

**2018 TELPAS
Score Distributions and
Statistics by Content Area
and Grade**

Glossary

This glossary provides definitions for the statistical terms that appear in the tables and graphs in this section ("2018 TELPAS Score Distributions and Statistics by Content Area and Grade") of Appendix D. Definitions of statistical terms and concepts in the other sections are given in chapter 3 or chapter 4.

Descriptive Statistics

Mean. The mean is a measure of central tendency. It is the average score for the assessment. It is computed by summing the scores of all students and dividing the sum by the total number of students (N).

Median. The median is another measure of central tendency. It is the score at the middle of the frequency distribution for the assessment. It is computed by finding the score at which there are the same number of scores above as there are below.

Mode. The mode is another measure of central tendency. It is the most frequently obtained score for the assessment. It is determined by computing the frequency distribution and finding the score point with the highest frequency (n-count).

Range. The range is a measure of statistical dispersion (variability or spread). It is the difference between the lowest and highest scores obtained by students on the assessment. It is computed by subtracting the lowest score from the highest score.

Interquartile Range. The interquartile range is another measure of statistical dispersion (variability or spread). It is the difference between the 1st and 3rd quartiles (or 25th and 75th percentiles) of the score distribution for the assessment. It is computed by subtracting the score at the 1st quartile (the point that splits the lowest 25% of the scores) from the score at the 3rd quartile (the point that splits the highest 25% of the scores).

Standard Deviation (SD). The standard deviation is another measure of statistical dispersion (variability or spread). It is an indicator of the degree of score variation around the mean. It is computed using the following formula.

$$SD = \sqrt{\frac{\sum_{i=1}^N (x_i - \bar{x})^2}{N - 1}}$$

where x_i is the score for student i , \bar{x} is the mean score and N is the total number of students that took the assessment.

Variance. The variance is another measure of statistical dispersion (variability or spread) around the mean. It is computed as the square of the standard deviation (SD).

Skewness. The skewness is an indicator of the shape of the score distribution. It measures the extent to which the score distribution "leans" to one side of the mean. A positive skewness indicates that the score distribution leans below the mean. A negative skewness indicates that the score distribution leans above the mean. A skewness of zero indicates that the score distribution is symmetric around the mean. It is computed using the following formula.

$$Skewness = \frac{N}{(N-1)(N-2)} \sum_{i=1}^N \left(\frac{x_i - \bar{x}}{s_x} \right)^3$$

where x_i is the score for student i , \bar{x} is the mean score, s_x is the standard deviation (SD) and N is the total number of students that took the assessment.

Kurtosis. The kurtosis is another indicator of the shape of the score distribution. It measures the "peakedness" of the score distribution. A positive kurtosis is referred to as *leptokurtic*, meaning that the distribution has a more acute peak around the mean and fatter tails. A negative kurtosis is called *platykurtic*, meaning the distribution has a lower, wider peak around the mean and thinner tails. It is computed using the following formula.

$$Kurtosis = \frac{N(N+1)}{(N-1)(N-2)(N-3)} \sum_{i=1}^N \left(\frac{x_i - \bar{x}}{s_x} \right)^4 - \frac{3(N-1)^2}{(N-2)(N-3)}$$

where x_i is the score for student i , \bar{x} is the mean score, s_x is the standard deviation (SD) and N is the total number of students that took the assessment.

Frequency Distributions

Frequency (FREQ). This is the number of students that obtained the particular score point on the assessment.

Cumulative Frequency (CUM FREQ). This is the number of students that obtained a score that is less than or equal to the particular score point on the assessment.

Percentage (PCT). This is the percentage of students that obtained the particular score point on the assessment. It is computed as: $PCT = FREQ \div N \times 100$.

Cumulative Percentage (CUM PCT). This is the percentage of students that obtained a score that is less than or equal to the particular score point on the assessment. It is computed as: $CUM PCT = CUM FREQ \div N \times 100$.

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Table D.5.1. 2018 TELPAS Reading Scale Score Descriptive Statistics (Online only)

Subject	N	Mean	Median	Mode	Range	Interquartile		SD	Variance	Skewness	Kurtosis
						Range	Range				
Grade 2 Reading	105,668	1507.61	1504	1473	660	108	80.44	6470.48	0.63	0.78	
Grade 3 Reading	106,279	1545.68	1537	1488	891	151	108.02	11667.35	0.67	0.78	
Grade 4 Reading	96,525	1543.92	1537	1537	924	113	86.71	7518.75	0.40	0.91	
Grade 5 Reading	87,730	1574.01	1575	1562	924	114	94.41	8912.85	0.39	0.87	
Grade 6 Reading	70,767	1538.64	1535	1504	837	107	78.69	6191.95	0.23	0.26	
Grade 7 Reading	63,275	1545.31	1546	1578	837	118	83.01	6891.01	0.20	0.31	
Grade 8 Reading	54,260	1530.90	1525	1516	720	100	71.45	5104.74	0.26	1.19	
Grade 9 Reading	50,325	1521.39	1516	1498	720	100	74.14	5497.42	0.32	1.47	
Grade 10 Reading	37,512	1513.23	1516	1544	683	102	71.49	5110.53	0.11	0.95	
Grade 11 Reading	28,048	1525.27	1525	1544	683	84	71.54	5118.46	0.10	1.21	
Grade 12 Reading	21,382	1528.88	1534	1544	683	95	71.43	5102.83	0.02	1.56	

