

The Theoretical Foundation of Curriculum Development Competencies for Kindergarten Teachers from the Perspective of Competencies, Curriculum Development, and Early Childhood Education

Zhenchen Li, Ahmad Johari Bin Sihes

School of Education, Universiti Teknologi Malaysia, Malaysia Email: p-joha@utm.my Corresponding Author Email: lizhenchen@graduate.utm.my

Yueyue Yao, Qianying Li

School of Education, Sichuan Institute of Industrial Technology, China Email: yaoyue2024@126.com, leaneny@163.com

To Link this Article: http://dx.doi.org/10.6007/IJARPED/v13-i2/21439 DOI:10.6007/IJARPED/v13-i2/21439

Published Online: 19 May 2024

Abstract

Curriculum development competencies are an important part of kindergarten teachers' professional development and have been widely valued around the world. This study explored the theoretical foundation behind the curriculum development competencies of kindergarten teachers. This study used a Systematic Literature Review (SLR) to explore the theoretical foundation framework of curriculum development competencies for kindergarten teachers. Ultimately, this study found that the theoretical foundation framework of curriculum development teachers is constructed from competencies theory (Iceberg competency theory and Onion competency theory), curriculum development theory (Tyler curriculum theory and Taba curriculum theory), and early childhood education theory (Montessori education theory and Chen Heqin education theory). This theoretical foundation framework provides theoretical guidance for kindergarten teachers, the kindergarten curriculum system, and kindergarten teacher training, ultimately improves the quality of early childhood education.

Keywords: Curriculum Development Competencies, Kindergarten Teachers, Early Childhood Education (ECE)

Introduction

The UN Convention on the Rights of the Child is explicitly recognized in the EU Charter of Fundamental Rights. From a human and child rights perspective, it is important that all children have equal access to quality services. Early Childhood Education (ECE) can make an essential contribution to breaking the cycle of poverty and discrimination (Esping-Andersen,

2002; Delhaxhe et al., 2009). In addition, *Learning: the Treasure Within*, the report to UNESCO of the International Commission on Education for the Twenty-first Century proposed in 1996, mentioned the undoubted importance of teachers as agents of reform in promoting mutual understanding and tolerance will be even more relevant in the 21st century.

Moreover, the *Opinions on Strengthening the Construction of Early Childhood Teachers* issued by China MOE in 2012 stressed that "the goals of the construction of kindergarten teachers should be clarified and all localities should scientifically determine the goals of the construction of kindergarten teachers in accordance with the requirements of building an early childhood education (ECE) public service system". China has put forward requirements for the construction of high-quality kindergarten teachers and attaches great importance to the professional competence of kindergarten teachers. It shows that ECE is widely valued in the world, and the professional competence of kindergarten teachers is particularly important to the development of ECE.

However, what constitutes quality in ECE is complex, and quality in ECE should be contextspecific: it should include a regular review of the understanding and practice of improving services in changing social conditions (Penn, 2009). Competence is very important in determining the quality of one's work, including kindergarten teachers. Gupta (1999) defined competencies as "knowledge, skills, attitudes, values, motivations and beliefs people need in order to be successful in a job." Teachers' curriculum competencies are necessary for partnerships between teachers and the curriculum development team during the curriculum studies. The curriculum development team and the teachers have unique roles in the curriculum development process. Kindergarten teachers' competencies concerning curriculum development are of great importance for their professional careers and ECE.

Articulating the theoretical foundation of curriculum development competencies for kindergarten teachers serves several important purposes. Firstly, theory has the potential to help kindergarten teachers stay conscious of their position as historically and geographically situated subjects, able to learn from the past as kindergarten teachers try to meet current conditions in the specific ECE contexts in which they live, in more effective and imaginative ways (Mayring, 2014). Second, a theoretical foundation can provide a theoretical basis for curriculum development competencies for kindergarten teachers in ECE. To construct a competency-based system theoretical framework for the curriculum development of kindergarten teachers. When kindergarten teachers are developing a curriculum, they have a theoretical basis and guidance to rely on. Third, the theoretical foundation can guide practical activities and help kindergarten teachers to make curriculum development plans, design programs and make decisions according to principles and laws. In practice, the theory can provide direction and guidance for kindergarten teachers' curriculum development competencies, reduce blindness and arbitrariness, and improve the efficiency and success rate of curriculum development practice activities.

