

Synergy Between Coursebooks and Coursewares in the System of English Teaching Materials in China

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ABSTRACT

Synergetics, as the science of cooperation in multi-component systems, can play an important role in analyzing the system of English teaching materials in China, especially in the field of synergy between English coursebooks and English courseware. English, as an important course for students in China, has a variety of coursebooks as well as other teaching materials like coursewares, which constitute a complex system of teaching materials, in which the main components are coursebooks and courseware. This paper analyzes some conflicts between them and studies ways to achieve synergy between them.

Keywords: *Synergetics, Coursebooks, Courseware, Synergy.*

1. INTRODUCTION

System is an assemblage or combination of things or parts forming a complex or unitary whole and as an important branch of systems science, synergetics, the science of cooperation in multi-component systems, is an interdisciplinary field of research originated by Hermann Haken in 1969, which describes the self-organized establishment of order within systems through the behavior of their components. This term refers to systems characterized by openness, dynamic behavior, and complexity. Synergetics studies the combined effect of many subsystems. Synergetics deals with material or immaterial systems, composed of, in general, many individual parts (Haken 2004, see also Springer series in Synergetics, about 80 volumes).[1]

Synergetics reveals the process in which a complex system evolves from disorder to order, from low order to advanced order and points out that a stable system, with its subsystems, all move in a coordinated manner and successively in a certain way. All the research objects can be regarded as systems composed of subsystems. These subsystems will interact with each other by means of matter, energy or information exchange. Through these interactions between the subsystems, the whole system will form an overall synergistic effect or an orderly new structure.

From the systematic perspective, education system consists of many subsystems, among which is the system of teaching materials. The teaching materials system is made up of many components, such as coursebooks, teachers' books, coursewares. In today's Chinese classroom, coursebooks and coursewares are the most frequently used teaching materials, so in the following parts, the paper will choose them as samples to study how to achieve synergy between them.

2. DISORDER IN ENGLISH COURSEBOOKS AND COURSEWARES

English, as one of the most important subjects in China, is rich in teaching materials, constituting a complex system, which includes coursebooks, teacher's books, workbooks, courseware, and many other related materials, both online and offline. Among them, the most frequently used are coursebooks and courseware. Coursebooks and courseware are subsystems in the complex system of teaching materials. The subsystems should work cooperatively to achieve synergy.

According to a survey, the use of traditional paperback coursebooks together with coursewares mainly in the form of PowerPoint accounts for 87.60% in classroom teaching [2], so how to achieve synergy between coursebooks and

coursewares is a major concern for teachers as well as for editors of teaching materials and publishing houses involved.

In the field of English teaching, there are hundreds of thousands of coursebooks and coursewares available now in China, but to make the research more persuasive, only some of the most authoritative ones are chosen here for the study, such as the state-planned coursebooks, or coursebooks published by the most famous publishing houses and most widely used in classrooms and official coursewares provided by those publishing houses.

Synergetics believes that whether a system can play a synergistic effect is determined by the synergistic effect of each subsystem or component within the system. If the synergy is good, the overall function of the system is good. If within the teaching materials system, all subsystems and components cooperate with each other and work together around the goal, then a $1 + 1 > 2$ synergistic effect can be produced.

However, there exists a lot of disorder or conflicts in the English teaching materials system in China, which hinders the emergence of synergetic effects. These conflicts can be categorized as follows:

2.1 *Inaccuracy in the Use of English*

All English teaching materials should put language accuracy in the first place for English learners to learn from. There should be no mistakes, especially in coursebooks and coursewares. However, language errors exist in many coursebooks or coursewares, making them less reliable:

- Robert Johnson, an expert on the subject, says, "Computer addiction is a serious illness that can affect anyone of us..." [3] ("anyone" refers to any person at all, but not to any particular individual. "Any one"—used as two words—is an adjective phrase that refers to any single member of a group of either people or things. "Any one" is commonly followed by the preposition "of." So here anyone should be any one)
- Cellphones, the Internet, and social media in general are somewhat behind-the-scene "heroes"...[4] (behind-the-scene is not a word in English, and should be replaced with behind-the-scenes, which means:

being or working out of public view or in secret)

- Confusion over stationary and stationery: The campus bookstores often stocks university clothing, stationary, gifts, food, stamps and other accessories.[5] (stationary is adjective while stationery is a noun, which means either materials (such as paper, pens, and ink) for writing or typing or letter paper usually accompanied with matching envelopes. So in the above coursebook, stationary should be stationery.)
- A good amount of holidays[6]. (Number is regularly used with count nouns while amount is mainly used with mass nouns. The use of amount with count nouns has been frequently criticized as nonstandard English. So for a coursebooks designed to help students learn grammatical use of English, it is improper to use a good amount of holidays.)