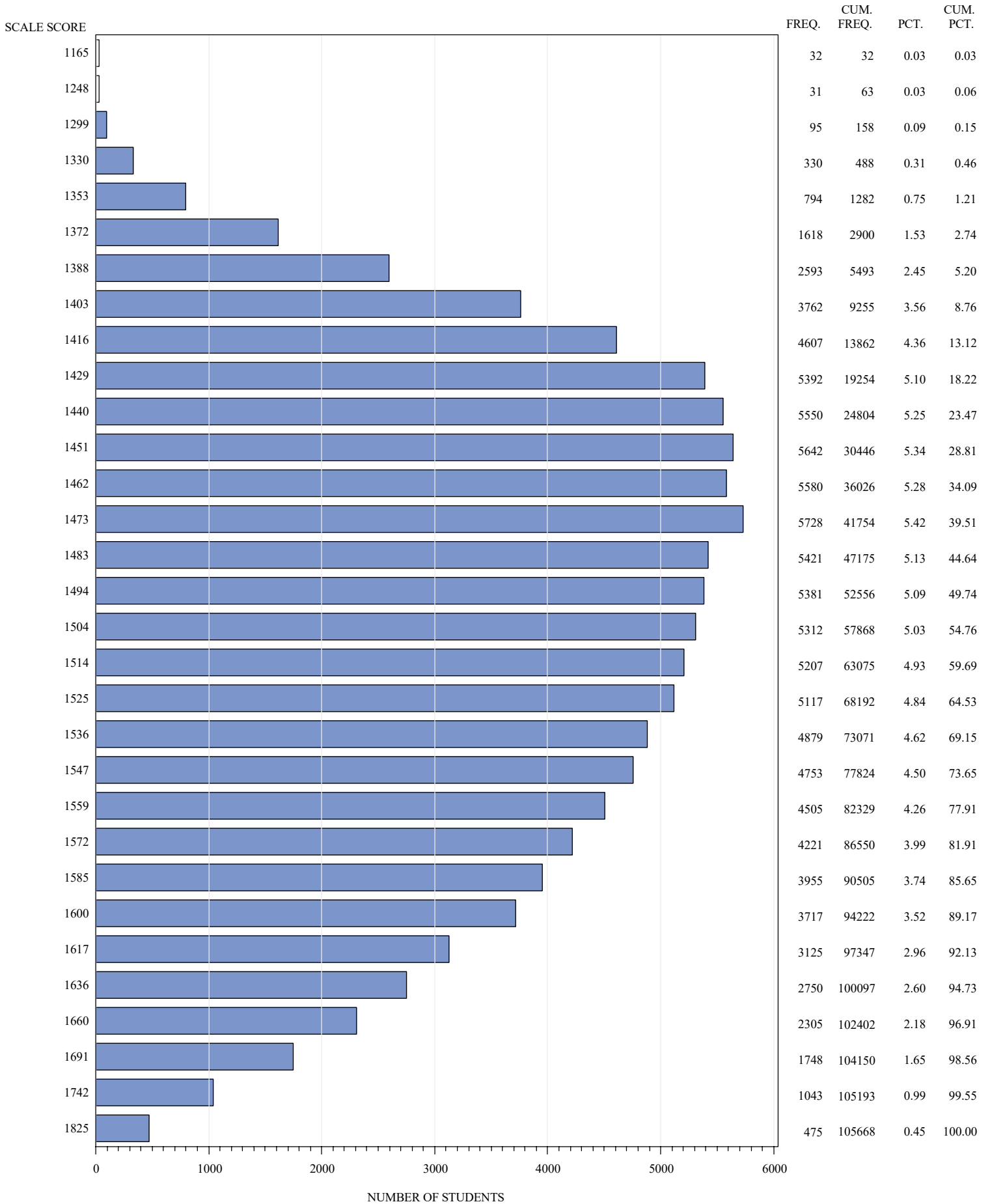
Table D.5.3. 2018 TELPAS Listening Scale Score Descriptive Statistics (Online only)

Subject	N	Mean	Median	Mode	Range	Interquartile		SD	Variance	Skewness	Kurtosis
						Range	Range				
Grade 2 Listening	105,697	1557.28	1563	1579	678	88	73.31	5374.24	0.23	0.83	
Grade 3 Listening	106,357	1600.91	1596	1637	678	89	79.11	6258.96	0.17	0.68	
Grade 4 Listening	96,646	1535.18	1539	1525	670	72	66.00	4355.73	0.21	0.95	
Grade 5 Listening	87,879	1556.73	1554	1569	670	93	70.73	5003.43	0.15	0.73	
Grade 6 Listening	70,800	1569.59	1575	1575	701	98	77.75	6045.13	0.11	1.33	
Grade 7 Listening	63,299	1572.91	1575	1592	701	105	81.07	6572.45	-0.01	1.04	
Grade 8 Listening	54,228	1580.86	1575	1611	701	105	86.15	7420.96	-0.20	1.25	
Grade 9 Listening	50,345	1533.49	1539	1551	541	85	69.53	4834.19	-0.06	0.77	
Grade 10 Listening	37,541	1540.23	1539	1564	541	85	68.47	4687.66	0.06	0.62	
Grade 11 Listening	28,059	1550.59	1551	1578	541	89	65.85	4336.32	0.08	0.71	
Grade 12 Listening	21,399	1552.10	1551	1578	541	78	64.41	4148.85	-0.06	1.18	