Therefore, is there any theoretical support behind the curriculum development competencies of kindergarten teachers? This study explored the theoretical foundation framework of kindergarten teachers' curriculum development competencies aims to construct a systematic theoretical framework to deepen the development of curriculum development in ECE.

Research Methodology

In this study, the authors followed a Systematic Literature Review (SLR) methodology, which involved several human-friendly steps

(1) Asking the Right Questions: The authors started by formulating the research inquiries to ensure authors are addressing the most pertinent issues.

(2) Choosing the Right Sources: The authors selected databases like CNKI, Baidu Scholar, Google Scholar, and ERIC to gather a wide range of articles.

(3) Finding the Right Words: The authors defined search terms to effectively navigate through the vast sea of literature available.

(4) Collecting and Organizing Insights: After gathering findings from various databases, the authors meticulously organized them for clarity and coherence.

(5) Analyzing with Care: The authors analyzed outcomes based on specific criteria, authors established beforehand, ensuring a thorough and fair review process.

(6) Drawing Conclusions: Finally, the authors synthesized the findings to establish conclusive results that contribute meaningfully to the research.

Competencies Theory

Competency is the key to kindergarten teachers' curriculum development competencies, other components are developed and refined from it. First, the authors explore the typical theories of competency, which have formed the cornerstone of the theoretical framework for the curriculum development competencies of kindergarten teachers.

Iceberg Competency Theory (Spencer & Spencer, 1993)

At present, the Iceberg competency theory is one of the representative competency models (Salleh et al., 2015). Firstly, one of the theoretical bases of competency in this study is the Iceberg competency theory. In the beginning, the famous American psychologist McClelland (1973), who proposed competency, believed that the content of competency could include six aspects and put forward an early Iceberg theory in the field of competency. The six dimensions of competency include knowledge, skills, social roles, self-image, trait, and motive. Subsequently, Spencer and Spencer (1993) divided the Iceberg model into five aspects, which include skill, knowledge, self-concept, trait, and motive, forming one of the most famous theories in the competency field (see Figure 1).

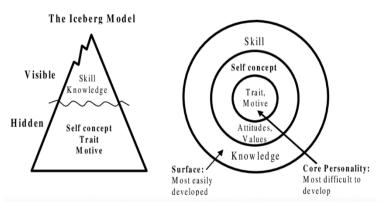


Figure 1 Iceberg competency theory (Spencer & Spencer, 1993)

The five aspects of the Iceberg competency theory represent the following meanings respectively (Vazirani, 2010):

(1) Knowledge: This refers to information and learning resting in a person, such as kindergarten teachers' knowledge of ECE.

(2) Skill: This refers to a person's ability to perform a certain task, such as an English teacher's skill to speak English.

(3) Self-Concept: This refers to a person's attitudes, values, and self-image. An example is self-confidence, a person's belief that he or she can be successful in given situation, such as a mathematics teacher's self-confidence in teaching mathematics class.

(4) Trait: Trait refers to physical characteristics and consistent responses to situations, or information. For example, good oral expression ability is a necessary trait for a Mandarin teacher.

(5) Motive: Motive is emotion, desire, physiological need, or similar impulse that prompts action. For example, compassionate headteachers tend to care about students who are isolated from their peers.

Spencer and Spencer (1993) divided competence into hard competency and soft competency. In the Iceberg competency theory, it is illustrated that hard competency includes visible (seen) skills and knowledge, and soft competency includes self-concept, invisible (unseen) traits, and motive (Staškeviča, 2019). With the "shelf-life" of knowledge and skills becoming shorter and shorter in today's ever-changing world, the long-enduring, "below the water-line" competencies have a more substantive impact on how effectively an individual performs on the job. Spencer and Spencer (1993) emphasized the point that competencies must be related to performance in the workplace. Knowledge and skill competencies are seen as relatively easy to develop compared to self-concept, traits, and motives (personal competencies) (Vazirani, 2010). Therefore, kindergarten teachers in the visible and invisible requirements of curriculum development competencies can be traced back to the theoretical foundation and background of the Iceberg competency theory.

