

Research on Integration of Education for International Understanding in High School Geography Based on the “Big Concept”

Jiqiang Niu*, Zhinuo Zhang, Chenguang Zhang, Jiao Chen

School of Geographical Sciences, Xinyang Normal University, Xinyang 464000, Henan Province, China

*Corresponding author: Jiqiang Niu, niujiqiang@xynu.edu.cn

Copyright: © 2023 Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), permitting distribution and reproduction in any medium, provided the original work is cited.

Abstract: Education for international understanding helps students learn about international cultures and listen to international voices, and it plays an important role in the teaching of geography in high school. In this study, the structure of high school geography is reconstructed by integrating education for international understanding under the “big concept.” This model includes three teaching concepts, four teaching objectives, and four teaching methods. Overall, the results of this study showed that the integration of education for international understanding can improve the students’ understanding about international issues and cultures and it can be used as a reference for teaching geography in high schools.

Keywords: Education for international understanding; Big concept; Teaching model; High school geography

Online publication: July 27, 2023

1. Introduction

Education for international understanding is developed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) to advocate cooperation among countries in aspects including politics, economy, and culture, in hopes of forming a harmonious and mutually beneficial relationship among countries ^[1]. Education for international understanding aims to cultivate international talents who are humanistic, always consider the common interests of human development, actively seize global opportunities and challenges, have global awareness and an open mind, respect all cultures and have cultural confidence, take a holistic and developmental view of issues, and proactively assume social responsibility.

In view of the rapidly changing world, education for international understanding has become an important issue. The 2016 International Charter for Geography Education states that international collaborations should enable people, including students, teachers, and scholars, to work together on the development and design of International Understanding courses ^[2].

In view of globalization, China has advocated building a community with a shared future, and has actively forge new international relationships, making a great contribution to world peace and development. In the field of education, education for international understanding has undertaken the new mission of spreading socialist culture, enhancing cultural confidence, and promoting the building of a community with a shared future. “Core Competencies and Values for Chinese Students’ Development” published in September 2016 ^[3] has defined international understanding as a shared responsibility of students, and is of great value in enhancing students' international outlook, communication skills, and sense of global

citizenship.

Education for international understanding has become increasingly emphasized. During the curriculum development of the education for international understanding, practical explorations such as school-based courses and interdisciplinary integration are used as entry points, with more emphasis on the explanation of knowledge points.^[4] However, more emphasis should be placed on the development of thinking and comprehensive competence to ensure a sustainable development of education for international understanding^[4-6]. In this paper, the integration of international understanding into high school geography is proposed based on the “big concept.”

2. Content of education for international understanding

2.1. The analysis of education for international understanding in high school geography

Education for international understanding has undergone a long process of development and its content has been constantly enriched. Education for international understanding has the characteristics of systematization, in which the content is deeply related to educational objectives. Therefore, it is necessary to sort out the definitions of the objective and the content by scholars in key periods, and then make an analytical and objective classification.

Firstly, UNESCO as the main promoter of education for international understanding and has experienced many policy changes in this process. In 1991, the *Guidelines and Criteria for the Development, Evaluation and Revision of Curricula, Textbooks and Other Educational Materials in International Education in Order to Promote an International Dimension in Education* published by UNESCO^[7] has set out the specific objectives and content of education for international understanding, and it was a milestone in international education (**Figure 1**).



Figure 1. The content of education for international understanding by UNESCO

Some scholars have also outlined the content of international understanding. With the goal of cultivating the “coexistence of human beings in view of globalization,” Professor Jiang Yingmin divided international into three dimensions which correspond to different contents^[8]. After the reform with core

literacy as the teaching objective, the content of education for international understanding has also been adjusted, in which Dr. Ma Yanjun combined the content of education for international understanding with subject-specific features, highlighting both the role of knowledge and the content of subject literacy ^[9]. The main views of the two scholars are summarized in **Table 1**.

Table 1. Analysis of the content of international understanding education by Chinese scholars

Name of scholar	Target dimension	Specific content
Jiang Yingmin	A member of the world	Understanding of different cultures Cultivating a sense of global responsibility Exercising the ability to resolve global conflicts Fostering the ideal of world peace
	A member of the country	The impact of globalization Inter-ethnic cultural understanding Civic responsibility Immigration and emigration
	A member of the community	Active participation in society Home and World Connections Maintaining social security Learning to live in harmony with others
Ma Yanjun	Understanding the relationship between humans and nature	<i>Population:</i> equality of the world's peoples, world population growth, migration and refugees <i>Resources:</i> uneven distribution of global resources, global resource scarcity <i>Environment:</i> sustaining biodiversity, global climate change, global natural disasters, global environmental pollution
	Understanding the relationship between humans and society	<i>Politics:</i> Home and Country, human Community with a shared future <i>Economy:</i> world food security, regional economic disparities, global economic integration <i>Culture:</i> Respecting cultural diversity and valuing the cultural heritage of humanity

Finally, specific contents of international understanding are presented in the high school geography curriculum standard and textbooks. The curriculum standard indicates the direction for teaching and learning, and it is an important basis for teaching and writing the textbook. In terms of curriculum principles, the importance of geographic core literacy is emphasized, the curriculum is reconstructed, and the content is systematically compiled ^[10]. Besides, the concept of man-land relationship and sustainable development are highlighted in the content, which can make geography courses more adaptable to the development of the times. Geography is the subject that studies the geographic environment and the relationship between human activities and the environment. Therefore, developing geographic literacy is important in geography education, which includes the need for students to have a national and global perspective and a common concern for global issues.