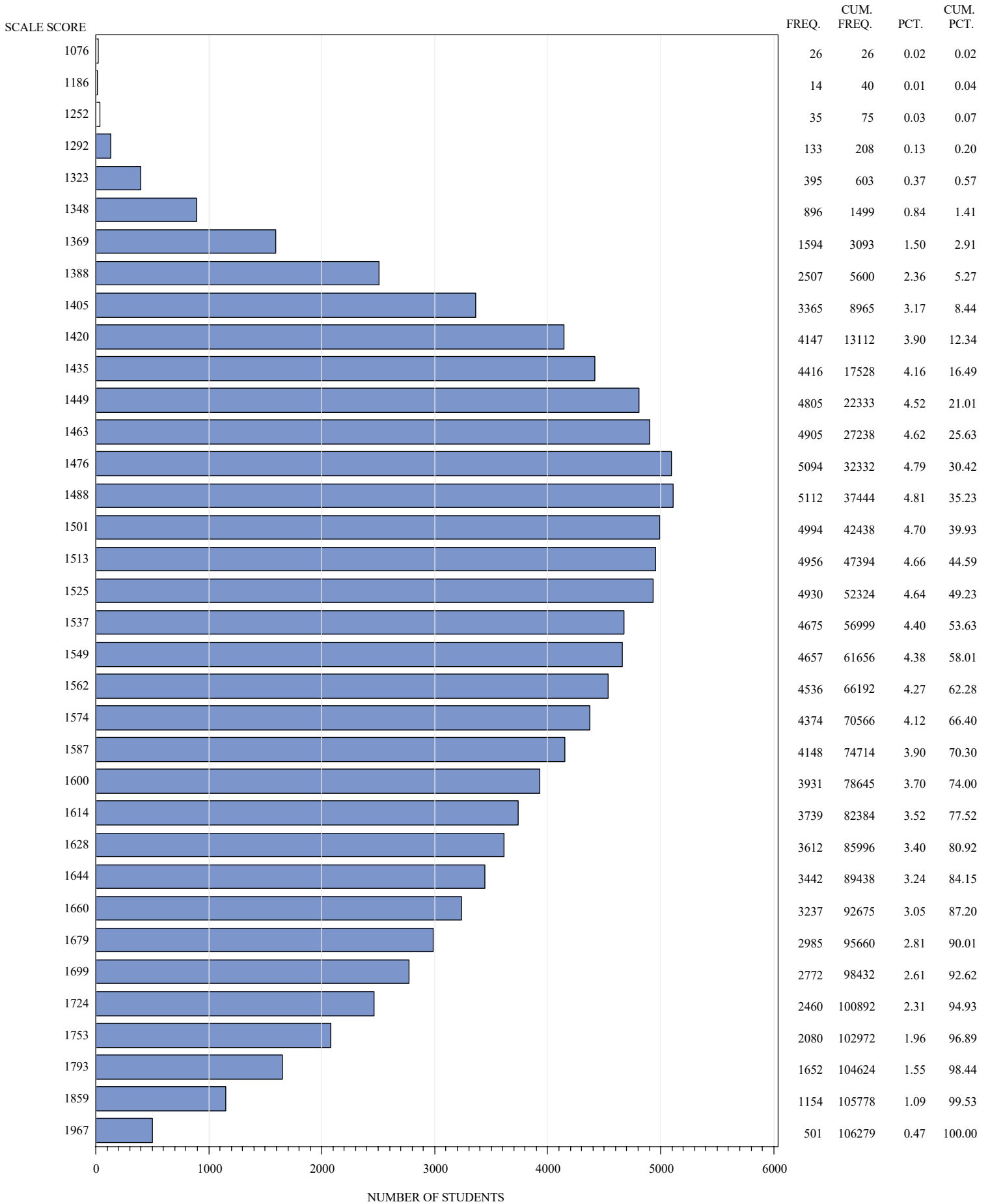
Table D.5.3. 2018 TELPAS Speaking Scale Score Descriptive Statistics (Online only)

Subject	N	Mean	Median	Mode	Range	Interquartile		SD	Variance	Skewness	Kurtosis
							Range				
Grade 2 Speaking	105,697	1499.95	1498	1498	479	79	69.66	4852.80	-0.36	0.65	
Grade 3 Speaking	106,357	1518.62	1525	1539	550	99	69.63	4848.29	-0.36	0.57	
Grade 4 Speaking	96,646	1531.70	1536	1549	361	59	46.84	2193.66	-0.33	0.85	
Grade 5 Speaking	87,879	1535.59	1536	1565	361	59	49.77	2477.15	-0.37	0.61	
Grade 6 Speaking	70,800	1520.45	1518	1541	260	57	43.52	1893.63	-0.11	0.13	
Grade 7 Speaking	63,299	1515.29	1518	1533	287	54	45.03	2027.91	-0.12	0.05	
Grade 8 Speaking	54,228	1516.16	1518	1550	287	63	47.45	2251.74	-0.19	-0.07	
Grade 9 Speaking	50,345	1510.24	1518	1406	327	65	53.06	2815.70	-0.32	-0.24	
Grade 10 Speaking	37,541	1516.71	1525	1406	281	61	52.86	2794.15	-0.39	-0.07	
Grade 11 Speaking	28,059	1525.21	1533	1553	263	55	52.53	2759.26	-0.49	0.13	
Grade 12 Speaking	21,399	1528.15	1533	1553	302	62	52.68	2774.94	-0.52	0.25	