Onion Competency Theory (Boyatzis, 1982)

The Onion competency theory proposed by American scholar Richard Boyatzis constructs competency characteristics relatively completely: it is composed of three layers from the outside to the inside, gradually deepening from the outer layer to the inner layer Boyatzis (1982,1991) (see Figure 2). The outermost layer is knowledge and skills, which are explicit, can be directly observed and perceived, easy to measure and evaluate, and can be improved and transformed through training. The middle layer is self-image and social roles, which are represented by individuals' cognition of themselves in an intermediate state. These competencies are relatively stable. The innermost layer is the motive and trait, which is the implicit, the most stable, and not easily detected ability characteristic, and plays a core role in individual behavior (Weber, 1991).

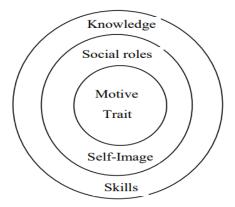


Figure 2 Onion competency theory (Boyatzis, 1982)

The quality Onion competency theory proposed by Richard Boyatzis in 1982 lays more emphasis on the hierarchical relationship between the elements of competencies. The contents of the central ring are motive and trait, which means that these two items are the core parts of the model and have the driving action of the outer ring. Peripheral knowledge and skills are also qualities that are easiest to find and develop outside (Leatemia et al., 2022). In the process of building the competency model, the Onion competency theory goes from the outer layer to the inner layer and describes the hierarchical relationship and corresponding development of the competency that an individual should have when working or completing a certain task.

The expression of competencies in the Onion competency theory highlights its hierarchy Guo et al (2022), which can also be one of the theoretical foundations of the competency aspect of curriculum development for kindergarten teachers. Its progressive legend can not only show the differences in competencies of kindergarten teachers but also further reflect the difficulty degree of various elements of curriculum development for kindergarten teachers.

Briefly speaking, although the Iceberg competency theory and the Onion competency theory differ in the details of competency, they share some common characteristics. The core views of the Iceberg competency theory and the Onion competency theory are as follows:

Competency characteristics can be divided into a visible part and an invisible part. The visible part is one of the external expressions of competency characteristics, such as the "above-the-sea-surface" part of the Iceberg competency theory and the outer layer of the Onion competency theory, while the invisible part is the internal characteristics part, such as the "below-the-sea-surface" part of the Iceberg competency theory and the inner layers of the Onion competency theory theory (Yu et al., 2016).

The more visible the aspects of a visible part are, the easier it is to observe, understand, measure, cultivate, and improve them. On the other hand, the more invisible the aspects of a part are, the more difficult it will be to understand, measure, influence, and acquire them (Li et al., 2017).

(3) The external part usually consists of the basic requirements for one to adapt to the work post, while the internal part is about personal behavior, which is more critical for work performance (You et al., 2023).

To sum up, Iceberg competency theory and Onion competency theory are two classic and widely used competency theories, which are briefly introduced in this part. The two models have intrinsic consistency in nature. The iceberg model and the onion model are competency structure analysis models built from longitudinal (vertical dimension) and transverse (horizontal dimension) respectively. The iceberg model highlights the dominant and recessive characteristics of competency, while the onion model reflects the surface and core relationship of competency (Li & Yan, 2016). They consist of the first domain of the theoretical framework of kindergarten teachers' curriculum development competencies.

Curriculum Development Theory

The curriculum development theory is another element of the theoretical framework of kindergarten teachers' curriculum development competencies. At the same time, curriculum development theory is the basic theoretical literacy that kindergarten teachers need to obtain to implement curriculum development, which reflects the further refinement of competence in the professional field of curriculum development. This part analyzes two famous and classic curriculum development theories, including the Tyler curriculum theory and the Taba curriculum theory.

Tyler Curriculum Theory (Ralph Tyler, 1949)

Ralph Tyler's curriculum theory is one of the best known. In 1949, Tyler published Basic Principals of Curriculum and Instruction, in which he outlined an approach to curriculum and instruction. Those involved in curriculum inquiry must try to (1) determine the school's purposes, (2) identify educational experiences related to those purposes, (3) ascertain how the experiences are organized, and (4) evaluate the purposes (Tyler, 1949) (see Figure 3). Tyler pointed out that the development of any curriculum and lesson plan must answer four basic questions, which can also be called the basic content of the Tyler Principle. These four questions can be further summarized as "determining educational objectives", "choosing educational experience", "organizing educational experience", and "evaluating educational plans" (Zhang, 2011).

