# An Analysis of Chinese English Learners' Scores in CET Band 4 and 6 and Its Implications 

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#### Abstract

This paper conducts a statistical analysis of CET band 4 and 6 scores of 14,265 students from Shanxi Normal University and reveals the following findings: firstly, the analysis of percentage of listening, reading, cloze and writing relative to the total scores shows that students' writing score accounts for $19.2 \%$, close to the standard rate of $20 \%$; their cloze score is $10.7 \%$, slightly higher than the standard rate of $10 \%$. However, their reading scores take up to $38.8 \%$ of their total scores, much higher than the standard rate of $35 \%$; listening score accounts for $31.0 \%$, much lower than the standard rate of $35 \%$. These figures show that students' ability in writing and cloze is, by and large, consistent with the requirement. As for reading and listening, the former is better than required, but the latter still leaves much room for further improvement. Secondly, comparative analysis of the two CET4 scores indicates that the potential area for score increase is the section of listening and reading. Thirdly, an analysis of band 4 and 6 scores reveal the relationship between students' passing rate in band 6 and their previous band 4 scores. The research findings can offer some guide for college English teaching and learning.


Key words: Statistic analysis; Normal distribution; Mean score; Percentage analysis


#### Abstract

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## INTRODUCTION

Testing is an aid to learning, by which it is meant that testing can serve as a learning experience and act as a guide to the student as well as the teacher. After testing, what students and learners should do is to go on to relearn and consolidate what has been found to be lacking, and then has the opportunity to retest to see how the learning is progressing. In brief, the test stimulates further learning (Rivers, 2016). This approach to testing can largely reduce anxiety and stress on the part of the learners when faced with the present-day testing (Rivers, 2016). The present research is intended to provide some guide for English teaching and learning through the statistical analysis of Students scores in CET4 and 6. The data is collected from 10,922 students attending CET band 4 and 3,343 students attending CET band 6 from Shanxi Normal University, an ordinary provincial normal university. It is expected that such a statistical analysis of test scores can help learners find their weakness and strength in English learning, finally, some suggestions to overcome the weakness have been proposed in the hope that they can contribute to the improvement of English teaching and learning for nonEnglish major students.

## 1. SCORE DISTRIBUTION AND THE GENERAL ENGLISH LEVEL OF STUDENTS

In the analysis of the first CET4 scores in the year of 2011, the total number of the students attending the test is 6,619 .

Students who score above 426 are 2,060 , accounting for about $31.1 \%$. Students attending the test come from three groups: 3,601 students from the main campus, among them, 1,625 students score over 426; 2,715 students from the second campus, School of Modern Arts and Science, only 404 students score over 426, and 303 students from the third campus, School of Physical Education, among which only 31 score over 426. Students' score is not satisfying because the enrollment requirement is low on those two campuses. Students on the main campus include sophomores, juniors and seniors. 837 are juniors and 209 of them score over 426; 215 are seniors and 25 score over 426. Juniors attending the test are the ones who failed to get passing score of

426 in the previous two tests. Seniors attending the test are the ones who failed to pass in the previous four CET tests. So their scores are not good, either. Sophomores take CET band 4 as their final English test, therefore, they all attend the test. The number of sophomores from the main campus is 2548 , among which 1391 students score over 426 , about $54.6 \%$, to a certain degree, it can be said that their test scores represent the general English ability of Shanxi Normal University students.

For the effective analysis of the test score distribution, student number in each score area is presented in Table 1. (The first score area is between 220-226, including 220, and so on).

Table 1
Different Score Areas and the Corresponding Student Number

| Score area | 220 | 226 | 236 | 246 | 256 | 266 | 276 | 286 | 296 | 306 | 316 | 326 | 336 | 346 | 356 | 366 | 376 | 386 | 396 | 406 | 416 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Student number | 8 | 10 | 13 | 13 | 15 | 17 | 35 | 72 | 133 | 199 | 226 | 299 | 341 | 367 | 411 | 433 | 404 | 417 | 430 | 379 | 337 |
| Score area | 426 | 436 | 446 | 456 | 466 | 476 | 486 | 496 | 506 | 516 | 526 | 536 | 546 | 556 | 566 | 576 | 586 | 596 | 605 | 616 | 626 |
| Student number | 308 | 286 | 240 | 205 | 208 | 157 | 136 | 120 | 106 | 88 | 61 | 41 | 38 | 24 | 14 | 11 | 8 | 3 | 3 | 3 | 0 |

Figure 1, corresponding with Table 1, shows a clearer picture of student number in different score areas. This distribution is a Gauss distribution, the mean score $\mu$ is 398 , the standard variance $\sigma$ is 63 . According to the statistical theory, $68.27 \%$ of students' scores should be distributed between the area $\mu+\sigma$ to
$\mu-\sigma$, that is 335 to 461 . The program calculation result shows that student number between the score 335 to 461 is 4,498 , that is $67.96 \%$ of the total student number. The statistical result indicates that the statistical data is large enough to explain the statistical distribution correctly.