Geography textbooks are a result of the wisdom of experts and scholars, and is an important tool for teaching and learning. The new high school geography textbooks fulfill the requirements of the curriculum and contains a rich content of education for international understanding. According to Dr. Ma Yanjun, the content of education for international understanding is most closely aligned with the geographic literacy. Dr Ma divided international understanding into a few subtopics: population, resources, environment, politics, economy, and culture which are used as thematic terms to classify the content of international understanding. The following statistics about the senior high school geography textbooks show that it has a large amount of content on education for international understanding, but they are not evenly distributed. **Figure 2** shows the distribution of the content of education for international understanding in geography textbooks (The People Education 2019 Edition).

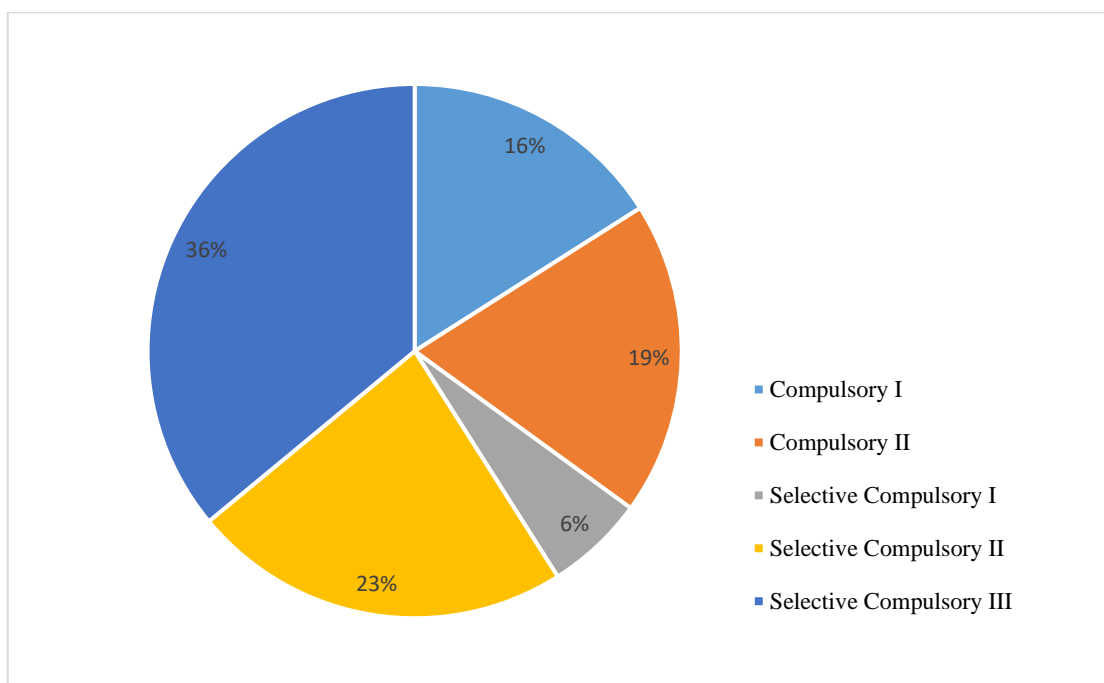


Figure 2. Content distribution of education for international understanding in Geography textbooks (The People Education 2019 Edition)

2.2. Education for international understanding based on the “big concept”

2.2.1. Selection of big concept

The content of geography in senior high school is interrelated, complex, and fragmented. Therefore, it is important to focus on developing students' various skills as well as multiple abilities through geography ^[11]. The “big concept” restructures the unit by an associated theme. For example, the theme of “cars” is distinguished from the subtopic of “wheels”, which provides the distinction between core content and secondary content ^[12,13]. The “big concept” needs to be based on the standard and textbook but also need to be detached from them, so as to achieve a meaningful construction of the content.

There are two basic forms of “big concepts”: top-down and bottom-up ^[14]. The top-down approach is teaching a secondary concept based on a core concept. For example, the concept of “regional awareness” includes secondary concepts such as regional environment and geographical location. In the bottom-up approach, general facts and concepts based on the life values, specific objectives, learning priorities and assessment criteria are refined to a big concept which is more explanatory, with the flow of explanation being basic concept – general concept – big concept ^[15]. As one of the core literacies, “international understanding” is the big concept, and the top-down approach teaching a major concept is shown in **Figure 3**.

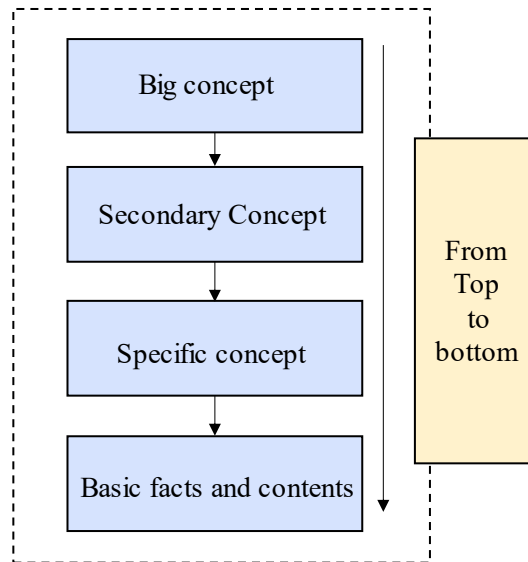


Figure 3. Top-down approach for major concepts

2.2.2. Construction of the content

The design of the units led by a “big concept” is conducive to the integration and dispersal of teaching contents, in which the content of the units needs to be reorganized and reconstructed based on the “big concept.” There are three types of approach to this design: firstly, the content organized by core tasks, which are closely related to the core content of the discipline; secondly, the content is organized according to the original textbook to make it coherent; thirdly, the content is organized according to real-life problems, which require interdisciplinary knowledge and skills ^[16]. The reconstruction of the chapters based on the “big concept” should be built around the core tasks. Therefore, in this paper, the content of education for international understanding is unitarily reconstructed based on high school geography textbooks (PEP edition) under the “big concept.”

