

# *A Comparative Study on Readability of High School English Textbooks in Poland and China*

Guangping Sun<sup>1,a\*</sup>

<sup>1</sup>NingboTech University, Ningbo Zhejiang, China

<sup>a</sup>[cathysungp@nbt.edu.cn](mailto:cathysungp@nbt.edu.cn)

\*corresponding author

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**Abstract:** In the process of China rapidly entering the center of the world stage, participating in global governance, and jointly building the "the Belt and Road", it is urgent to cultivate talents who are proficient in foreign languages. English textbooks play a key role in the education and training of English talents. This paper analyzes the text readability of high school English textbooks in China and in Poland, one of the important countries along the "the Belt and Road". The similarities and differences between the two kinds of high school English textbooks have been found which can be used for further revision of high school English textbooks in the future.

## 1. Introduction

The global English Proficiency Index survey report released by EF Education First, an international English education institution, ranks English proficiency in over 100 countries and regions worldwide. According to the latest report (2022), Poland ranks 13th in the global ranking and China Mainland ranked 60th in English ability. The results of the survey showed that the English level of people in Poland is significantly higher than that in China Mainland. This paper studies English textbooks used for High Middle School students in Poland and in China Mainland and makes a comparative study with English textbooks in Chinese Mainland in order to find out the similarities and differences in the compilation of English textbooks between the two countries. It can help each other learn from each other, jointly improve the quality of middle school English textbooks, and make the greatest efforts to cultivate national pillars with good English core literacy.

## 2. Current Research

The importance of textbooks in English education is self-evident. Comparing and studying English textbooks from different regions and countries can be helpful for better evaluating and analyzing textbooks from multiple perspectives, providing more quality disciplinary support for

adapting to English education in the country. Therefore, the comparative study of English textbooks has become a topic of concern in the field of English education.

Many scholars have made comparison and contrast of English textbooks used in China and different countries from multiple perspectives, such as the presentation of cross-cultural content in textbooks (Shi Xingsong and Wan Wenjing, 2015), and the presentation of pragmatic knowledge in English textbooks (Li Min and Yu Zhongqiu, 2020). The role of English textbook reading text design content has also been discussed in cultivating students' critical thinking ability (Chen Zehang et al., 2020). Yang and Zhou (2011) have analyzed the characteristics of illustrations in Japanese junior high school English textbooks in terms of creative concepts, techniques, and styles.

Other research findings showed different features in presenting cultural factors in English textbooks used in different countries. Torrez & Misael (2017), after comparing English textbooks used in Norway and in Nicaragua, found that Norwegian English textbooks cover more cultures of English speaking countries, while Nicaraguan English textbooks showcase more of their local culture and help students cultivate a sense of pride in their local culture. According to Rahim & Daghish (2019), compared to the original English textbooks exported from Europe, Malaysian native English textbooks perform better in terms of cross-cultural content and the breadth of cultural content coverage. Nguyen (2020) has criticized that Vietnamese English textbooks are unable to meet the diverse cultural exchange needs worldwide in terms of cultural content.

For English textbooks evaluation, it is no doubt that cultural content comparison is an important focus for the research, but the comparison of reading readability of different English textbooks in different countries still need much attention in English teaching. Thus, in this paper, the writer

### **3. Comparative Analysis of Text Readability of High School English Textbooks in Poland and China**

In this study, the research data came from The Matura Focus, is one set of the English textbooks commonly used for many Polish high school students. Published by Europe Pearson Publishing Company in September 2015, the set of The Matura Focus consists of 5 volumes in total. For ordinary high school students, before graduation, they have to finish the stud of book 2, 3 and 4.

In Poland, Book 1 of the Matura Focus is used for low level high school students. And for most middle level high schools, Book 2 is for students of Grade 10, Book 3 for Grade 11 and Book 4 for Grade 12. Book 5 for Grade 12 of advanced level school students.