Figure 1

## Distribution of the Student Number in Different Score Areas of CET 4

Table 2 is the analysis of sophomores' scores in CET4, their final English test is canceled, they take CET band 4 instead as their final English test. All students attend CET4, it is also the first time that they take part in the test. Their test scores represent the general English ability of Shanxi normal university students. Their score distribution is calculated by program and it is shown in Figure 2. The mean score is 430, standard variance is 66 . According to the statistical theory, $68.27 \%$ of students' score should be distributed in the area from364 to 496. Program calculation result shows
that the number of students who score in the area 364 to 496 is $1,701,66.76 \%$ of the total sophomore students. This result indicates that the statistical data is big enough to satisfy the statistical analysis requirement. Figure 1 and Figure 2 are normal distribution, but the departure direction is different. Figure 1, the score analysis of all students from this university attending the test, shows that more students score below the mean score than students who score above the mean score. But the score analysis of sophomores in Figure 2 shows that more students score above the mean score
than students who score below the mean score. This means more high score students can be found in the sophomores, their mean score is 30 points higher than that of all students from the university, including the main campus and the second and third campus. According to the "College English Test score norm percentage corresponding diagram", sophomores' mean score 430
is corresponding to $17 \%$. This percentage indicates that the general English ability of sophomores is better than the first top $17 \%$ of the norm test group students. (Council of College English Test Band 4 and Band 6, 2012). This percentage also shows the general English ability of the Shanxi Normal University students is fairly good.


Figure 2
Sophomores' Score Distribution in CET Band 4

## 2. ANALYSIS OF STUDENTS' LISTENING, READING, WRITING AND CLOZE ABILITY

When doing percentage analysis of listening, reading, writing and cloze score relative to the total score, we select students with scores above 276, because students who score below 276 have no writing score. According
to the "CET score explanation" published on the official net, listening, reading, writing and cloze account for respectively $35 \%, 35 \%, 20 \%$ and $10 \%$, this is called standard percentage. If student's ability to achieve balanced improvement, their scores for each section will be approximate to this percentage.

Figure 3 shows the percentage of each section score relative to the total score in the first CET4 of the year 2011.


Figure 3

## Percentage of Each Section Score Relative to the Total Score

Figure 3 shows that the percentage of writing is almost the same for all students, and it is $19.2 \%, 0.8 \%$ lower than the standard one, this indicates that students' writing ability is not strong enough. The percentage of cloze is $10.7 \%$ for virtually all students, $0.7 \%$ higher than the standard percentage, this indicates that students' cloze ability is good enough. Nevertheless, the percentage of listening is lower than that of reading, and the difference between the
two percentages varies for students in different score areas. Particularly in the vicinity of mean score 406 , reading percentage is $38.8 \%$, listening percentage is $31.0 \%$, the difference is $7.8 \%$, absolute score difference between reading and listening is 32 , indicating that students' English reading ability is better than listening ability.

As is shown, students' listening ability is the poorest in the English learning. However, listening is considered
to be the core and key to further improvement in students’ English listening, speaking, reading, writing and translation skills. If one can not resolve problems with listening, he can never get a good command and make proper use of English (Zhang, 2008, pp.26-27). To improve students' English listening ability, class size should be restricted to a reasonable number, students and teachers should interact enough in the classroom teaching situation, teachers should speak English as much as possible, create an unrestricted, friendly environment, and to ensure that students have sufficient exposure to the language (Rivers, 1983), so that to help students to develop the habit of speaking English. At the present time, it is much more possible than in the past for the learner to have a well-rounded experience of the language: To see, hear, and live it in all kinds of ways (Rivers, 2016). That means, every possible medium and modality can be used to aid learning. English learning should be extended beyond the classroom walls; language learning takes place in and out of the classroom, so students need to develop their ability to do autonomous learning. Students should take advantage of every chance possible to watch English movies, listen to English news and talk with native English speaker about English culture, history, customs, etc. not only to improve their English listening comprehension, but also enhance their English cultural
background, in fact, language learning is penetrating another culture, when students' English listening ability gets improved, improvement of speaking and writing can be achieved consequently.