2.2 *Errors in the Chinese translation*

For the convenience of English learners in China, many coursebooks or coursewares provide Chinese translation for some English sentences or even the whole texts. However, translation errors sometimes happen here and there, making some translation less valuable.

- Extreme exercise: the correct Chinese translation should be 剧烈运动, not 极限运动.

Research in the UK shows that you're not getting enough "extreme exercise," especially if you're a girl.(Chinese translation in the courseware: 英国的研究表明, 你的“极限运动不够”, 如果你是女孩子那更是这样。)

What is "extreme exercise"? It's any activity that increases your heart rate and the amount of oxygen that your muscles burn. Fitness experts say that just twenty minutes of extreme exercise a day is enough.[7] (Chinese translation in the courseware: 什么是“极限运动”? 极限运动是任何一种可以让你心率加速、肌肉耗氧量增多的运动。健身专家说每天只要 20 分钟的极限运动就够了。)

Here the Chinese translators mistranslated extreme exercise as extreme sports. In fact, they mean differently. According to Britannica, extreme sports, also known as action sports or alternative sports, sporting events or pursuits characterized by high speeds and high risk.[8]

Canadian Shield: 加拿大地盾, 又称为前寒武纪地盾区[9] (should be translated as 又称为前寒武纪地盾区).

2.3 *Factual Mistakes Are Mistakes Concerning Historical Facts or Geographical Facts or Other Commonly Accepted Facts*

Regarding the largest religion, some courseware says: The largest Religion in Britain: Catholicism [10]. But according to Britannica: Church of England “established” (protected by the state but not “official”); Church of Scotland “national” (exclusive jurisdiction in spiritual matters per Church of Scotland Act 1921); no established church in Northern Ireland or Wales.[11] Church of England is English national church that traces its history back to the arrival of Christianity in Britain during the 2nd century and has been the original church of the Anglican Communion since the 16th-century Protestant Reformation. As the successor of the Anglo-Saxon and medieval English church, Church of England has valued and preserved much of the traditional framework of medieval Roman Catholicism in church government, liturgy, and customs, but at the same time it also has usually held the fundamentals of Reformation faith.

- Is Niagara Falls the widest waterfall in the world? Some coursebooks say yes: Niagara Falls: the widest waterfall in the world.[20] Regarding the widest waterfall in the world, disputes exist. Some think the widest waterfall in the world can be found on the Mekong River in Laos. The 35,376-foot wide Khone Phapheng Falls in Ban Hang Khone is actually a combination of the Khone and Pha Pheng Falls and regarded as the widest waterfall in the world and others think Iguazu Falls is the widest waterfall in the world. Anyway, Niagara Falls is not the widest in that the total width (Size) of Iguazu Falls is 2700 meters and that of Niagara Falls is only 945 meters. Located between the Canadian and American international borders, about 400 miles from New York City, with a vertical drop of 165 feet (50 m) and 3,409 feet (1,000 m) wide, Niagara Falls are no doubt one of the most beautiful phenomenon in the world.
- In American history there were two presidents Roosevelt: Theodore Roosevelt, the 26th U.S. president, and Franklin Delano Roosevelt, the 32rd U. S. president. But some courseware editors were

confused and Theodore Roosevelt was put under FDR’s photo [12] [13].

