the core quality of teachers is a major research topic in open education talent training. This paper explores the research progress on the core literacy of OECD and EU teachers. The theoretical cultivation of open education teachers' core literacy is not only beneficial for improving the teaching quality of open education and promoting lifelong education, but also helps enhance the sense of accomplishment and happiness of open education teachers.

1. Introduction

Open education is a new type of talent training mode that implements undergraduate and junior college academic education through modern distance education. It is an educational concept aimed at establishing a fair teaching system. Broadly, it refers to the universal right to lifelong education, involving not only accessibility to educational opportunities but also the openness of educational concepts, resources, and processes. In a narrower sense, open education typically denotes the modern distance education model practiced by the Open University of China^[1]. This approach embodies the lifelong learning value proposition of "learning and examination available to everyone, everywhere, and always," offering a flexible, convenient, and efficient educational method.

The implementation of open education is student-centered and involves conducting high-quality open education and teaching activities. It aims to cultivate applied talents who can contribute to local economic development, a goal inseparable from the presence of high-quality teachers^[2]. Therefore, enhancing the core competencies of open education teachers is crucial for effectively training open education talents. This study aims to offer valuable insights into the training methodologies and approaches to enhancing the core competencies of open education teachers, drawing lessons from the practices of OECD and EU teachers.

2. OECD and European Union Research and Implications on Teacher Core Literacy

2.1 OECD Research on Teacher Core Literacy

Core literacy is a concept proposed by the OECD in 1997. The organization believes that literacy encompasses not only knowledge and skills but also the ability to meet complex needs by utilizing and mobilizing psychosocial resources (including skills and attitudes) in specific situations. "Core Literacy promotes a Successful Life and a Sound Society" and "Definition and Selection of Core Literacy: Executive Summary," released by the organization, are the ideological basis for studying core literacy in countries around the world^[3]. Building upon core literacy, the OECD further develops a comprehensive framework for fostering practical skills and literacy. Global competency assessment indicators for teachers mainly include global awareness, integration of global issues into curriculum, and adaptation of diverse teaching strategies for different students. Specifically regarding teachers' core competencies^[5], in "Back to the Future of Education: Four Prospects of Future School Education," the OECD emphasizes that future educators should possess professional

competence and teaching innovation^[4], lifelong and collaborative learning skills, digital literacy, social and emotional abilities, and other foundational qualities. Overall, the OECD's research on teachers' core literacy primarily focuses on broad scenarios and the evolving roles and requirements of educators in contemporary environments. It establishes the fundamental dimensions of teachers' core literacy and proposes directions for their future development.

2.2 A European Union Study on the Core Literacy of Teachers

The EU's research on teachers' core literacy has profound historical reasons. Under the concept of EU cultural unity, most European countries attach great importance to the integration of education and the formulation of unified educational standards. Starting with the Teacher Core Quality and Qualification Standards and the Common European Guidelines formulated in 2005, the European Union has put forward four basic requirements for teachers. Subsequently, based on the EU's integration development, information technology, and lifelong learning, the EU introduced the Core Literacy to Promote Lifelong Learning proposal to support the development of teachers' core literacy. This included the Core Literacy to Promote Lifelong Learning Committee proposal and other policy documents on the connotation of teachers' core literacy, which set increasingly higher requirements and guidelines for teachers' core literacy.

At the same time, academic research on teachers' core literacy has also yielded a series of achievements. For example, in 2011, Greek scholars divided teachers' core literacy into four dimensions, and some scholars believe that teachers' core literacy involves "the dynamic combination of cognitive skills and metacognitive skills." On the basis of the joint promotion of policy documents and academic research, the EU has established common standards that teachers should follow. In conjunction with these common standards, scholars from different countries have developed a quantitative table of teachers' professionalism, identifying many factors affecting teacher professionalism from multiple dimensions. With the improvement of the eight core literacy requirements in 2018, the EU's standards for teachers' core literacy have become more complex and diversified, forming clearer literacy standards.