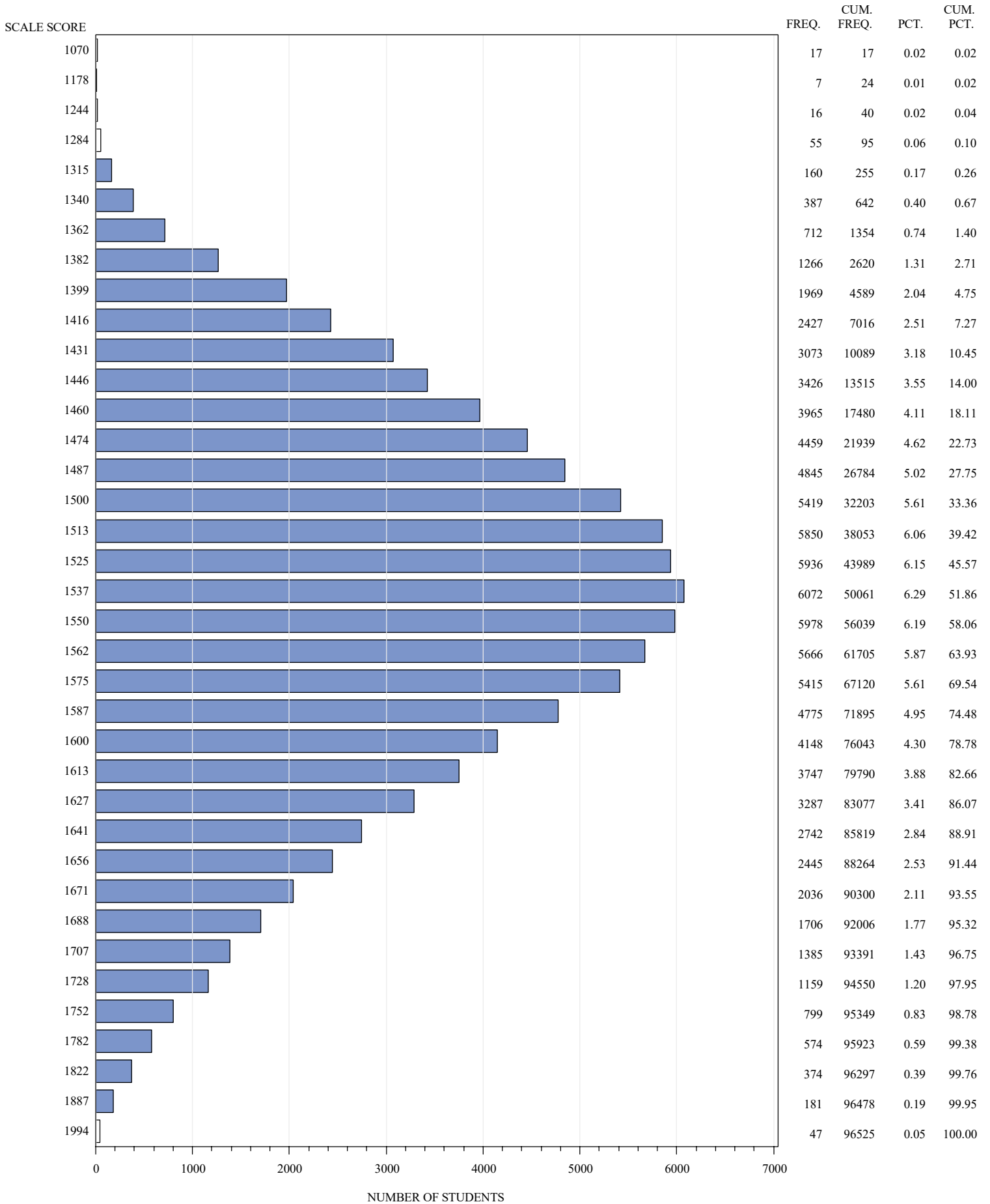
**Figure D.5.1 2018 TELPAS Grade 2 Reading
Frequency Distribution of Scale Scores
Online Students**