- Some coursebook says: In 1932, President Franklin D. Roosevelt passed a number of acts to prevent the possible collapse of the American economic and political system.[14] FDR came to office as US president in 1933, so how could he pass some acts to save America in 1932? Franklin D. Roosevelt, in full Franklin Delano Roosevelt, byname FDR, (born January 30, 1882, Hyde Park, New York, U.S.—died April 12, 1945, Warm Springs, Georgia), 32nd president of the United States (1933–45), and the only president elected to the office four times, Roosevelt led the United States through two of the greatest crises of the 20th century: the Great Depression and World War II.
- Mistakes concerning the WWII: some coursebook reads: As with World War I, the United States had stayed neutral until Japan’s surprise attack on Pearl Harbour on December 7, 1941,[15] and the courseware made the same mistake: As with World War I, the United States had bound the country to neutrality. [16] Here both the coursebook and the courseware made the same mistake concerning WWI.
- As to the founding of Roman Republic, one courseware mentions twice such information: In 509 BC, Augustus built a republic country of Rome. In 509 BC, Augustus built up Roman Republic.[17] according to Encyclopaedia Britannica, Ancient Roman historians initially differed over the precise date of Rome’s foundation. By the end of the republic, however, it was generally accepted that Rome had been founded in 753 BCE and that the republic had begun in 509 BCE, following the overthrow of Lucius Tarquinius Superbus, the last of Rome’s seven kings. According to tradition, the first six kings had been benevolent rulers, but the last was a cruel tyrant who was overthrown by a popular uprising. Who was Augustus? Augustus, also called Augustus Caesar or (until 27 BCE) Octavian, original name Gaius Octavius, adopted name Gaius Julius Caesar Octavianus, (born September 23, 63 BCE—died August 19, 14 CE, Nola, near Naples, Italy, was the first Roman emperor, following the republic, which had been finally destroyed by the dictatorship of Julius Caesar, his great-uncle and adoptive father. So the Roman Republic was not founded by Augustus.

- Steve Jobs, (born February 24, 1955, San Francisco, California, U.S.—died October 5, 2011, Palo Alto, California), in full Steven Paul Jobs, cofounder of Apple Computer, Inc. , and a charismatic pioneer of the personal computer era. However, a funny mistake was made. In the official courseware affiliated to a state-planned coursebook: Book Rally: Skim through the book and find the answers to these questions: 18. When was Steve Jobs born and when did he die? He was born on 24th February, 1955 and died in 2009. [18] The textbook editor made Steve Jobs die two years earlier. What a terrible mistake!

2.4 Spelling Mistakes

Spelling mistakes can be easily checked out by the computer, however, such mistakes do happen here and there in some coursebooks, for example:

- Unhealthly [19] should be printed as unhealthy
- To become a pilot, you must clock up at least 1,000 hours of flying time[20]. Here at least should be at least.

3. SYNERGETIC SOLUTIONS

In systems science, the term order refers to the regular connection or regular transformation between the internal elements and elements, systems and elements, systems and systems, and disorder describes the chaotic and irregular combination between the internal elements and elements, systems and elements, systems and systems., and its transformation is irregular.

Haken pointed out that the key for a system to transform from disorder to order does not lie in whether the system is in a balanced state or not, or in how far the system is from the equilibrium state, but lies in the self-organization structure, which is a ordered structure spontaneously produced through the nonlinear effect, mutual coordination and cooperation between them under certain conditions. [21]

How to solve the above-mentioned disorder and help transform the system of coursebooks into a balanced state? The following solutions are recommended:

Firstly, editors of teaching materials should make use of the Slaving Principle and highlight the the role of order parameters in the English teaching material system.

Essential in synergetics is the concept of order parameter which was originally introduced in the Ginzburg-Landau theory in order to describe phase-transitions in thermodynamics. The order parameter concept is generalized by Haken to the "enslaving-principle", which says that the dynamics of fast-relaxing (stable) modes is completely determined by the 'slow' dynamics of as a rule only a few 'order-parameters' (unstable modes).The order parameters can be interpreted as the amplitudes of the unstable modes determining the macroscopic pattern.

According to the slaving principle, the order parameters determine the behaviour of the individual parts which may still be subject to fluctuations. Their origin may be internal or external.

The Slaving principle or enslaving principle plays a central role in synergism. Haken found the Slaving Principle from the phenomenon where a large number of fast changing state variables in the system are dominated by order parameters whereas the slow variable slaves or enslaves all the fast variables in the phase transition, and determines the form and speed of the phase transition.[22]

The principle of order parameter and Slaving Principle show that synergetics is also a systems theory that combines self-organization with other organizations. The order parameters are self-organized within the system. Once it is produced, it takes a dominant position and becomes the internal organizer of the system, dominating other components, subsystems, and patterns, thus transforming into an organizing force, which is somewhat similar to the role of the control center.

The phase transition process of the system can actually be regarded as a process that forms the order parameters of the system by the state variables of the system, and then the order parameters dominate the other fast variables of the system.