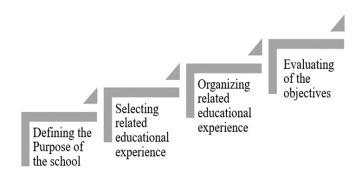


Figure 3 Curriculum development approach according to Tyler curriculum theory

The curriculum design prescribed by Ralph Tyler outlines a simple formula and consists of four key thoughts (Ndubuisi et al., 2022; Sadvika & Chodisetty, 2024):

(1) What are the educational purposes that a school should seek to attain? (Educational Objectives).

(2) What learning experiences can be selected to fulfill the educational objectives? (Learning Experiences).

(3) How should the learning experiences be organized to achieve the desired outcomes? (Organization of Experiences).

(4) What assessment and evaluation techniques can be used to determine the success of the implemented curriculum? (Assessment and Evaluation).

Determining curriculum objectives is the first problem of the Tyler Principle. According to Tyler, determining curriculum objectives is the starting point of curriculum development. The whole process is determined by predetermined educational objectives (Zhang, 2011). Firstly, by purposes, Tyler meant general objectives. He indicated that curriculum planners should identify these objectives by gathering data from the subject matter, the learners, and the society. After identifying numerous general objectives, the curriculum planners need to refine them by filtering them through the school's philosophy and the psychology of learning. Specific instructional objectives can be a result.

Secondly, Tyler discussed how to select educational experiences that allow the attainment of objectives. Learners' perceptions and previous experiences had to be considered in learning experiences. Besides, learning experiences were selected according to knowledge about learning and human development. Thirdly, Tyler addressed the organization and sequencing of these experiences. He believed that the sequencing had to be somewhat systematic to produce a maximum cumulative effect. He thought that ideas, concepts, values, and skills should be woven into the curriculum fabric. These key elements could link different subjects and learning experiences.

The last one of Tyler Principle deals with evaluating plans and actions. Tyler believed that evaluation is important in determining whether a program is effective. Finally, in Tyler's view, the evaluation framework is used to determine the extent to which the curriculum and teaching actually achieve educational objectives. The purpose is to examine more comprehensively whether learning and experience work in practice and to guide the teacher to lead the desired results. Because of the evaluation, the whole curriculum development process becomes a dynamic system that continuously progresses on the basis of feedback, and improves the scientificity of curriculum development (Zhang, 2011).

Therefore, the classic Tyler curriculum theory plays a crucial role in this study as one of the curriculum development theoretical sources for the curriculum development competencies among kindergarten teachers.

Taba Curriculum Theory (Taba, 1962)

Hilda Taba (1962) is an influential colleague of Tyler's. In Curriculum Development: Theory and Practice, Taba indicated that there is a definite order to creating a thoughtful, dynamic curriculum. Unlike Tyler, Taba believed that teachers should participate in developing curricula. Taba advocated what has been called the Grassroots Approach, a model whose steps resemble Tyler's. Although Tyler did not advocate that his model be used only by people in the central office, educators during the early days of curriculum-making thought that the

central authorities had the knowledge to create curricula. They subscribed to a top-down (administrative) model. Frequently, administrators give teachers ideas from curriculum experts and then supervise the teachers to ensure that the ideas are implemented. In contrast, Taba believed that a curriculum should be designed by its users. Teachers should begin by creating specific teaching-learning units for their students and then build to a general design. Taba advocated an inductive approach rather than the more traditional deductive approach of starting with a general design and working toward specifics.

This theory is similar to Tyler's theory but Taba extended the importance of teachers in the development of curriculum (Bhuttah et al., 2019). Taba believed that generalized learning objectives ought to be organized around a curriculum that facilitates students in discovering principals efficiently (Middaugh & Perlstein, 2005). In the perspective of Taba curriculum theory, teachers are the most important factor in curriculum building. A teacher should participate in the curriculum from beginning to end. Shifting the responsibility more to teachers rather than administrators makes this theory different and more realistic.