In Chinese high schools, the most commonly used English textbook is the series of English. English contains 10 volumes, including Compulsory Book 1-3, Selective Compulsory Book 1-4 and Selective Book 1-3. This set of books was first published by the People's Education Press in China, in April 2019. In China, the students from ordinary high schools use Compulsory Books 1-3 for Grade 10, Selective Compulsory Books 1-2 for Grade 11, and Selective Compulsory Books 3-4 for Grade 12. Selective Book 1-3 are used for advanced high school students. Each unit is organized according to its theme, including listening, speaking, reading, writing, phonetics, grammar, project expansion, and video. The exercise book is merged with the students' book, without separated exercise book.

The Matura Focus used in Poland consists of Students' Book and Exercise Book. In each book of the Matura Focus, there are 8 units all together. In Students' Book, each unit is organized according to the theme, consisting of eight sections: vocabulary, grammar, listening, reading, grammar, speaking, writing, and unit review. The number of total pages of Books 2-4, including Students' Books and Exercise Books, is 846.

There are no additional Exercise Books in the series of English used in China. The number of pages of Compulsory Books 1-3, Selective Compulsory Books 1-2, and Selective Compulsory

Books 3-4 for Grade 10-12. For Grade 10-12 is 840. For this point, we can say that the volumes of content of English textbooks for Polish high school students and for Chinese high school students are similar.

### 3.1. Comparison of The Matura Focus and English in terms of Flesch Reading Ease

Readability refers to the difficulty of reading a text. In 1948, Rudolf Flesch designed the Readability Calculation Formula, also known as the Flesch Reading Ease Formula, which can measure the difficulty of a text. According to this formula, the score range is 0-100. The higher the score, the lower the difficulty of the text and the stronger its readability.

There are many ways to measure the readability of reading materials. In this study, the readability has been calculated by using the tools provided at [www.readabilityformulas.com](http://www.readabilityformulas.com).

When comparing the readability of the Matura Focus and English, in this study, we choose the reading materials for each unit of two sets of textbooks for calculation. It is found that Polish and Chinese high school English textbooks exhibit both similar and different characteristics in the Flesch Reading Ease values.



Figure 1. Flesch scores of the matura focus and english for grade 10 in poland and china

From the above figure, it can be seen that the average Flesch scores of high school English textbooks applicable to first-year students in ordinary high schools in Poland is 70.8. The average Flesch score of high school English textbooks suitable for first-year students in Chinese ordinary high schools is 66.88. The above figures indicate that the language difficulty of Chinese high school English textbooks is slightly higher. From the distribution of Flesch scores in each unit, it can be seen that the Flesch values in Polish high school English textbooks are relatively balanced, indicating that the difficulty of reading texts in each unit does not change significantly. The Flesch values in Chinese high school English textbooks show significant fluctuations, indicating a significant variation in the difficulty of reading texts for each unit.