The order parameters of the English teaching materials system in Chinese universities are the relevant laws and regulations of the state, the Department of Teaching Materials of the Ministry of Education, the Teaching Steering Committee of Foreign Language and Literature Majors of the Ministry of Education, the College English Teaching Steering Committee and their relevant rules and regulations promulgated. For example, the Management Measures of Teaching Materials in the Administration of Ordinary Institutions of

Higher Learning stipulates that "teaching materials shall be compiled according to the construction plan of teaching materials and the teaching standards of disciplines or courses, to serve the teaching reform of higher education and personnel training". [23]

All these order parameters should be kept in mind and be fully utilized in the process of teaching materials compilation by editors from home and from aboard.

The second strategy is to coordinate the relationship between various (components) subsystems in the English teaching material system. Specifically, it is to coordinate the collaboration between the subsystem of paperback coursebooks and the subsystem of electronic coursewares, which prepares for the formation of the overall effect of English teaching.

"The key for an open system to change from disorder to order lies not in whether it is in equilibrium, or in how far the system is from equilibrium, but in whether there is a large number of subsystems inside the synergetic system(i.e., subsystems exchange interaction between each other through material, energy or information)." [24] Therefore, the components of the system are the key to forming an orderly structure. This requires the editors of textbooks and coursewares to work together, communicate with each other, supervise each other, to ensure that each subsystem does not produce mutual contradiction, to ensure that the functions of each subsystem are complementary and coordinated, so as to form a synergistic effect. Most of the above mentioned disorder such as inaccuracy in the use of English, errors in the Chinese translation and factual mistakes can be corrected in this way.

Thirdly, the relationship between the system of English teaching materials and the external environment should not be neglected.

The English teaching materials system is a complex and open system. Strengthening the exchange of material, energy and information in the opening process is conducive to enhancing the synergistic effect of the English teaching materials system, developing in a more orderly direction, and improving the efficiency and quality of English teaching. The overall emergence of the system depends not only on the internal components and structure, but also on the external environment. No matter whether the environment provides resources and conditions to the system, or impose restrictions

or oppression to the system, there will be environmental effects, so the English teaching materials system also needs to pay attention to the environmental effects.

Haken pointed out that control parameters are an important feature of synergetic systems, and there are external parameters that can control the development of the system, [25] and it is able to change the total effect of the environment on the system (expressed by the control parameters) to cause self-organization.

The environment outside the teaching material system plays an important role in the orderly development of the teaching materials system.

For example, the editors of the teaching materials should pay attention to the feedback of readers, especially teachers and students, timely check the omissions of the teaching materials and correct the errors, and timely update the relevant content of the teaching materials according to the changes of the domestic and foreign situation and the update of knowledge.

Fourthly, the butterfly effect can be applied to the system of teaching materials to achieve synergy. The butterfly effect is the idea that small, seemingly trivial events may ultimately result in something with much larger consequences - in other words, they have non-linear impacts on very complex systems. For instance, when a butterfly flaps its wings in India, that tiny change in air pressure could eventually cause a tornado in Iowa. So, even trivial errors like misprints or spelling mistakes or punctuation mistakes can cause great damage to the teaching materials system. Editors of teaching materials should not only lay emphasis on the overall structure of coursebooks and coursewares, but also focus on trivial errors, even errors concerning a punctuation mark.

4. CONCLUSION

Employing synergetics to improve the synergistic effect of English teaching materials system is a new attempt to transplant advanced scientific method in the natural science to humanities research, which requires taking corresponding measures to coordinate the relationship between each subsystem and between each component of a system and between the system of teaching materials and the external environment, and by doing so, the whole synergistic effect can be formed in the English

teaching materials system and the efficiency and quality of English teaching can be improved.