Firstly, “international understanding” is identified as big concept, and the sub-concepts are as follows: mutual understanding between humans, mutual understanding between humans and nature, and mutual understanding between humans and society. Next, the sub-concepts are decomposed into specific concepts, and the specific concepts represented by “population” can be sorted out into distribution of the world’s population, population migration, reasonable population capacity, and others (**Figure 4**).

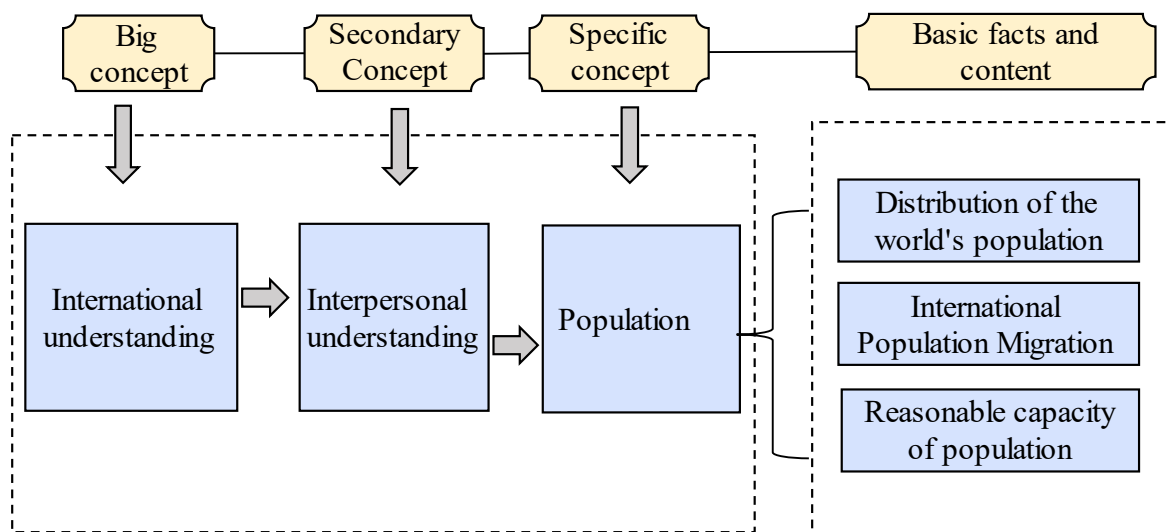


Figure 4. Knowledge reconstruction on the theme of population

The specific concepts of “resources” and “the environment” are more informative and have a higher relevance to geography. The content of “resources” is concentrated in the optional compulsory textbook, while the content of “environment” is scattered. Therefore, both were reconstructed in relation to their strong relevance to international understanding (Figure 5).

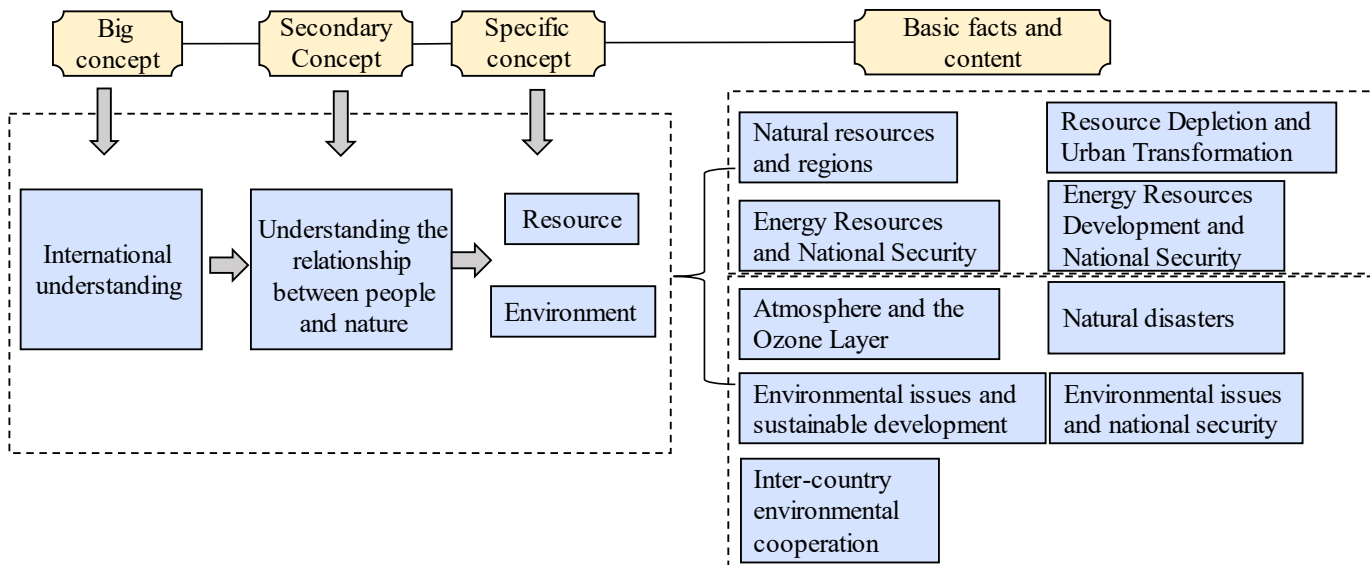


Figure 5. Knowledge reconstruction on the theme of resources and environment

Finally, the specific concepts of “politics, economics and culture” are under interdisciplinary knowledge, which involve national strategies and positions (Figure 6).