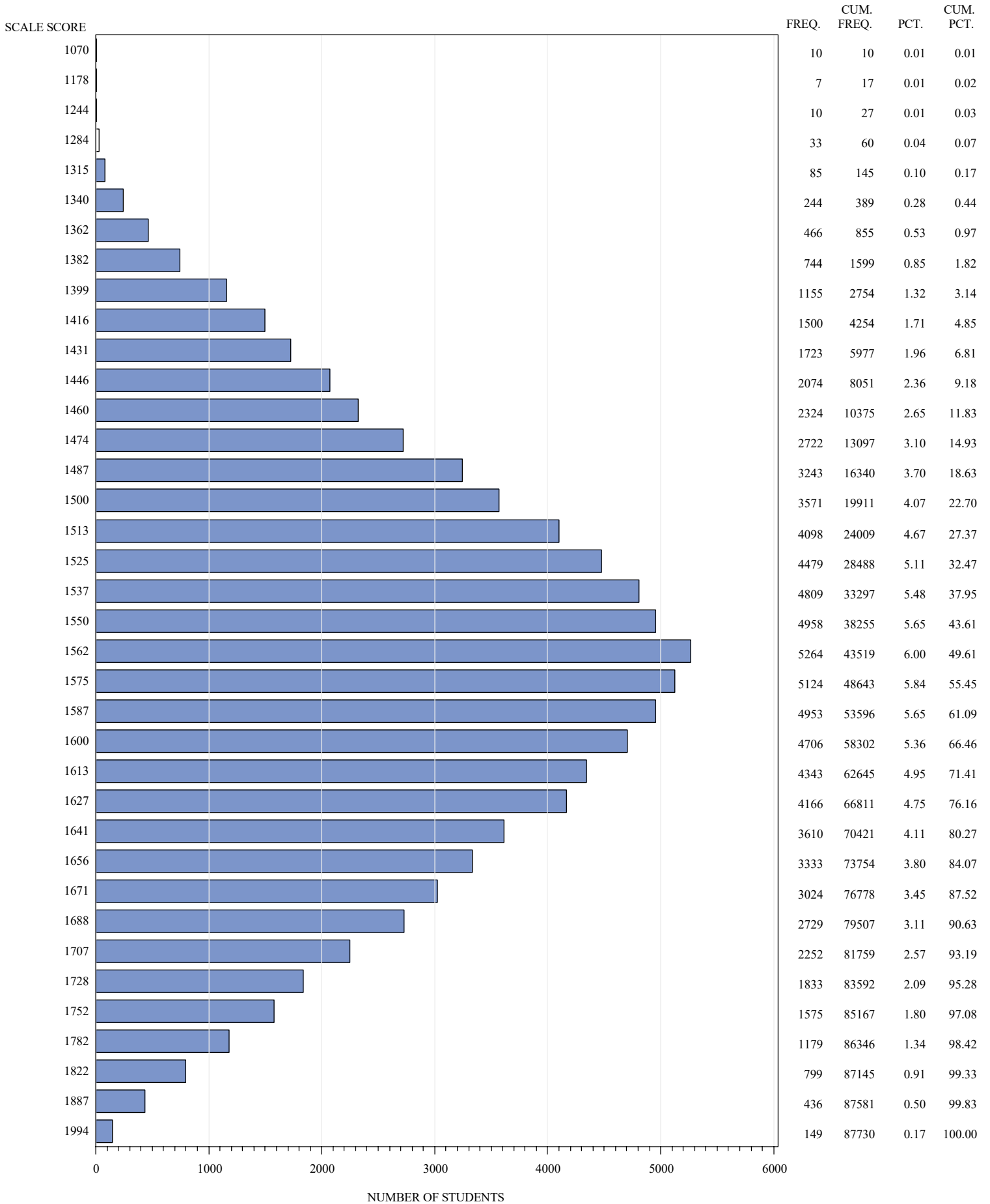
**Figure D.5.2 2018 TELPAS Grade 3 Reading
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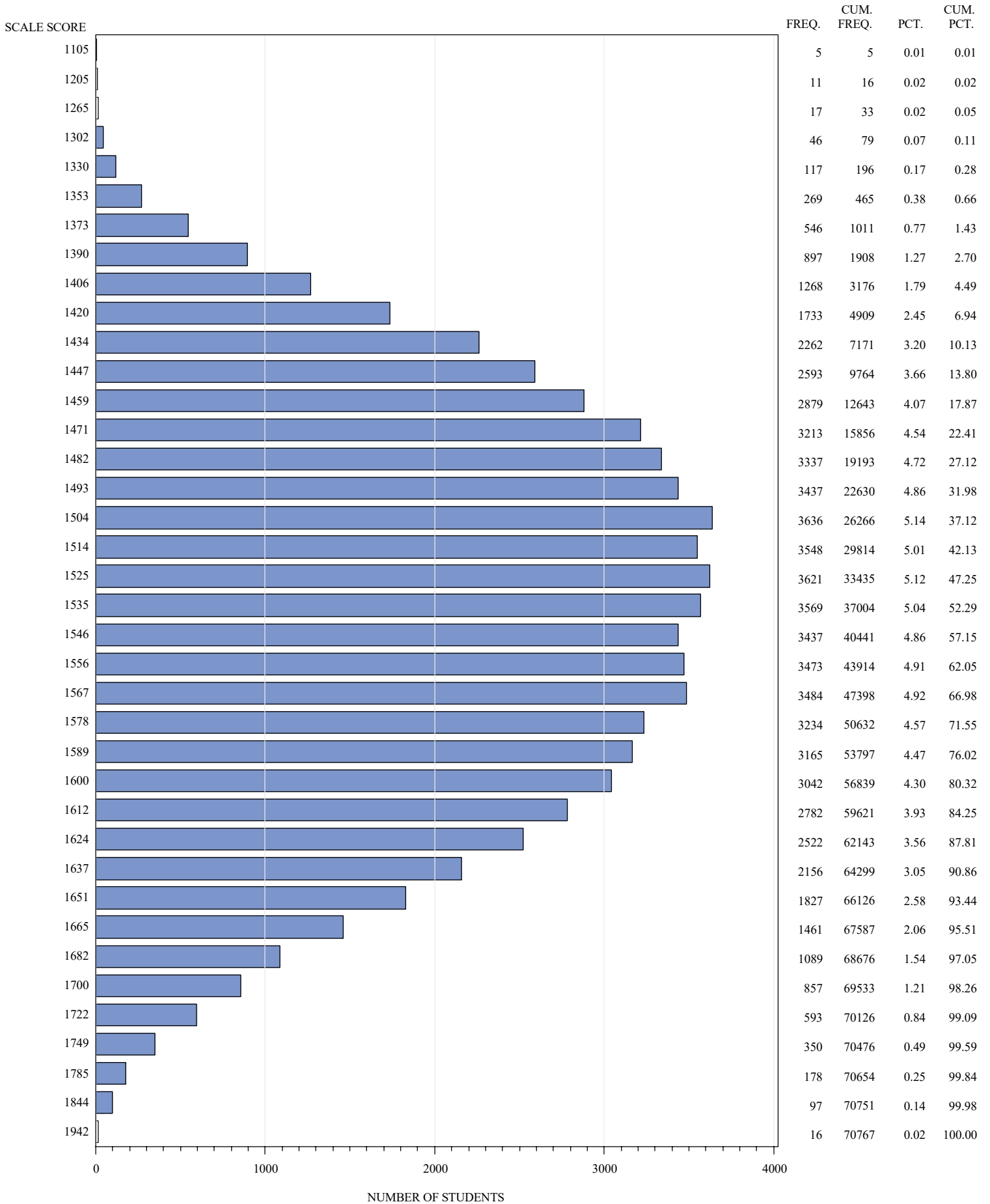