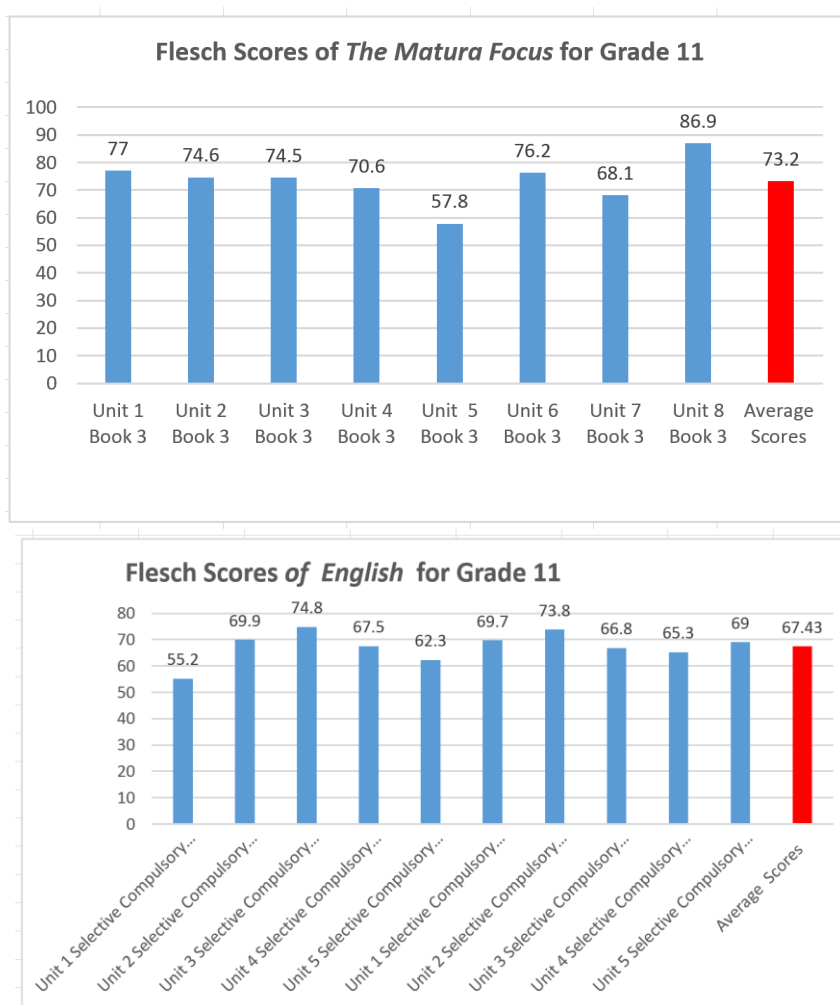


Figure 2. Flesch scores of the matura focus and english for grade 11 in poland and china

From the above figure, it can be seen that the average Flesch scores of high school English textbooks applicable to second year students in Polish ordinary high schools is 73.2. The average Flesch scores of high school English textbooks applicable to second year students in Chinese ordinary high schools is 67.43.

This indicates again that the language difficulty of Chinese English textbooks for Grade 11 is slightly higher than Polish English textbooks. From the distribution of Flesch scores in each unit, it can be seen that Flesch scores in Polish English textbooks and Chinese English textbooks is relatively balanced, showing the same distribution trend.

The average scores of Polish English textbook for Grade 10 is 70.8, while the average score of

English textbooks for Grade 11 is 73.2. The average scores of Chinese English textbooks for Grade 10 are 66.88, while the average scores for Grade 11 are 67.44. That shows another similarity in the distribution of Flesch scores in Polish and Chinese English textbooks that is reading materials for Grade 11 in both countries are slightly easier than those for Grade 10, which is actually not recommended for compiling English textbooks. The difficulty of reading materials should increase according to the increased grades, not the opposite.

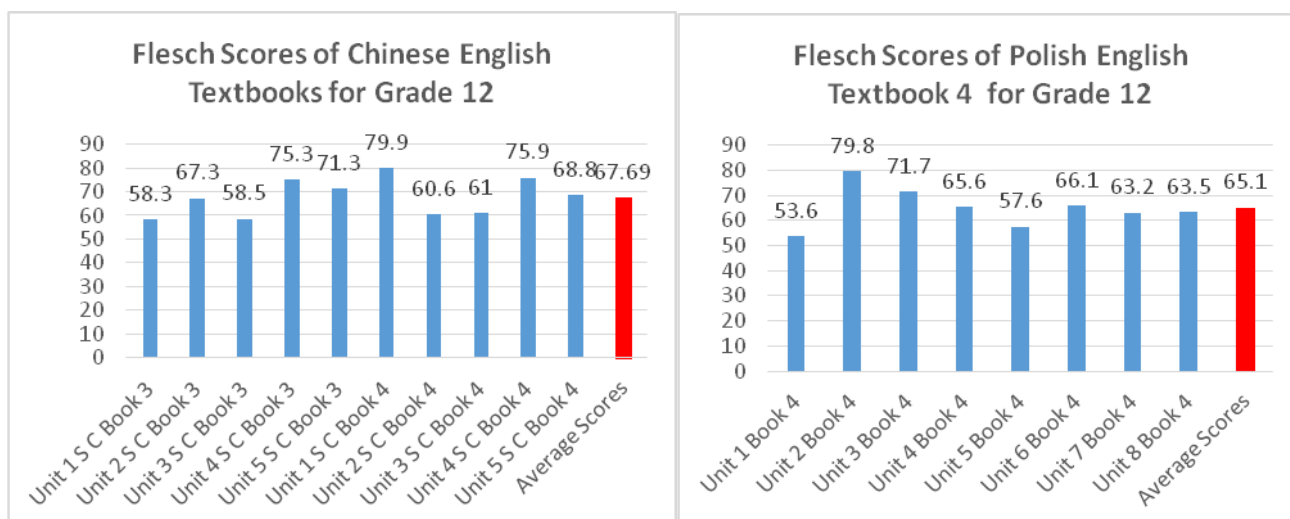


Figure 3. Flesch Scores of The Matura Focus and English for Grade 12 in Poland and China