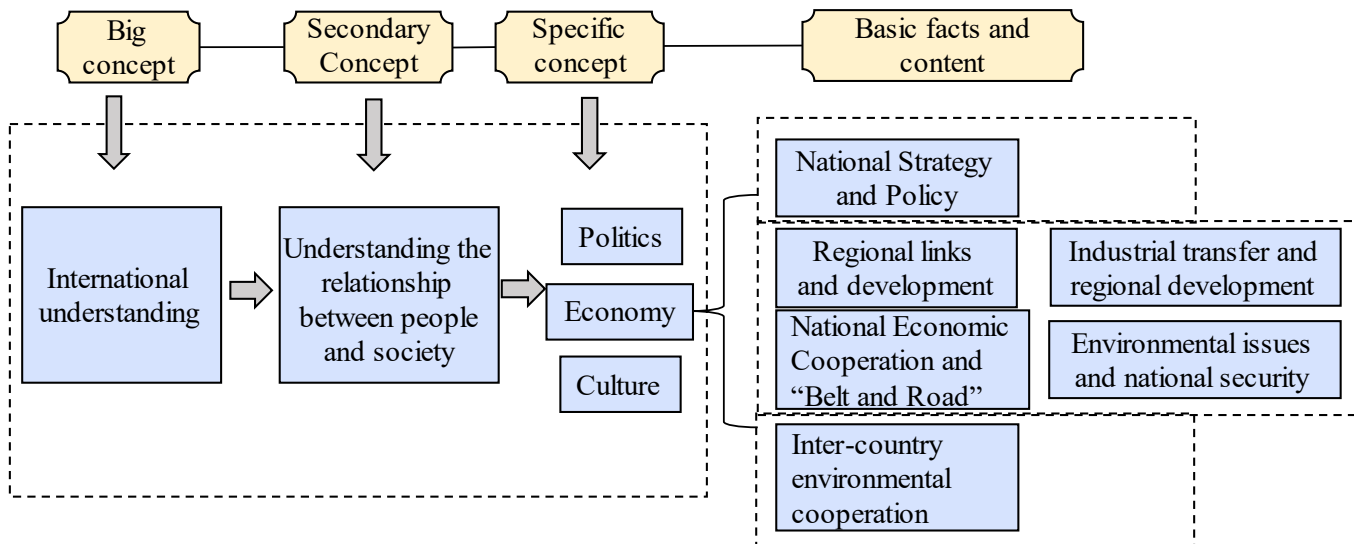


Figure 6. Knowledge reconstruction on the theme of politics, economics and culture

3. The construction of teaching model based on the “big concept”

The teaching model is the bridge between teaching theory and practice and the paradigm that guides teachers to teach effectively [17]. The teaching model constructed in this paper consists of four main components: teaching philosophy, teaching objectives, teaching elements and teaching procedures, which is a complete teaching model with theoretical and practical features [18]. The framework of the teaching

model is shown in **Figure 7**.

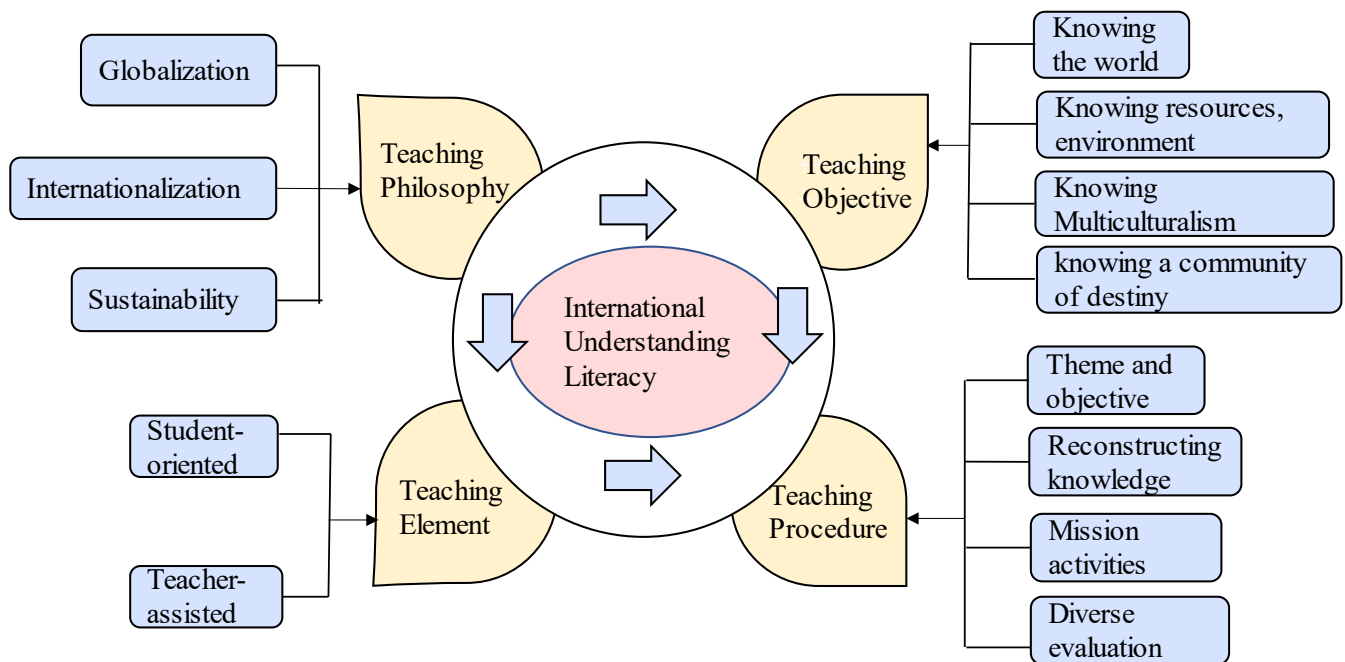


Figure 7. Framework of the teaching model

3.1. Teaching philosophy

3.1.1. Globalization awareness

The goal of education for international understanding is to cultivate a global perspective and a sense of transpersonal thinking in students. That is, students need to be guided to a deeper understanding and appreciation of senses and reasoning ^[19]. In geography teaching, big tasks and contexts are organized with globalization in mind, so as to cultivate national cultural sensibility and global outlook.