Ornstein and Hunkins (2009) explained a "grassroots approach to curriculum development", and introduced the seven most important steps according to Taba (see Figure 4):

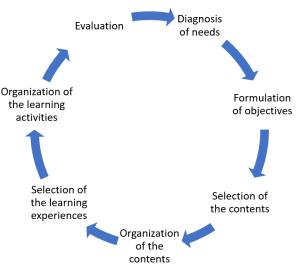


Figure 4 Curriculum development approach according to Taba curriculum theory

(1) Diagnosis of needs: First there is a need to find the requirements of the learners before designing the curriculum.

(2) Formulation of objectives: After identifying goals, those goals are required to be accomplished by the teachers.

(3) Selection of the contents: The contents and objectives should not only correspond to one another but also be valid and significant.

(4) Organization of the contents: According to the interest of the children the content should be categorized by considering the maturity, understanding, and interest of the learners.

(5) Selection of the learning experiences: Those methods of instruction should be selected which engage the learners with the contents.

(6) Organization of the learning activities: Besides the contents sequenced and organized, learning activities should also be categorized so that the learners can link the activities with the contents as well as remember what they learned.

(7) Evaluation: The curriculum planners also need to determine the accomplishment of the objectives. In the process of evaluation both the teacher and student are involved.

To sum up, Tyler curriculum development theory is one of the classic, cornerstones and sources of curriculum development theory. Taylor's goal-oriented curriculum development is conducive to wide dissemination and use, and kindergarten teachers at different levels are easier to master and apply. While Taba curriculum development theory highlights the role of teachers, which is an improvement from Tyler's theory. However, its more complex curriculum development process is not conducive to generalization among all levels of teachers and requires higher professional competencies of kindergarten teachers. These two curriculum development theories form the second domain of the theoretical framework of kindergarten teachers' curriculum development competencies.

Early Childhood Education Theory

Early childhood education (ECE) is the enlightenment stage of children's school education and an important part of basic education. ECE aims to promote the overall physical and mental development of children, helping them to establish a positive attitude towards learning, develop social skills, improve self-care ability, and lay the foundation for their future learning and life. The curriculum development competencies of kindergarten teachers are carried out in the ECE education system and contribute to the development of ECE. Therefore, this part analyzes two typical ECE theories from Western countries and China.

Montessori Education Theory (Montessori, 1909)

Maria Montessori is a famous Italian educator of early childhood education (ECE) in the early 20th century. The education system from Montessori has had a wide impact, and currently, more than 110 countries and regions in the world have schools named after her (Cossentino, 2006). In 1907, Montessori founded the first "Casa dei Bambini" (Children's House) in the SAN Lorenzo district of Rome and carried out systematic experiments in education and teaching, with amazing results. In 1909, Montessori Education Law was published in Italy, which quickly formed a sensation in the world. Besides, Montessori Schools began to be built around the world, and a large-scale Montessori Education Movement was set off. Montessori began to have a profound impact on ECE in the world. The Montessori education theory (Montessori, 1909, 1912) is famous in the world, and the concept of children is the essence of her education system.

The Montessori method is the core of Montessori education theory, which is centered on the belief that children are naturally curious, self-motivated learners and that education should foster their natural development. Here are some key principles of it (Montessori, 2013):

(1) Child-centered Learning: Montessori education places the child at the center of the learning process. The teacher serves as a guide and facilitator, allowing the child to explore and discover concepts at their own pace.

(2) Prepared Environment: Montessori classrooms are carefully prepared to provide a stimulating and orderly environment. The materials and activities are designed to encourage exploration and independence, with age-appropriate materials easily accessible to children.

(3) Mixed Age Groups: Montessori classrooms typically have mixed-age groups, allowing younger children to learn from older ones and vice versa. This setup promotes a sense of community, collaboration, and peer learning.

(4) Self-directed Learning: Children are encouraged to choose their activities from a range of options. This autonomy fosters independence, decision-making skills, and a love for learning.(5) Sensory Education: Montessori education emphasizes the importance of sensory experiences in learning. Materials are often hands-on and appeal to a child's senses, supporting the development of various skills.

(6) Freedom within Limits: While children have the freedom to choose their activities, this freedom is within the limits of the prepared environment and the ground rules established by the teacher. This structure provides a sense of security and order.