From Fig 3, it can be seen that the average Flesch scores of high school English textbooks applicable to Grade 12 in Polish ordinary high schools is 65.1. The average Flesch scores of high school English textbooks applicable to Grade 12 students in Chinese ordinary high schools is 67.69. Those indicate that the language difficulty of English textbooks for Grade 12 in Poland is slightly higher than that of English textbooks for Grade 12 in China. From the distribution of Flesch scores in each unit, it can be seen that the distribution of Flesch scores in Polish high school English textbooks and Chinese high school English textbooks is relatively balanced, showing the same distribution trend.

From Fig 4, it can be seen that in terms of Polish English textbooks for ordinary high school students, the highest value is 86.9 and the lowest, 53.6. In terms of Chinese English textbooks for ordinary high school students, the highest value is 83.8, while the lowest value is 50.9. This indicates that overall, the difficulty of Chinese high school English textbooks is slightly higher than that of Polish high school English textbooks. From the distribution of values in each volume, it can be seen that the fluctuation of Flesch values in each volume and unit of Polish English textbooks is relatively stable, while Flesch values in various volumes and units of Chinese English textbooks exhibit significant fluctuations. This indicates that the difficulty level of each unit in Polish English textbooks does not change significantly. On the contrast, the difficulty level of each unit in Chinese high school English textbooks varies more significantly.