3.1.2. International perspective

International understanding has disciplinary and literacy attributes, and it is a combination of endogenous and exogenous knowledge, which involves both the individual and society ^[20]. Besides, it is a part of a holistic education development that values multifaceted abilities of students. Teaching geography with a “big concept” allows students to think about international issues from multiple perspectives and improve themselves in the process of learning.

3.1.3. Sustainable development

Sustainable development includes ecological, economic, and social sustainability. Geography education occupies an important position in sustainable development and plays an important role in cultural exchange and global development. Through geography education, students can understand the problems that exist in society today in terms of the environment, resources, international development and cooperation, etc.

3.2. Teaching objectives

Education for international understanding emphasizes the development of values. Firstly, the content of international understanding is implicit; secondly, knowledge is presented in a text-based format, so the teaching objectives should be meaningful and thoughtful ^[21]. According to the characteristics of the “big concept” and the content of international understanding in high school geography, the teaching objectives of international understanding can be summarized as follows: “understanding the world,” “resources and

environment,” “cultural identity,” and “community of a shared future,” as shown in **Figure 8**.

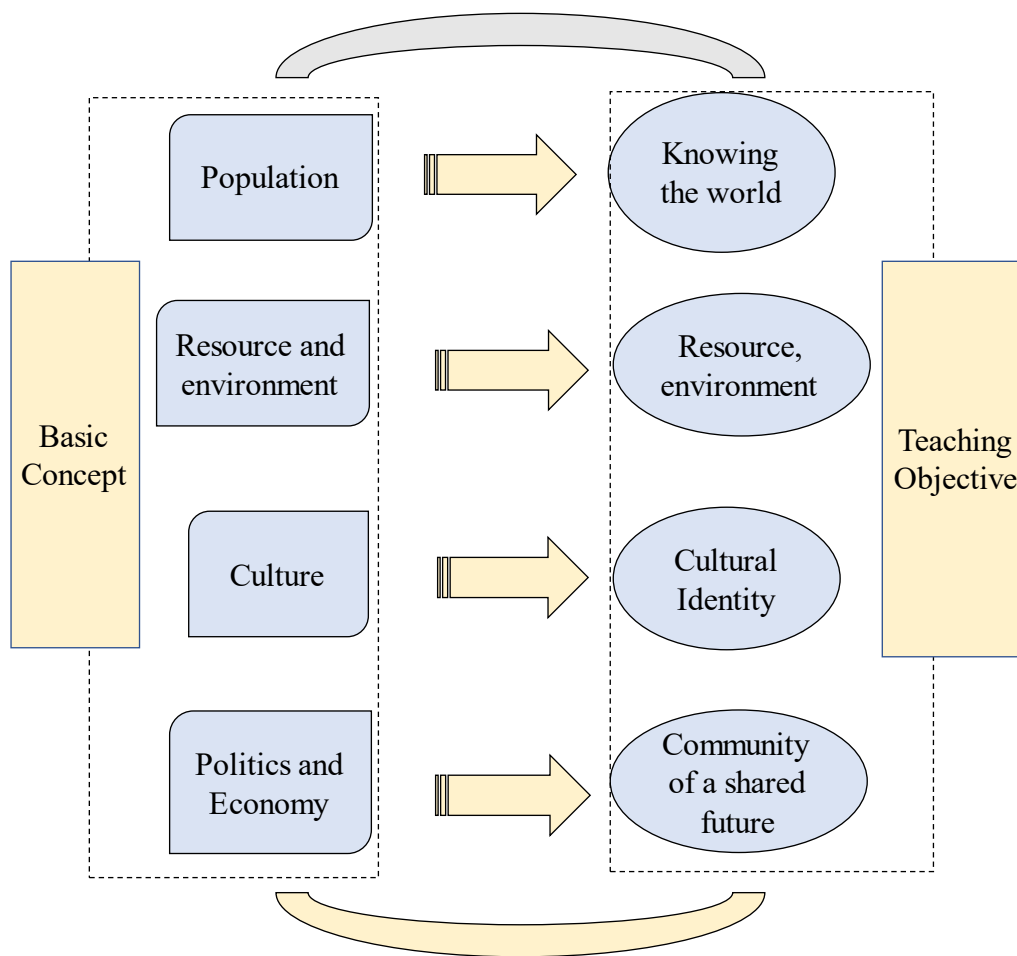


Figure 8. Design of teaching objectives

3.3. Teaching elements

The main elements of teaching and learning in this paper include two basic factors: the teacher and the students. The teacher controls and prepares the lessons. During the lessons, it is important to pay attention to the students’ experience, interests, knowledge structure, mental state, cognitive structure, and prior experience. The students’ performance should be assessed after the lessons are carried out.

The big concept is an important bridge between the known and the unknown, and it requires students to ask good questions and the good guidance from teachers to achieve the optimum learning effect.

3.4. Teaching procedure

The teaching procedure can be concluded into three components: analysis, implementation, and evaluation (**Figure 9**).