Overall, the construction of teachers' core literacy in the EU is characterized by comprehensiveness, timeliness, academic rigor, localization, specificity, policy orientation, and staged development. It covers requirements for teachers' professional knowledge and understanding, professional skills and practice, and professional attitudes.

2.3 Research Implications of OECD and EU Teachers

According to the study of EU teachers' core literacy, literacy essence refers to the combination of knowledge, skills, and attitudes. Teachers' core literacy is based on extension, expansion, and abstraction. The eight core competencies cover teachers' knowledge literacy, skills attainment, emotional competence, and various other aspects. However, the corresponding standards are not static; they also need to be updated in accordance with the requirements of the times. Each country or region should reasonably supplement or evolve according to its own situation^[5]. The OECD considers teachers' core literacy to emphasize the key aspects of competence. It is a highly comprehensive and complex ability to solve problems and meet societal needs, taking into account specifics such as migration, morality, and democracy. Although it arrives at different conclusions compared to EU research, fundamentally, both define teachers' core literacy as encompassing knowledge, skills, attitudes, and emotional dimensions^[6]. Based on this foundation, the two perspectives have gradually evolved towards exploring the internal literacy of teachers, which is not easily observable directly. There is a greater focus on the complex hierarchical structure within each dimension and the interplay and intersection among these dimensions.

According to research of the European Union (EU) and OECD, the concept of teachers' core literacy needs to be fully developed and adapted to contemporary requirements and specific contexts^[7]. Open education exhibits certain unique characteristics: it is flexible, transcending time and space, abundant in educational resources, emphasizes learners' agency, and encourages independent study^[8,9,10]. Given these circumstances, the core literacy framework for open education teachers must encompass knowledge, skills, attitudes, and more. The knowledge dimension

primarily includes subject expertise, educational theory, technology application, and interdisciplinary knowledge. The skills dimension comprises teaching design, implementation, evaluation, feedback, communication, collaboration, and lifelong learning. The attitude dimension encompasses professionalism, dedication, openness, inclusivity, innovation, exploration, sustainable development, self-improvement, and social responsibility.

3. The core quality of open education teachers

3.1 The knowledge structure is not comprehensive and balanced enough

Knowledge literacy is an important part of the core literacy of open education teachers and a basic requirement for teacher literacy. However, there are still some deficiencies in the knowledge of open education teachers^[11]. First, with the rapid development of science, technology, and society, the speed of knowledge update in some disciplines is very fast. Some open education teachers may not be able to keep up with the latest developments in their subjects due to busy work schedules or other reasons, leading to outdated knowledge content that cannot meet the needs of students.

Secondly, the knowledge system of some open education teachers is too narrow and lacks interdisciplinary integration, making it difficult to provide learners with diversified and comprehensive teaching content. Third, although many open education teachers have basic computer operation skills, they lack technical knowledge in advanced teaching technologies and tools such as big data analysis and artificial intelligence-assisted teaching. These deficiencies can easily lead to ineffective teaching methods, thus affecting students' learning experiences^[12,13].

3.2 Low Skills in Education and Teaching

Open education teachers need to possess a variety of skills to enhance educational activities, including instructional design skills^[14]. In practice, open education teachers face several challenges: Firstly, there is unevenness in teaching design and implementation abilities. In the open education setting, teachers must demonstrate strong design skills to cater to diverse student learning needs and characteristics. However, some teachers disproportionately emphasize theoretical knowledge over practical skills, neglecting hands-on training^[15]. Secondly, there is a deficiency in evaluation and feedback capabilities. Effective student assessment and instructional feedback are pivotal in improving teaching quality, particularly in open education. Teachers must provide meaningful evaluations and feedback to foster learner satisfaction and engagement. Nonetheless, some open education instructors struggle with inaccurate evaluations or challenges in providing actionable feedback on learning outcomes. Thirdly, inadequate technical proficiency poses a challenge. As education adopts more flexible formats through information technology, teachers must adeptly use various digital tools and applications to deliver effective, interactive lessons across different timeframes and settings^[16]. However, many teachers face barriers due to insufficient digital literacy, hindering their use of multimedia, online teaching platforms, and other modern educational technologies. Fourthly, interdisciplinary integration skills are lacking. The open education environment demands teachers who can seamlessly integrate knowledge and teaching methodologies across different disciplines. Yet, some educators struggle to effectively blend diverse subject areas into cohesive learning experiences.