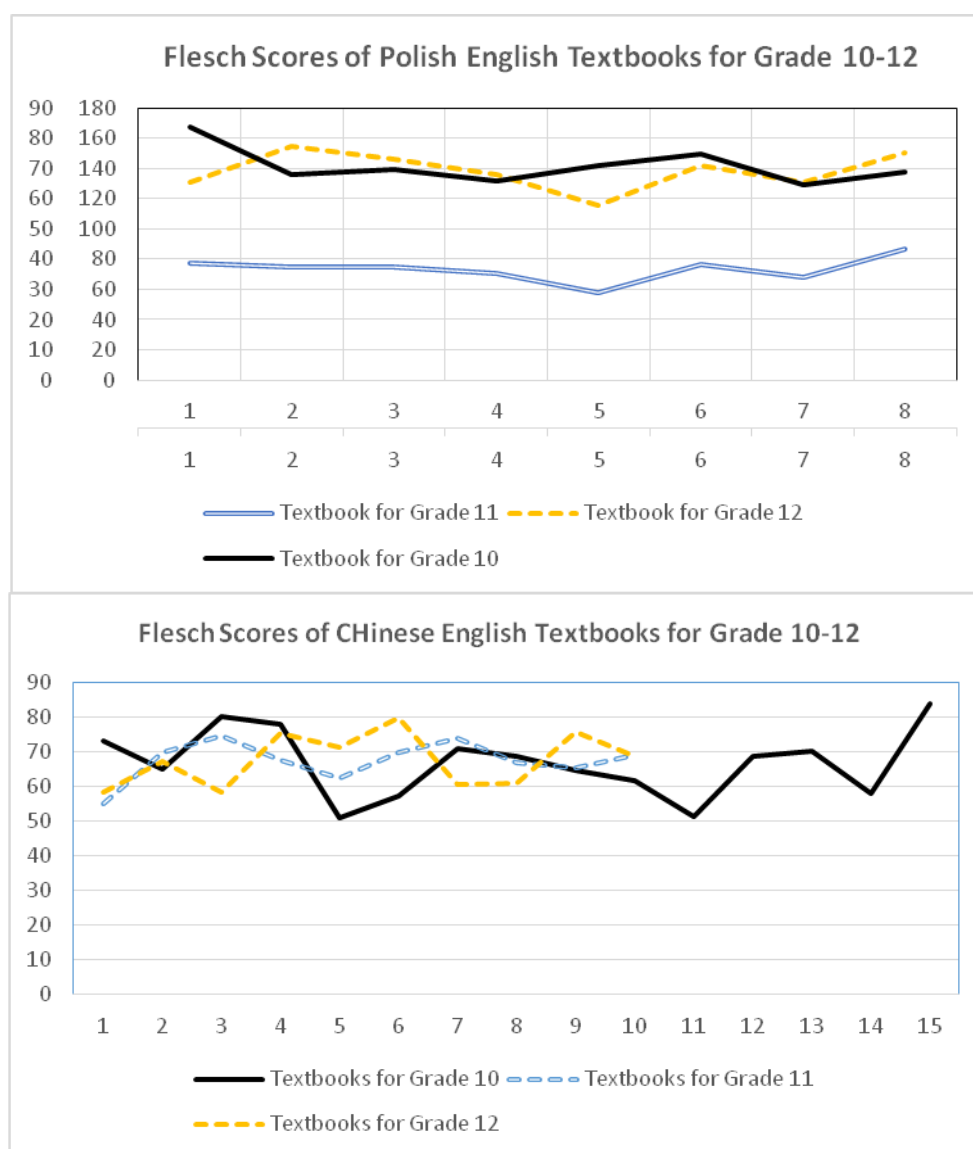


Figure 4. Comparison of Flesch Scores between Polish and Chinese High School English Textbooks

After comparing the Flesch readability of high school English textbooks in Poland and China by grade, the next step is to explore the difficulty level of high school English textbooks in both countries.

### 3.2. Comparative Analysis of Word Length, Sentence Length, and Article Length in both Polish and Chinese English Textbooks

The above discussion partially demonstrates the similarities and differences in readability of high school English textbooks between Poland and China.

Below, we will compare the average word length (i.e. the average number of letters in a word), sentence length (i.e. the average number of words contained in a sentence), article length (i.e. the total number of words in each reading text), and corresponding grade segments of the high school English textbooks of the two countries.

The average values of word length in Polish high school English textbooks for Grade 10-12 are

4.4, 4.3, and 4.5, respectively. The total average value in Polish high school English textbooks for Grade 10-12 is 4.4. The average values of Chinese high school English textbooks for Grade 10-12 are 4.5, 4.5, and 4.5, respectively. The total average value for the three years is 4.5.

In terms of sentence length, the average values of Polish high school English textbooks over the past three years are 13.6, 15.2, and 19.5, respectively; The total average value for three years is 16.1. The average values of Chinese high school English textbooks over the past three years are: 4.5, 4.5, and 4.5, respectively; the total average value for three years is 16.0.

In terms of length, the average number of words per reading chapter in Polish high school English textbooks over the past three years is 437.6, 504.5, and 636.3, respectively. The total average value for three years is 526.1. The average values of Chinese high school English textbooks over the past three years are 391, 382.5, and 597.4, respectively. The total average value for three years is 457.9.

In terms of the readability of articles corresponding to the grade groups of American students, the average values of Polish high school English textbooks over the three years are: 7, 7.1, and 9.4, respectively. The total average value for three years is 7.8. The average values of Chinese high school English textbooks over the past three years are 8.1, 8.1, and 8.4, respectively. The total average value for three years is 8.2.

From the above values, it can be seen that there is little difference in average word length between the reading texts of high school English textbooks in Poland and China, both between 4.3 and 4.5. Moreover, there is no significant fluctuation in the values from the first year to the third year of high school, and the average word length of seven volumes of Chinese high school English textbooks remains consistent. In terms of average sentence length, although the average values of sentence length of each volume in Polish and Chinese high school English textbooks are almost the same, the values in Polish high school English textbooks show a significant increase with grade, increasing from 13.6 to 19.5, which means 5.9 words of average sentence length have been increased from Grade 10 to Grade 12, equivalent to an increase of 43%. On the contrast, the sentence length in Chinese high school English textbooks only increased by 12.6% (from 15.1 to 17), from Grade 10 to Grade 12. On the whole, the change in word length in Chinese English textbooks is not as significant as in Polish English textbooks for high school students.