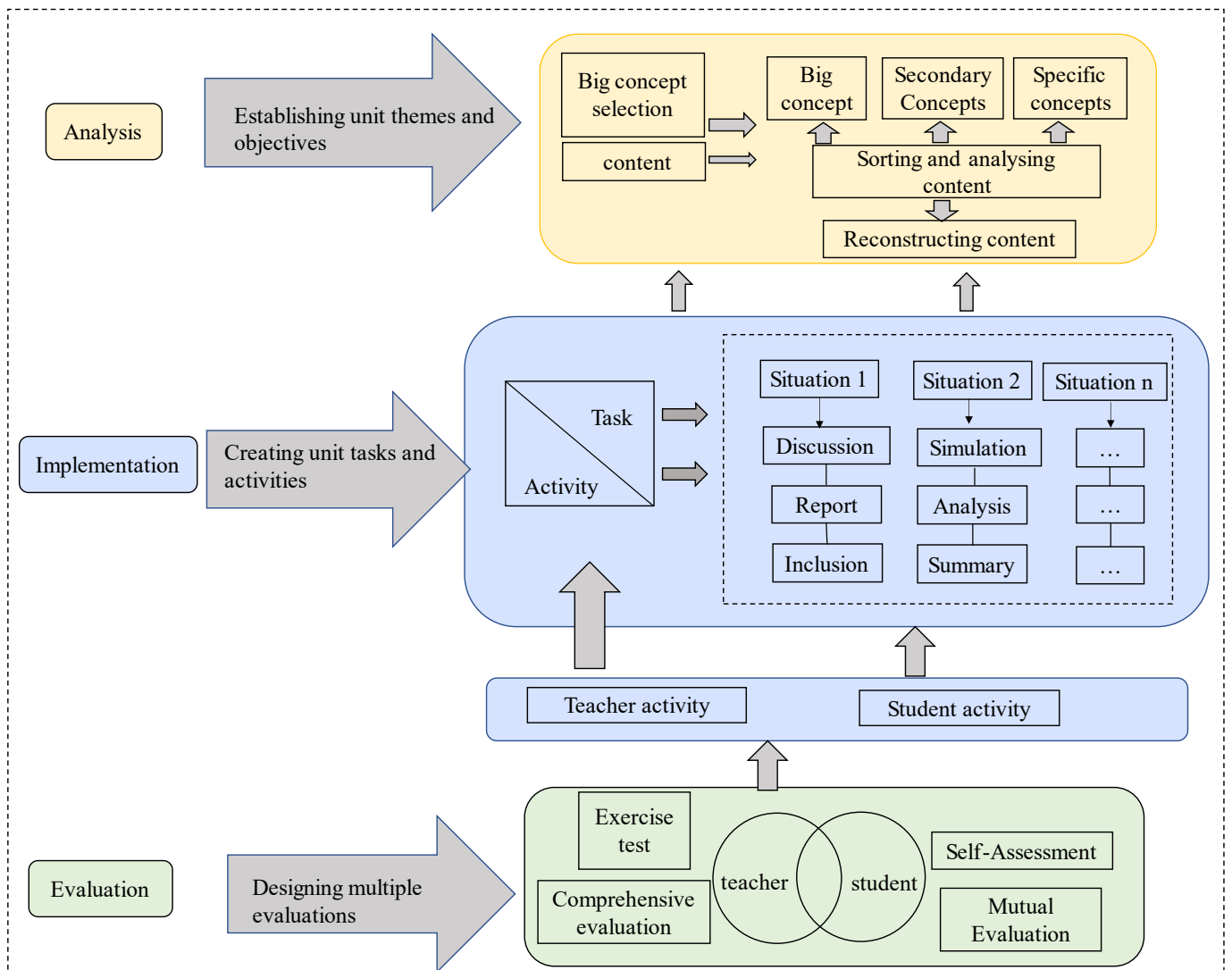


Figure 9. Teaching procedures

4. Analysis of teaching practice and effectiveness

In this study, the proposed teaching model was tested on teaching the topic of “international cooperation,” which includes content like economic cooperation, ecological and environmental cooperation. The purpose of this test was to determine test whether “big concept” teaching can develop students’ integrative thinking and enhance international perspectives.

In this paper, two classes in the second year of senior secondary school in Xinyang, Henan Province, were used as the control class and the experimental class, respectively. During the period of study, the experimental class was taught under the “big concept,” and the control class was taught using regular methods. There were 55 students in the control class and 48 students in the experimental class.

4.1. Analysis of classroom effectiveness

The performance of students of each classroom were evaluated. The evaluation content included the students’ learning progress learning ability. In this paper, the results of the evaluation consisted of three levels: A – excellent, B – good, and C – average. The results of the evaluation are shown in **Table 2**.

Table 2. The number of students with comprehensive assessment

Class	Experimental class	Control class
Number of students	48	55
A	24	16
B	17	20
C	7	19

To better analyze the results obtained, a bar chart was plotted (**Figure 10**). Among the three levels, there are less differences in the control class, and the number of level As in the experimental class was more prominent.