(7) Individualized Education: Montessori recognized and respected the individual differences among children. The method allows for personalized learning experiences, adapting to each child's unique needs, interests, and pace of development.

(8) Holistic Approach: Montessori education aims to nurture the whole child—cognitive, social, emotional, and physical development are all considered integral to the learning process.

(9) Observation: Teachers in Montessori classrooms engage in careful observation of each child. This helps them understand the children's needs, interests, and progress, allowing for better guidance and support.

In brief, the Montessori education theory has been widely adopted around the world, and there are Montessori Schools for various age groups, including Chinese basic education. The Montessori education theory has also influenced ECE and has been adapted for use in different cultural and educational settings.

Chen Heqin Education Theory (Chen Heqin, 1940)

In the subsequent ECE theoretical research, it is believed that Montessori's teaching aids are too mechanical and inflexible, and lack flexibility and change. Montessori's negative view of teachers will cause children to waste too much time and energy in exploration, which affects the effectiveness of teaching. Chen Heqin is a famous children's educator in modern China. He devoted his life to ECE education and founded the first kindergarten in modern Chinese history. The Living Education he advocated is not only a rectification of the old view of children (Huang, 2023), but also a liberation of children and a call for a new view of children, so he is called the Father of Chinese ECE.

Here, Chen Heqin education theory is analyzed deeply, including three aspects: teleology, curriculum theory, and methodology (Zhang, 2006; Chen & Cui, 2020). Chinese Chen Heqin education theory has enriched the ECE education theory in the world.

(1) Teleology

Educational purpose is the starting point and final destination of educational theory. What is the purpose of Living Education? According to Chen (1940), "live" is the purpose of "education", which is to progress successively through three levels, namely, "Being a man, being a Chinese, and being a modern Chinese".

(2) Curriculum theory

The curriculum theory of Living Education refers to nature and big society are living textbooks, which is put forward by Chen (1940) in view of the shortcomings of traditional education which excessively superstitious classroom book knowledge. Chen (1940) believed that traditional education is fixed and inflexible, teachers are rigid in teaching, students are only rigid in learning, and ultimately cultivate only nerds. Chen (1940) clearly pointed out: "The knowledge in books is indirect and dead, and the great society of nature is our living book, the direct book".

But Living Education does not completely abandon books, Chen (1940) believed that knowledge in books is only a reflection of the real world and must be verified in natural society. Chen (1940) emphasized the acquisition of experience in activities, and he concretized the content of Living Education into Five Finger Activities, namely, health activities, social activities, scientific activities, artistic activities, and literary activities, whose purpose is to train children to live a real life.

(3) Methodology

Consistent with the activity curriculum theory of Living Education, Chen (1940) put forward the basic principle of the methodology of Living Education, namely, teach by doing, learn by doing, and seek progress by doing. Chen (1940) advocated learning Dewey's experience of "learning by doing" and "doing" as the basic principle of teaching methods.

In summary, Although the Italian Montessori education theory and the Chinese Chen Heqin education theory may differ in details, they both focus on the education of children's all-round development and pay attention to the training of children's emotional, cognitive, and social abilities, as well as the important role of teachers in this process. In addition, the emphasis on individual development and emotional factors, the training of children's autonomy and independence, and the emphasis on the role of teachers are the common concerns of these two world-renowned ECE theories.

Discussion

Through the review and analysis of relevant theories, this study analyzed in depth the theoretical foundation behind kindergarten teachers' curriculum development competencies. The final finding of this study is that the theoretical foundation framework of curriculum development competencies for kindergarten teachers is constructed from competencies theory, curriculum development theory, and early childhood education theory (see Figure 5). Iceberg competency theory and Onion competency theory are the two classic competency theories. Tyler curriculum theory and Taba curriculum theory are selected to be the sources of curriculum development theories. Moreover, Montessori education theory from Western countries and Chen Heqin education theory from China represent typical ECE theories.

INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN PROGRESSIVE EDUCATION AND DEVELOPMENT

Vol. 13, No. 2, 2024, E-ISSN: 2226-6348 © 2024

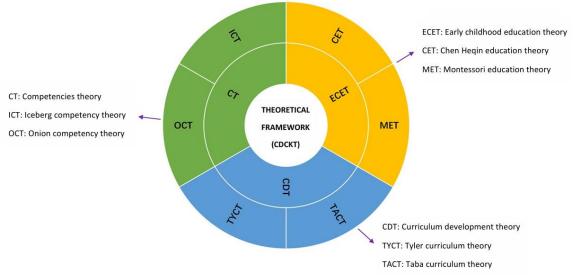


Figure 5 Theoretical foundation framework of curriculum development competencies for kindergarten teachers

Theory is the cornerstone of reality, the theoretical foundation framework constructed in this study can serve as the theoretical foundation for implementing curriculum development competencies among kindergarten teachers, providing an inexhaustible source of power for their development. Competencies theory, curriculum development theory, and ECE theory, as the fulcrum of the theoretical framework from three angles, form a stable theoretical foundation of kindergarten teachers' curriculum development competencies. Different theories have their own characteristics and perspectives. Through this multi-dimensional theoretical framework combining China and the West, the comprehensiveness of kindergarten teachers' curriculum development competencies.

Research Significance

The theoretical foundation of curriculum development competencies for kindergarten teachers has theoretical and practical significance for kindergarten teachers, the kindergarten curriculum system, and kindergarten teacher training. First of all, the theoretical foundation can promote the professional development of kindergarten teachers. Curriculum development competence is an important part of kindergarten teachers' professional competencies. The theoretical foundation not only directly promotes the curriculum development competence of kindergarten teachers, but also indirectly improves the professional development competencies of kindergarten teachers and provides theoretical impetus for their sustainable professional development. Secondly, the theoretical foundation can promote the construction and improvement of the kindergarten curriculum system. Under the guidance of the three-level curriculum management system, China's kindergarten curriculum system is composed of national curriculum, local curriculum, and kindergartenbased curriculum. Kindergarten-based curriculum requires kindergarten teachers to develop and implement the curriculum. Therefore, kindergarten teachers' competencies in curriculum development have an important impact on the kindergarten-based curriculum and are an important part of the construction of the kindergarten curriculum system. Finally, the theoretical foundation can enrich the content of kindergarten teacher training, fill the lack of curriculum development competencies in the current pre-service and post-service training of kindergarten teachers, and improve the quality of teacher education.

Conclusion

In conclusion, this study explored the theoretical basis behind the curriculum development competencies of kindergarten teachers, which constructed the theoretical foundation framework of curriculum development competencies of kindergarten teachers. This not only enriches the theoretical structure of ECE but also provides theoretical guidance at the competency level for curriculum development in kindergartens. This theoretical foundation framework reflects the professionalism and complexity of kindergarten teachers' curriculum development. In the new era of rapid development of science and technology, ECE demands the professional competencies of kindergarten teachers with The Times. Kindergarten teachers' curriculum development competencies should be constantly updated and developed. This theoretical foundation framework provides a reference and foundation for the future study of kindergarten teachers and curriculum development and contributes to the improvement of ECE quality around the world.

References

- Boyatzis, R. (1982). *The competent manager.* A model for effective performance. John Wiley & Sons.
- Boyatzis, R. E. (1991). *The competent manager: A model for effective performance.* John Wiley & Sons.
- Bhuttah, T. M., Xiaoduan, C., Ullah, H., & Javed, S. (2019). Analysis of curriculum development stages from the perspective of Tyler, Taba and Wheeler. *European Journal of Social Sciences*, 58(1), 14-22.
- Chen, H. Q. (1940). *Living education*. The Chinese Children Education Society Press.
- Chen H., & Cui Liling. (2020). Education Chen Heqin and live. Northeast Normal Uiversity Press.
- Cossentino, J. M. (2006). Big work: goodness, vocation, and engagement in the Montessori method. *Curriculum Inquiry*, 36(1), 63–92.
- Crahay, M. (2009). *Early childhood education and care in Europe: tackling social and cultural inequalities.* Education, Audiovisual and Culture Executive Agency, European Commission.
- Delhaxhe, A., Motiejunaite, A., Coghlan, M., Huart, T., Manni, G., Leseman, P. P., & Penn, H. (2009). *Early childhood education and care: Key lessons from research for policy makers.* European Commission, Directorate-General for Education and Culture.
- Esping-Andersen, G. (2002). A child-centred social investment strategy. *Why We Need A New Welfare State*, 1, 26-68.
- Gupta, R. D., & Kundu, D. (1999). Theory & methods: Generalized exponential distributions. *Australian & New Zealand Journal of Statistics*, 41(2), 173-188.
- Guo, Z., Rau, P. L. P., & Heimgärtner, R. (2022, June). *The "onion model of human factors": a theoretical framework for cross-cultural design.* In International Conference on Human-Computer Interaction (pp. 20-33). Cham: Springer International Publishing.
- Huang J. (2023). Chen Heqin and the construction of "children's world" in modern times. Journal of Beijing Institute of Education, (06), 8-15. doi:10.16398/j.cnki.jbjieissn 1008-228x.2023.06.002.
- Leatemia, L. D., van Merrienboer, J. J., & Susilo, A. P. (2022). Development of a questionnaire to measure teachers' student-centred perspectives based on the onion model. *BMC Medical Education*, 22(1), 504.