3.3 Lack of Ideological Consciousness in Education and Teaching

According to the research results of the OECD and teachers' core competencies in the European Union, the attitude dimension referred to here mainly encompasses the psychological activities, state, and outward behavior of teachers in relation to education and teaching. The attitude dimension of open education teachers is primarily manifested in the following aspects: first, there is a lack of professionalism among teachers, stemming from the fact that open education often adopts online teaching formats where interaction between teachers and students is relatively limited, making it challenging to establish direct supervision. As a result, some teachers may develop a lax attitude and lack a sense of responsibility towards students. Second, teachers' awareness of

sustainable development and self-improvement is inadequate. According to the OECD's projections for future education, teachers must continuously learn and enhance their capabilities to meet new educational requirements and challenges. However, open education teachers may not prioritize self-directed learning and personal development. Third, there is a persistence of outdated educational concepts among some open education teachers who adhere to traditional teaching methods. They lack innovation consciousness and skills, excessively focusing on knowledge transmission while neglecting student subjectivity and practical application, which hinders the stimulation of students' interest in learning and their innovative abilities ^[17].

4. Suggestions on Cultivating Core Literacy in Open Education from the Perspective of Lifelong Education

4.1 Put forward comprehensive and clear literacy requirements to drive teachers' self-development

The core qualities of teachers in open education possess certain particularities. From the perspective of lifelong education, clear and comprehensive literacy requirements enable teachers to consciously assess and compare their own literacy. This not only fosters self-development awareness but also provides a clear foundation for enhancing teachers' literacy. Firstly, specific and actionable literacy requirements should be proposed. Based on the above analysis, the core literacy of open education teachers primarily includes three fundamental dimensions: knowledge, skills, and attitudes. Related aspects should be aligned with these dimensions and tailored to the characteristics of open education. Teachers are expected to meet specific requirements in terms of knowledge, skills, and attitudes. To effectively guide and evaluate teachers, these requirements must be clear, measurable, and achievable. This clarity enables teachers to understand precisely what improvements are needed and how to achieve them ^[18]. Secondly, establishing a regular assessment mechanism is crucial. This mechanism encourages teachers to enhance their motivation for self-improvement and prompts ongoing reflection on teaching methods and effectiveness. By instituting regular assessments of teachers' core literacy, we ensure they maintain continuous attention to and investment in their own development. Thirdly, implementation of assessment results should lead to promotion and rewards. Linking assessment outcomes to teachers' career advancement and incentives further boosts their internal drive for self-development. When teachers realize that their teaching performance and assessment results directly impact their career progression and benefits, they are motivated to enhance their core competencies to meet literacy standards.

4.2 Strengthen the professional training of knowledge and skills to address the shortage of teacher quality

Under the background of lifelong education, the core competencies of open education teachers have a vital influence on teaching quality and students' learning outcomes ^[19]. To achieve this, the education management department must enhance professional training for teachers in knowledge and skills, assisting them in regularly updating their professional knowledge and improving their technical application abilities. Firstly, diversified training methods should be implemented, such as combining online and offline approaches to provide flexible and diverse learning paths for teachers. Additionally, various training formats like workshops, seminars, and case studies should be introduced to enhance teachers' engagement and practical abilities. Secondly, high-quality teacher resources should be introduced. Universities and other institutions can invite industry experts, renowned scholars in the field of education, and exemplary teachers as trainers to ensure the content's authority and cutting-edge relevance. Thirdly, the practical aspect of training should be strengthened. Training programs should incorporate practical components where teachers can apply their knowledge and skills in real teaching scenarios. This approach facilitates the transformation of theory into practice, thereby enhancing the effectiveness of the training. Building upon these efforts, training programs should establish a post-training tracking and guidance mechanism. Regular communication with participating teachers is essential to understand their challenges and

uncertainties in teaching practice, providing targeted guidance and support accordingly.