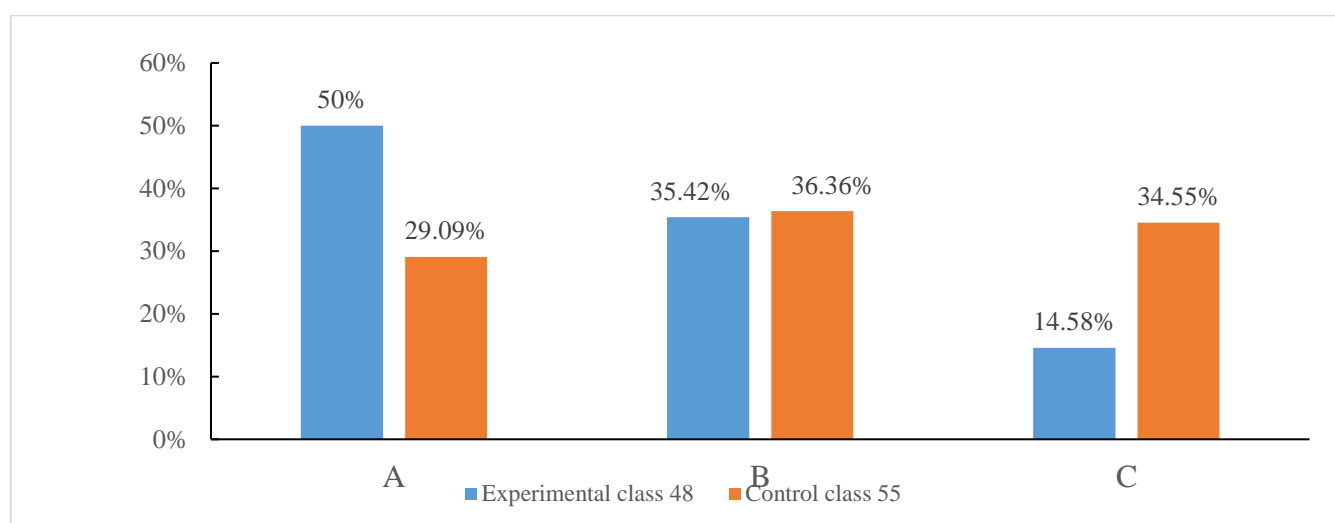


Figure 10. Results of learning assessment

As shown in **Figure 10**, teaching based on the “big concept” was conducive to the improvement of abilities and could change the students’ attitude towards learning. For example, they were able to respond positively in group activities and were willing to be group leaders; they were also good at expressing and communicating, and they showed a great interest in learning; furthermore, they have an overview mind when investigating problems. Experimental classes had a higher proportion of A and B scores. This proves that the “big concept” teaching model could stimulate students’ interest in learning, and it created a good classroom atmosphere that gave full play to the students’ initiative and creativity.

4.2. Analysis of questionnaire

We collected feedback from the experimental classes on teaching model through distributing questionnaires. The questionnaire consisted of three main sections: the effectiveness of teaching under the guidance of “big concept,” the perceptions and understanding of international understanding, and the satisfaction towards the geography lessons. All questionnaires were recovered and were valid. The three parts of the questionnaire were coded as Type I, Type II and Type III, and the results of the questionnaire are shown in **Figure 11**.

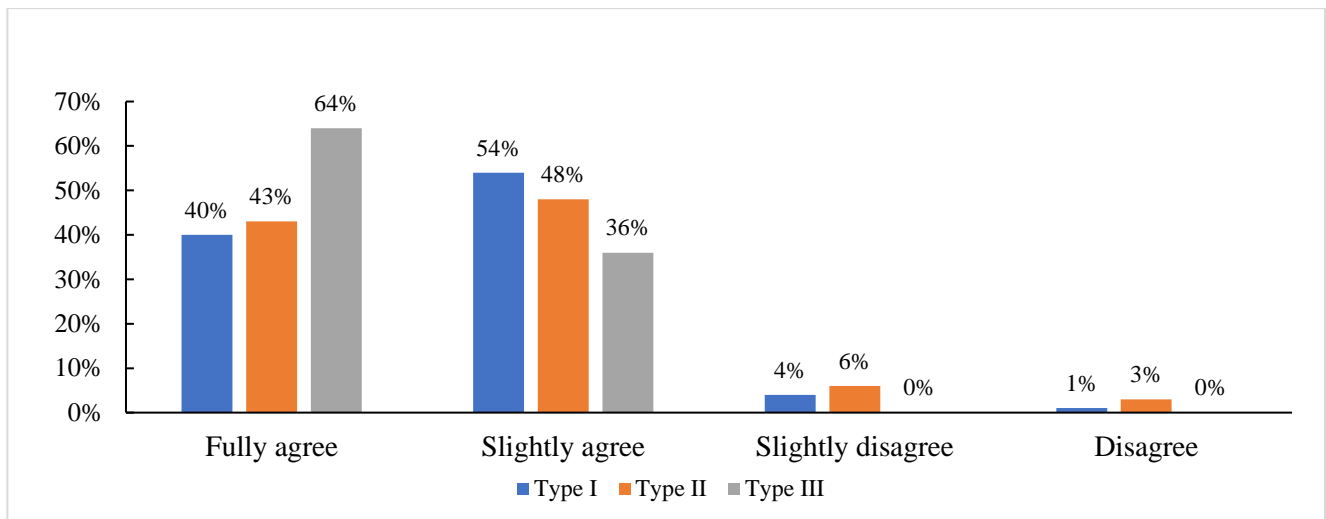


Figure 11. Comparison of post-test questionnaires

According to **Figure 11**, the students in the experimental class were satisfied with the “big concept”-based lessons because they were in line with the students’ expectations. Therefore, this means that based on “big concept” can stimulate students’ interest in learning and improve teaching efficiency. The “big concept” teaching model was used to teach the topic of “international cooperation in this study. By the end of the lesson, students formed a certain understanding of international issues and were able to actively explore related topics, which further enhanced their international understanding. It was also revealed that more than half of the students actively participated in classroom activities and they were also interested in similar lessons in the future.