**Figure D.5.3 2018 TELPAS Grade 4 Reading
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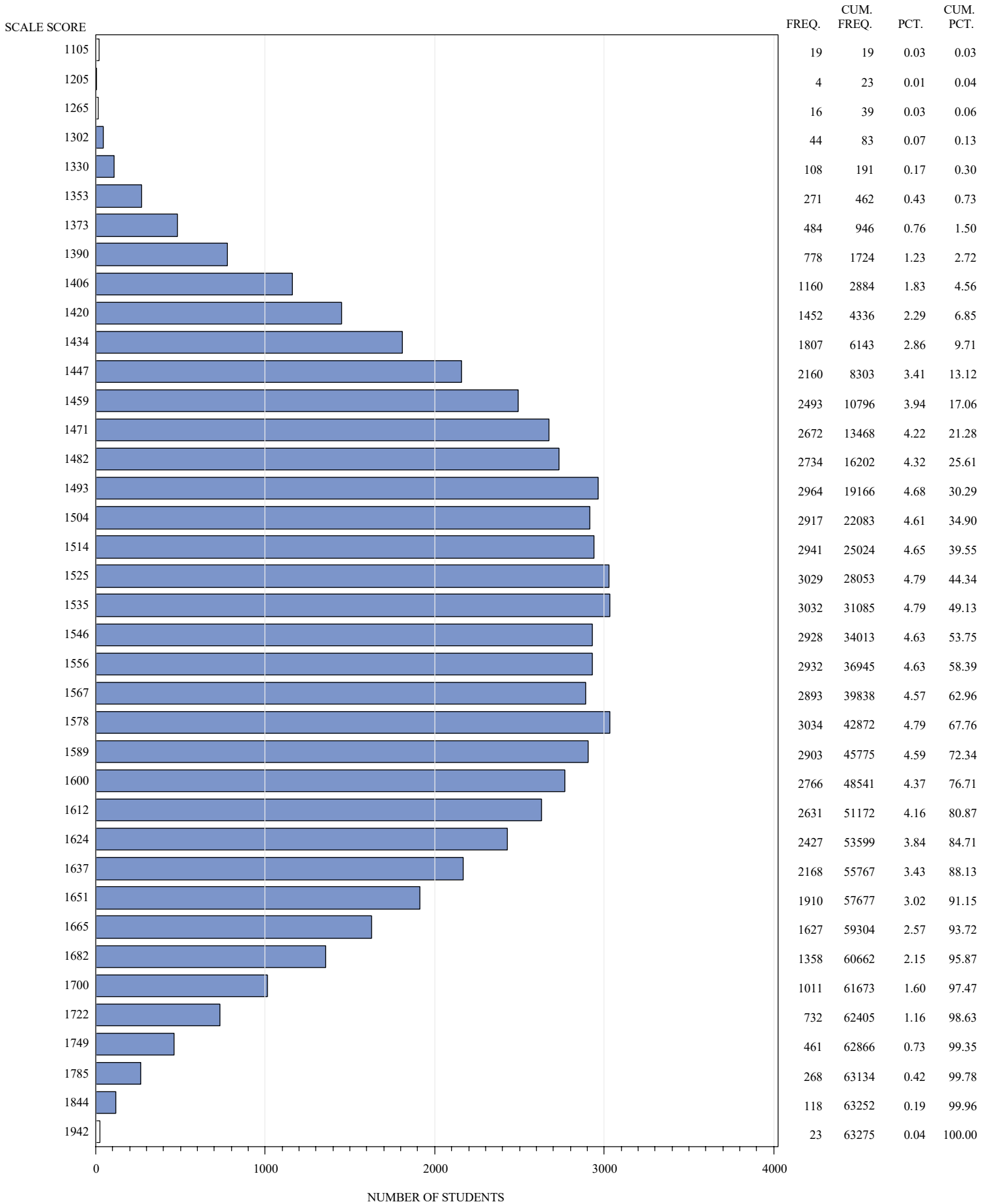
**Figure D.5.4 2018 TELPAS Grade 5 Reading
Frequency Distribution of Scale Scores