According to the above statics, in terms of article length, on the whole, the length of reading materials in Polish English textbooks from Grade 10 to Grade 12 is longer than of that in Chinese English textbooks. However, Chinese high school students need to finish a total of 35 reading units during Grade 10 to Grade 12, while in Polish high school English textbooks there are a total of 24 units for students from Grade 10 to Grade 12 to learn. Considering this, we believe that the words which Chinese high school students need to read and master will be more than Polish high school students.

Regarding the grade range of American students corresponding to English reading texts, it is calculated that the average grade corresponding values of high school English textbooks in Poland and China are not significantly different, with 7.8 and 8.2, respectively. This means that the difficulty level of high school English textbooks in both countries is suitable for the students of Grade 7 and Grade 8 of Native American students to read. According to a survey, the average reading level of American adults is between 6th and 8th grades (Cutilli & Bennett, 2009). Also, a report issued by the Department of Health and Public Works in the United States rates reading materials related to healthcare as the reading level for the American students of Grade 7 and Grade 8, which is labeled as “relatively difficult” (Edmunds, MR, et al. 2014). Based on this, the difficulty of reading texts in high school English textbooks in Poland and China has reached the upper limit of the average reading level of American adults. For high school students from non-native English speaking countries, this level of difficulty of reading materials not only poses a challenge but also



helps to improve their English language reading proficiency. It should also be pointed out that although there is not much difference in the average reading values of high school English textbooks between Poland and China in terms of corresponding grade levels, the difficulty of high school English textbooks in Poland also increases sharply with the increase of grade levels. The values of reading materials for Grade 10 and Grade 11 are 7 and 7.1, and it suddenly rises to 9.4 for Grade 12. However, in Chinese English textbooks for high school students, it is found that the difficulty of reading materials shows no significant change from Grade 10 to Grade 12, with 8.1, 8.1 and 8.4 respectively.

#### 4. Conclusion

Based on the above analysis of the readability of high school English textbooks in Poland and China, the following conclusions can be drawn.

Firstly, from the perspective of the total number of English textbooks for Grade 10 to Grade 12 in Polish high schools, the total amount of learning materials in three years is not much different.

Secondly, from the readability index, the difficulty of high school English textbooks in Poland and China is mostly within the range of “standard” and “relatively easy”. However, overall, the difficulty index of Chinese high school English textbooks is slightly higher than that of Polish high school English textbooks, and the fluctuation of the difficulty index of Chinese high school English textbooks is higher than that of Polish high school English textbooks among different units.

Thirdly, from the perspective of word length, there is not much difference between high school English textbooks in Poland and China, both around 4.3 and 4.5.

Fourthly, in terms of sentence length, the average values of high school English textbooks in Poland and China are relatively similar. However, in the reading materials from Grade 10 to Grade 12, the sentence length of Polish English textbooks shows an increasing trend, while the change in sentence length of high school English textbooks in China almost remains the same.

Fifthly, in terms of the total vocabulary of reading articles during the three years of high school learning, there is not much difference between Poland and China.

Sixth, in terms of the difficulty level of reading texts in high school English textbooks, the reading texts of both countries have reached the upper limit of the average reading level of American adults, reflecting the difficulty level of English textbooks. This has played a promoting role in improving the English proficiency of students. However, the difficulty level of reading materials in Chinese high school English textbooks did not show a gradient change during the three years of high school English learning, while in Poland, although the difficulty level of high school English textbooks was equal in Grade 10 and Grade 12, it suddenly increased in Grade 12.

From the above analysis, it can be seen that Chinese and Polish high school English textbooks have both commonality and uniqueness in text readability. These commonalities and characteristics will be of great significance for domestic English education, the compilation of English textbooks, the cultivation of Chinese students' global vision, and the cultivation of Chinese students to stand on the international high level and use English to tell Chinese stories to the world.

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Email: cathysungp@nbt.edu.cn



## Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

## Conflict of Interest

The author states that this article has no conflict of interest.

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