## 3. ANALYSIS OF THE INCREASE IN THE SCORES FOR THE SECOND CET4

In the second CET4 in the same year, the total number of students attending test and having effective score is 4,303, the mean score is 381.3 , standard variance is 56 . Compared with the first test, the mean score is lower and the score is more concentrated in the vicinity of mean score, this is because students failed to pass the first test in the same year. According to conditional search by program, 3,263 students attend the first test, in which 837 students pass the second test of the same year. Out of the 837 students, there are 24 students who score zero for one reason or another in the first test, and they are excluded from the score analysis. We have contrasted the scores of the remaining 813 students in the two successive tests, the result is shown in Table 2. The first line shows the score range, the second line shows the student number in the corresponding score area according to their first CET4 scores, the third line shows the number of students who pass 426 in the second test, the last line shows the passing rate.

Table 2
Contrastive Analysis of the Two Successive CETS 4 Scores

| Score area | 225 | 296 | 306 | 316 | 326 | 336 | 346 | 356 | 366 | 376 | 386 | 396 | 406 | $416-425$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Student number | 71 | 70 | 103 | 123 | 188 | 213 | 257 | 289 | 328 | 296 | 325 | 350 | 320 | 248 |
| Student number pass the score 426 | 14 | 14 | 20 | 20 | 34 | 33 | 29 | 64 | 71 | 75 | 86 | 121 | 125 | 107 |
| Passing rate over 426(\%) | 20 | 20 | 19 | 16 | 18 | 15 | 11 | 22 | 22 | 25 | 26 | 35 | 39 | 43 |

Based on Table 2, the probability of passing is $35 \%$ for students whose scores are above 396 in the first test, the probability of passing is lower than $26 \%$ for those with scores below 396 in the first test. Particularly for students who score below 356 in the first test, the probability of passing is lower than $20 \%$. The passing rate has a step change in the score of 356 . We strongly suggest that students not immediately and successively attend the next CET4 if their scores are below 356 in the first test and if they are not well-prepared. Instead, they should devote time and effort to the improvement of their English so that
they can have a higher probability of passing.
For the first test score analysis, we set 10 points as the score interval, Table 2 shows that for each score area above 336 , the number of students reaches more than 200 . The majority of the students' scores are around the score range of 336 to 425 in the first CET4, a comparative analysis of their scores between their first and second CETs, and the areas of score increase is of great importance for students in their English learning. Table 3 shows the situation of score increase for students who pass the second test, and their scores in the first CET4 are between 336 and 425 .

Table 3
Analysis of score increase in the second CET4

| Score range | 336 | 346 | 356 | 366 | 376 | 386 | 396 | 406 | $416-425$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Student number | 33 | 29 | 64 | 71 | 75 | 86 | 121 | 125 | 107 |
| Score increase | 115 | 108 | 100 | 86 | 71 | 60 | 52 | 41 | 35 |
| Listening score increase | 55 | 45 | 43 | 38 | 30 | 23 | 20 | 15 | 13 |
| Reading score increase | 49 | 40 | 42 | 33 | 30 | 27 | 23 | 16 | 16 |
| Writing score increase | 2 | 11 | 7 | 7 | 6 | 6 | 4 | 6 | 3 |
| Close score increase | 9 | 12 | 8 | 8 | 5 | 4 | 5 | 4 | 3 |

Table 3 shows that the score increase mainly come from reading and listening comprehension, score 376 is a division point, reading score increase more than listening for the students who score above 376 in the first test, listening score increase more than reading for students with score below 376 in the first test. This finding is further confirmed in Table 4 of comparative analysis of students' scores in CET band 4 and 6.

Based on the result of Table 3, English learning should be focused on English reading and listening improvement. Especially for low score students, the potential increase in listening score is considerable, for students who score higher than 376 , that in reading comprehension score is considerable. Teachers should arrange their teaching content and schedule to adapt to needs of individual students from different score areas.