- Li F., & Yan Z.Y. (2016). Modeling and improving strategies for professional quality of vocational education teachers. *Education and Career*, (15),23-27. doi:10.13615/j.cnki.1004-3985.2016.15.006.
- Li, W. J., Cheng, M. C., & Pham, Q. N. T. (2017). An overview of domestic and international research on competency. *World*, 8(2).
- McClelland, D. C. (1973). Testing for competence rather than for" intelligence". American Psychologist, 28(1), 1.
- Montessori, M. (1909). The Montessori method (AE George, Trans.). New York: Schocken.
- Montessori, M. (1912). *The Montessori method (with additions and revisions).* Frederick A. Stokes.
- Montessori, M. (2013). The Montessori method. Transaction publishers.
- Middaugh, E., & Perlstein, D. (2005). Thinking and teaching in a democratic way: Hilda Taba and the Ethos of Brown. *Journal of Curriculum & Supervision*, 20(3).
- Mayring, P. (2014). Qualitative content analysis: theoretical foundation, basic procedures and software solution. SSOAR
- Ndubuisi, S. I., Ezeani, C. F., & Ibeh, M. C. (2022). Digital skills required in business education programme in tertiary institutions for economic development. *Journal of Technical Education, Research & Development,* 7(1), 67-77.
- Ornstein, A., & Hunkins, F. (2009). Curriculum design. In curriculum: Foundations, *Principles* and Issues, 181-206.
- Spencer, L.M. & Spencer, S.M. (1993) *Competence at work: models for superior performance.* John Wiley & Sons, New York.
- Tyler, R. W. (1949). *Basic principles of curriculum and instruction.* Chicago: University of Chicago Press.
- Salleh, K. M., Khalid, N. H., Sulaiman, N. L., Mohamad, M. M., & Sern, L. C. (2015). Competency of adult learners in learning: application of the iceberg competency model. *Procedia-Social and Behavioural Sciences*, 204, 326-334.
- Staškeviča, A. (2019). The importance of competency model development. *Acta Oeconomica Pragensia*, 27(2), 62-71.
- Sadvika, M. E., & Chodisetty, R. C. M. (2024) Competency models in an organization: a literature. *International Journal of Progressive Research in Engineering Management and Science*, 4(2),10-13.
- Taba, H. (1962). *Curriculum development: theory and practice.* Cornell University. Harcourt, Brace & World.
- Vazirani, N. (2010). Review paper: Competencies and competency model–A brief overview of its development and application. *SIES Journal of Management*, 7(1), 121-131.
- Weber, R. (1991). Linguistic diversity and reading in American society. *Handbook of Reading Research*, 2, 97-119.
- Yu, Y., Sheng, J., & He, B. (2016). College Students' Professional Ability Training Based on the Theory of Competency. In 2016 International Conference on Education, E-learning and Management Technology (pp. 440-444). Atlantis Press.
- You, L., Tsai, P., & Kuo, L. (2023). *Research of teachers' background effects on ecological and professional competency development.* In E3S Web of Conferences (Vol. 460, p. 05022). EDP Sciences.
- Zhang C. Q. (2006). Chen Heqin origin analysis of "living education" thought. *Theoretical Observations*, (5), 2.

Zhang L. L. (2011). *The comparison of Taylor's and Dole's views on curriculum and its implications.* [Unpublished master's thesis]. Tianjin Normal University.