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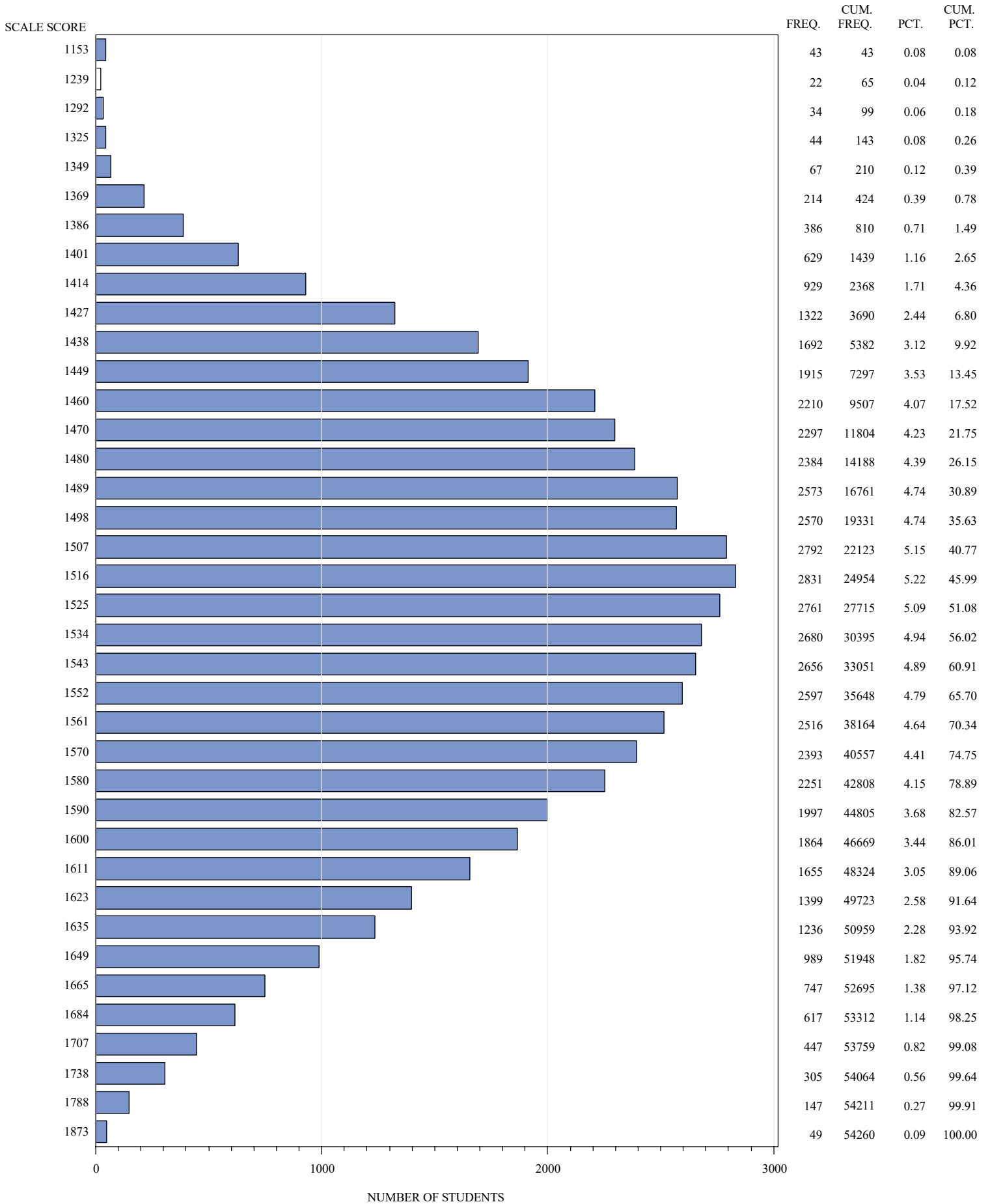
**Figure D.5.5 2018 TELPAS Grade 6 Reading
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Online Students**