REFERENCES

- [1] Synergetics [OL]. <http://scholarpedia.org/article/Synergetics>,2023-3-8.
- [2] Liu Hui, Jia Huijuan. Designing of University Textbooks by Coordinating Traditional Paperback Coursebooks and New Media[J]. Sci-Tech and Publishing Journal. 2015:12.
- [3] Zhang Yuexiang. The 13th Five-year State-planned Vocational Coursebook of Progressive English For Vocational Colleges(Students' Book 1)[M]. Shanghai: Shanghai Foreign Language Education Press, 2022: 87.
- [4] Li Yinhua. New Advanced College English Integrated Course(Student's Book 2)[M]. Shanghai: Shanghai Foreign Language Education Press, 2021:26.
- [5] Ding Guosheng. The 12th Five-year State-planned Vocational Coursebook: A Survey of Major English-speaking Countries, 2nd Edition[M]. Beijing: Foreign Language Teaching and Research Press, 2022:131.
- [6] Zhang Yuexiang. The 13th Five-year State-planned Vocational Coursebook of Progressive English For Vocational Colleges(Students' Book 1)[M]. Shanghai: Shanghai Foreign Language Education Press, 2022: 136.
- [7] Zhang Yuexiang. The 13th Five-year State-planned Vocational Coursebook of Progressive English For Vocational Colleges(Students' Book 1)[M]. Shanghai: Shanghai Foreign Language Education Press, 2022: 126.
- [8] Extreme sports | Definition, Examples, & Facts | Britannica [DB]. <https://www.britannica.com/sports/extreme-sports>.
- [9] Ding Guosheng. The 12th Five-year State-planned Vocational Coursebook: A Survey of Major English-speaking Countries, 2nd Edition [M]. Beijing: Foreign Language Teaching and Research Press, 2022:20.
- [10] Ding Guosheng. Official Courseware of The 12th Five-year State-planned Vocational Coursebook: A Survey of Major English-speaking Countries, 2nd Edition [DB]. Beijing: Foreign Language Teaching and Research Press, 2022.<https://heep.unipus.cn/support/list.php?SeriesID=172&SubSeriesID=697>, 2023-2-21
- [11] United Kingdom: Facts & Stats[OL]. <https://www.britannica.com/facts/United-Kingdom>.
- [12] Ding Guosheng. Official Courseware of The 12th Five-year State-planned Vocational Coursebook: A Survey of Major English-speaking Countries, 2nd Edition [DB]. Beijing: Foreign Language Teaching and Research Press, 2022, <https://heep.unipus.cn/support/list.php?SeriesID=172&SubSeriesID=697>, 2023-2-21.
- [13] Ding Guosheng. Official Courseware of The 12th Five-year State-planned Vocational Coursebook: A Survey of Major English-speaking Countries, 2nd Edition [DB]. Beijing: Foreign Language Teaching and Research Press, 2022. <https://heep.unipus.cn/support/list.php?SeriesID=172&SubSeriesID=697>, 2023-2-21
- [14] Ding Guosheng. The 12th Five-year State-planned Vocational Coursebook: A Survey of Major English-speaking Countries, 2nd Edition [M]. Beijing: Foreign Language Teaching and Research Press, 2022:45.
- [15] Ding Guosheng. The 12th Five-year State-planned Vocational Coursebook: A Survey of Major English-speaking Countries, 2nd Edition[M]. Beijing: Foreign Language Teaching and Research Press, 2022:45.
- [16] Ding Guosheng. Official Courseware of The 12th Five-year State-planned Vocational Coursebook: A Survey of Major English-speaking Countries, 2nd Edition[DB]. Beijing: Foreign Language Teaching and Research Press, 2022, <https://heep.unipus.cn/support/list.php?SeriesID=172&SubSeriesID=697>, 2023-2-21.
- [17] Ye Shengnian. Official Courseware of The 11th Five-year State-planned Coursebook: Western Culture: An Introduction. 2nd Edition[DB]. Shanghai: Shanghai Foreign Language Education Press.

<https://we.sflep.com/books/bookdetail.aspx?id=167>.

- [18] Ingrid Preedy. Teacher's Book of Progressive English For Vocational Colleges[M], Shanghai Foreign Language Education Press, 2018: II.
- [19] Zhang Yuexiang. The 13th Five-year State-planned Vocational Coursebook of Progressive English For Vocational Colleges(Students' Book 1)[M]. Shanghai: Shanghai Foreign Language Education Press, 2022: 101.
- [20] Zhang Yuexiang. The 13th Five-year State-planned Vocational Coursebook of Progressive English For Vocational Colleges(Students' Book 1)[M]. Shanghai: Shanghai Foreign Language Education Press, 2022: 139.
- [21] Duan Xiaojun, Lin Yi, Zhao Chengli. Systems Science Tutorial[M]. Beijing: Science Press, 2019:235.
- [22] Gao Jihua, Di Zengru. Systems Theory and Application[M]. Beijing: Science Press, 2018:113.
- [23] Gao Jihua, Di Zengru. Systems Theory and Application. Beijing: Science Press, 2018:105.
- [24] Miao Dongsheng. Systems Sciences University Notes[M]. Beijing: China Renmin University Press, 2007:317.
- [25] Haken, H. Advanced Synergetics[M]. Springer-Verlag, 1983:69.