4.3 Create an open and shared learning community and construct a space for teachers to grow within

The open and shared learning community referred to here refers to a network platform or physical space characterized by openness, interactivity, and sharing, aimed at promoting learning, communication, and cooperation [20]. The community can provide teachers not only with rich learning resources and communication opportunities but also stimulate their innovative spirit and sense of teamwork. It offers various career development paths such as participating in domestic and international academic conferences and research projects, providing sustainable professional development opportunities, and promoting teachers' professional growth. There are three main strategies: First, establishing an online learning platform that utilizes modern information technology, integrating online courses, teaching videos, teaching cases, academic papers, and other resource types to provide teachers with a convenient learning environment and rich resources that cater to their diverse learning needs. Second, organizing offline communication activities alongside the online platform. Training institutions can regularly host teachers' seminars, symposiums, teaching observations, and other offline activities to facilitate face-to-face experience exchange and shared learning, thereby fostering cooperation and mutual growth among teachers. Third, building a learning community through mechanisms such as learning groups and mentor systems to cultivate a positive learning atmosphere and enable collective growth among teachers.

4.4 Improve the evaluation mechanism of teachers' quality and guide teachers to reflect on and develop it

Improving the evaluation mechanism for teachers' quality and encouraging teachers to reflect on their development are crucial means to enhance the core competencies of open education teachers. This approach not only elevates the overall core competency of open education teachers but also fosters personal development among educators, thereby enhancing the quality of education. To comprehensively enhance the core competencies of open education teachers, it is imperative to identify their strengths and weaknesses in education and teaching. This identification process enables targeted professional development support. The education management department must enhance the evaluation mechanism for teachers' core competencies through several steps. Firstly, diverse evaluation indicators should be established to encompass the various requirements of the three basic dimensions of open education teachers' core competencies. This ensures that all aspects of teachers' core competencies are adequately reflected in the evaluation process. Secondly, a variety of evaluation methods should be employed, including self-evaluation, peer evaluation, student evaluation, practical evaluation, process evaluation, and outcome evaluation. These methods collectively assess the diverse qualities of teachers. Thirdly, specific evaluation standards should be formulated. Managers should develop precise and actionable standards based on the professional qualities, teaching abilities, and ethical standards of open education teachers. These standards should be continuously adjusted and optimized based on evolving circumstances. Fourthly, regular evaluation activities should be implemented, such as periodic assessments, teaching observations, and evaluations of teaching plans. These activities effectively gauge teachers' core competency levels, pinpoint developmental issues and deficiencies, and offer targeted improvement recommendations. Fifthly, emphasis should be placed on the application and feedback of evaluation results. Evaluation findings should be communicated back to teachers, guiding them in self-reflection and improvement efforts to advance their professional development. By systematically enhancing the evaluation mechanism and supporting teachers' reflective practices, significant strides can be made in improving the core competencies of open education teachers and, consequently, the overall quality of education.

5. Conclusion

The goal of cultivating open education talents is to train applied talents that meet the needs of

local economic and social development. The quality of talent cultivation is closely related to the core competencies of teachers. Starting from research on the core competencies of teachers by OECD and the EU, this paper examines in depth, theoretically, the cultivation of core competencies of open education teachers in line with the requirements of open education teaching practices. It proposes recommendations for cultivating the core competencies of open education teachers from the perspective of lifelong education, which is beneficial for enhancing the quality of talent cultivation in open education. This discussion holds significant reference value for the efficient advancement of high-quality education at open universities.

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