## 4. RELATIONSHIP BETWEEN PASSING RATE OF CET6 AND THE SCORE OF CET4

In the second CET6, 3,343 students attend the test and have an effective score, 724 passed the test. Frequency distribution of the student number in the test of CET6 is shown in Figure 4. The mean score is 388.6, standard variance is 50.3 . Compared with the score of CET4, scores in CET6 are more concentrated in the vicinity of mean score, this shows for students attending CET6, their English ability is pretty much the same. 1,770 sophomores attend CET6, 500 of them get the score of and above 426 in CET6, accounting for $69 \%$ of the students passing the test.


Figure 4

## Distribution of the Student Number in Different Score Areas in CET6

According to probability, the higher, the score in CET4, the more probable in passing CET6. Table 4 gives the relationship between the score of CET4 and the percentage of passing CET6, showing that all the students who score over 576 in CET4 pass the CET6. The percentage of passing CET6 is above $53 \%$ for
students whose CET4 scores are between 506 to 516 . Score 496 is a dividing point, and the passing rate of CET6 has a step change around this score area. While the passing rate of CET6 is $45 \%$ if the CET4 score is higher than 496, that for CET4 scores lower than 496 is 32\%

Table 4
Relationship Between The Passing Rate of CET6 and CET4 Scores

| Score area of CET4 | 426 | 436 | 446 | 456 | 466 | 476 | 486 | 496 | 506 | 516 | 526 | 536 | 546 | 556 | 566 | 576 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of students attending CET6 | 269 | 253 | 213 | 179 | 192 | 139 | 126 | 106 | 96 | 73 | 54 | 35 | 36 | 23 | 11 | 25 |
| Number of students passing CET6 | 15 | 16 | 19 | 28 | 40 | 41 | 40 | 48 | 51 | 42 | 33 | 24 | 30 | 18 | 8 | 25 |
| Passing rate (\%) | 6 | 6 | 9 | 16 | 20 | 29 | 32 | 45 | 53 | 58 | 61 | 69 | 83 | 78 | 73 | 100 |

## CONCLUSION AND IMPLICATIONS

Through detailed study and analysis of CET band 4 and 6 scores of 14,265 students from Shanxi Normal University, we make the following findings: firstly, the overall English level of students, sophomores in particular, is good enough, the analysis of percentage of listening, reading, cloze and writing relative to the total scores shows that students' writing score accounts for $19.2 \%$, slightly lower than the standard rate of $20 \%$; their cloze score is $10.7 \%$, slightly higher than the standard rate of $10 \%$. However,
their reading scores take up to $38.8 \%$ of their total scores, much higher than the standard rate of $35 \%$; listening score accounts for $31.0 \%$, much lower than the standard rate of $35 \%$. These figures show that students' ability in writing and cloze is, by and large, consistent with the requirement. As for reading and listening, the former is better than required, but the latter still leaves much room for further improvement. Secondly, comparative analysis of the two CET band 4 scores indicates that the potential area for score increase is the section of listening and reading. Thirdly, an analysis of band 4 and 6 scores reveal
the relationship between students' passing rate in band 6 and their previous band 4 scores. The research findings will offer some guide for college English teaching and learning.

Shanxi Normal University is an ordinary university, and to a certain extent, student's English ability here is representative of the overall college students' English level. The statistical result of the score analysis of 10,922 students attending CET4 and 3343 students attending CET6 offers some implications for English teaching and learning in general. Firstly, guided by the analysis of mean score and score distribution, teachers could clearly know the overall English level of the students in their class, so that they can arrange their English teaching accordingly. Secondly, according to the data analysis, reading comprehension ability is higher than the listening comprehension ability, therefore teachers should focus on listening practice for the purpose of improving students' overall English ability. Thirdly, the discussion of the passing rate for students attending CET4 for the second time shows that over $35 \%$ of the students passed 426 if they score over 396 in the first CET4, the score increase mainly come from reading improvement for students whose scores are over 376 in the first test, but for students who score below 376 in the first test, the score increase mainly come from listing comprehension improvement, teachers should take into account students' individual difference and practice individualized instruction, at the same time, to encourage a variety of learning styles. Finally, the discussion of the relationship between the passing rate of CET6 and the scores of CET4 indicates
that the percentage of passing CET6 is over $50 \%$ for students who score more than 500 in the CET4, students who score lower than 500 should be patient, make real effort and do substantial practice before they take their CET band 6 for the first time, so that they can ensure a better chance to pass.

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