5. Retrospect and prospect

A teaching model was constructed in this paper, and when this model was implemented, specific cases and teaching experiments were performed to verify the feasibility of the model. The results of this experiment showed that teaching under the guidance of “big concept” could help students develop a global perspective and international knowledge. However, international understanding is a long-term, systematic educational project, and there are still many aspects that need to be improved.

Education for international understanding is crucial in teaching geography. It takes time to master international understanding and develop the way of thinking based on the “big concept.” Therefore, education for international understanding needs to be permeated in geography teaching for a long time. In addition, education for international understanding requires the support from all parties, such as education policies, the teachers, and other members of society.

This study explored education for international understanding from the perspective of a pedagogical model, based on its unique value in high school geography, which differs from previous studies that took a macro perspective on the content of the education for international understanding programs. This education model can act as a reference for international understanding teaching in high school geography.

Funding

- (1) Henan Postgraduate Education Reform and Quality Improvement Major Project (Project number: HNYJS2020JD14)
- (2) Henan Curriculum Reform of Teacher Education Project “Reform and Practice of Core Literacy Cultivation Model for Geography Majors in Normal for Basic Education” (project number: 2020-JSJYZD-028)

Disclosure statement

The authors declare no conflict of interest.

References

- [1] UNESCO, 1974, Proceedings of the General Conference at Its Eighteenth Session, October 17–November 23, 1974: Recommendation Concerning Education for International Understanding, Co-operation and Peace and Education Relating to Human Rights and Fundamental Freedoms., UNESCO, Paris, 147–153.
- [2] Hu WS, Zhang Y, 2016, On the Development of Geographical Education from the International Charter of Geography Education. *Teaching Reference of Middle School Geography*, 2016(21): 11–13.
- [3] Core Literacy Research Group, 2016, The Core Qualities of Chinese Students. *Journal of the Chinese Society of Education*, 2016(10): 1–3.
- [4] Liu JH, Han X, Wu XX, 2021, Basic Orientation and Teaching Strategies of Education for International Understanding in Primary and Secondary Schools in the New Era. *Beijing Education*, 2021(03): 71–73.
- [5] Xiang CZ, Peng XH, 2021, The Necessity, Value and Suggestions of Education for International Understanding. *Educational Practice and Research*, 2021(03): 30–33. <https://www.doi.org/10.14160/j.cnki.13-1259/g4-c.2021.03.011>
- [6] Hu SW, Li Q, Chen GQ, Fu HL, Fang ZS, 2021, An Analysis of the Appropriateness of Implementing International Understanding Literacy in High School Geography. *Teaching Reference of Middle School Geography*, 2021(11): 47–50.
- [7] UNESCO, 1995, Guidelines and Criteria for the Development, Evaluation and Revision of Curricula, Textbooks and Other Educational Materials in International Education in Order to Promote an International Dimension in Education, UNESDOC Digital Library, <https://unesdoc.unesco.org/ark:/48223/pf0000100178?posInSet=13&queryId=34bae84a-4307-4642-9158-1bb7f505d78b>
- [8] Jiang YM, 2017, Construction of a Theoretical System for Education for International Understanding Education in the Era of Globalisation in China. *Tsinghua Journal of Education*, 38(01): 87–93. <https://www.doi.org/10.14138/j.1001-4519.2017.01.008707>
- [9] Ma YJ, 2020, Research on the Education for International Understanding in Middle School Geography, thesis, Northeast Normal University.
- [10] Ministry of Education of the People’s Republic of China, 2017, Geography Curriculums Standards for General Senior High School, amended 2020, People’s Education Press, viewed June 3, 2020.
- [11] Bransford JD, Brown AL, Cocking RR, *How People Learn*, Washington, DC: National Academy Press, 2000.
- [12] Wang XB, 2018, Connotation Significance and Access of “Grand Concept” of Disciplines. *Teaching and Administration*, 2018(24): 86–88.
- [13] Liu H, 2018, Deep Learning: Teaching Based on Big Concepts, *Shanghai Education*, 2018(18): 57.
- [14] Bang D, Park E, Yoon H, et al., 2013, The Design of Integrated Science Curriculum Framework Based on Big Ideas. *Journal of the Korean Association for Science Education*, 33(5): 1041–1054.
- [15] Chen J, 2019, Reconstructing Teaching of Geography Learning Unit from the Perspective of Big

- Concept. *Journal of Tianjing Normal University (Elementary Education Edition)*, 20(03): 37–41. <https://www.doi.org/10.16826/j.cnki.1009-7228.2019.03.007>
- [16] Mitchell I, Keast S, Panizzon D, et al, 2017, Using ‘Big Ideas’ to Enhance Teaching and Student Learning. *Teachers and Teaching*, 23(5): 596–610.
- [17] Wang WJ, 2002, *Models of Teaching Based on Situated Cognition and Learning*, thesis, East China Normal University.
- [18] Zhu M, 1998, Awareness and Practice of Teaching Model Theory - The Construction and Application of a Heuristic Research-based Teaching Model. *Chinese Journal of Chemical Education*, 1998(03): 4–7. <https://www.doi.org/10.13884/j.1003-3807hxjy.1998030002>
- [19] Wu Q, 2022, “Creative Integration,” Education for International Understanding —— Taking “Transboundary Transfer of Pollutants and Environmental Security” as an Example. *Research and Review on Education*, 2022(07): 90–93.
- [20] Bu Lr, 2022, Research on cultivation path of international literacy of understanding senior high school students in China —— Taking Several High Schools in Chongqing for Example, Thesis, Sichuan International Studies University.
- [21] Wiggins GP, McTighe J, 2005, *Understanding by Design Framework*, ASCD, Alexandria, 3–7.

Publisher’s note

Bio-Byword Scientific Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.