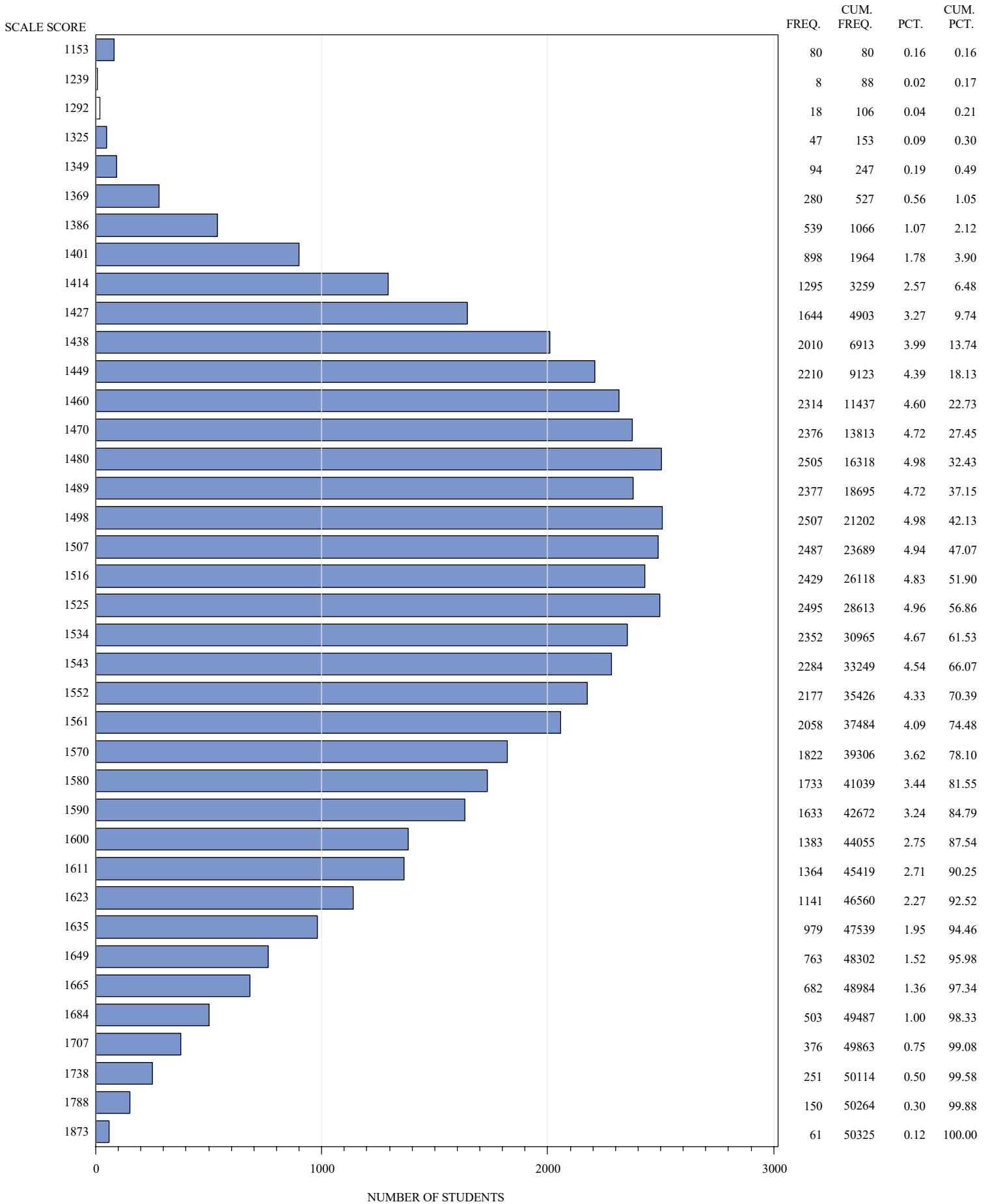
**Figure D.5.6 2018 TELPAS Grade 7 Reading
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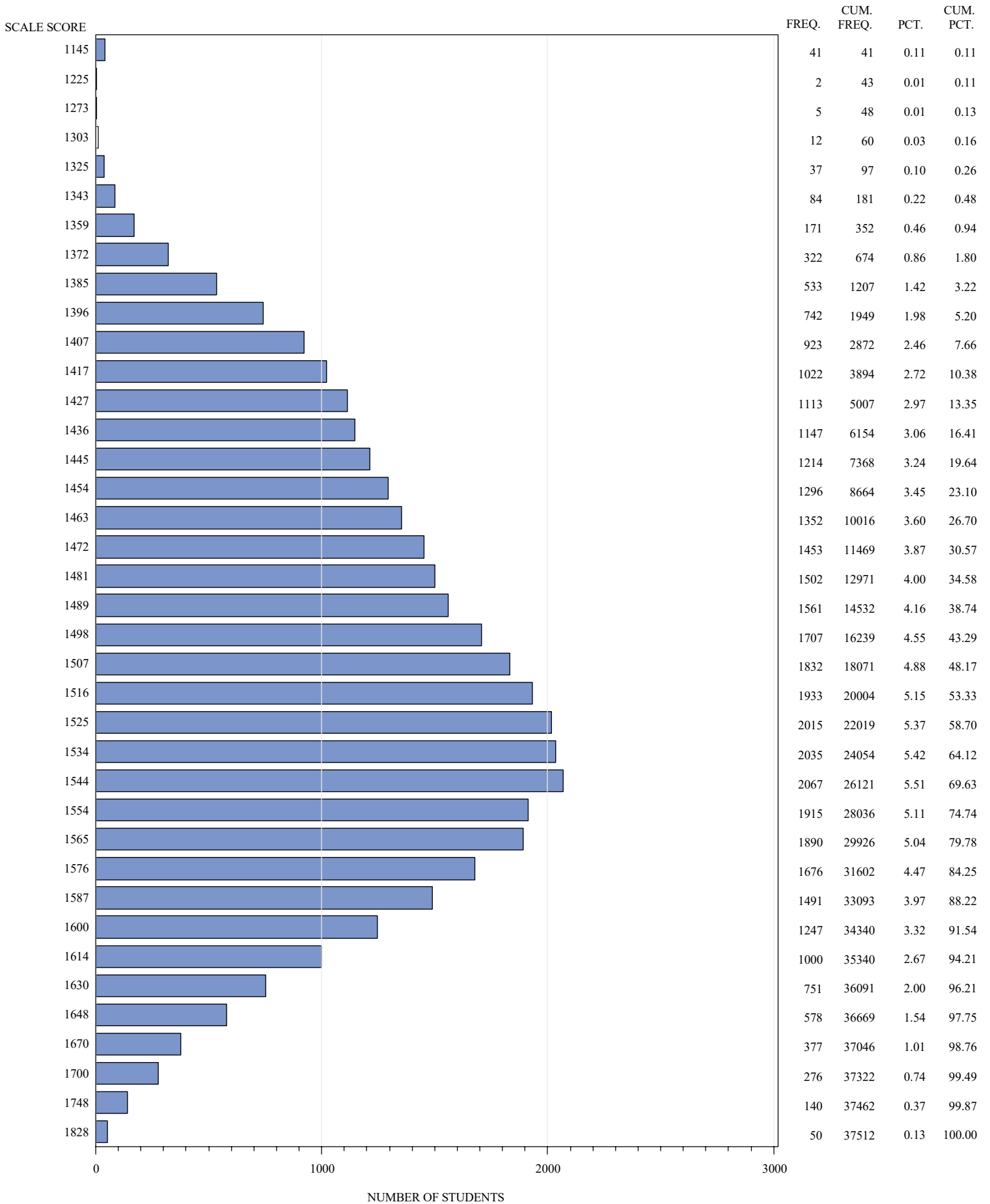
**Figure D.5.7 2018 TELPAS Grade 8 Reading
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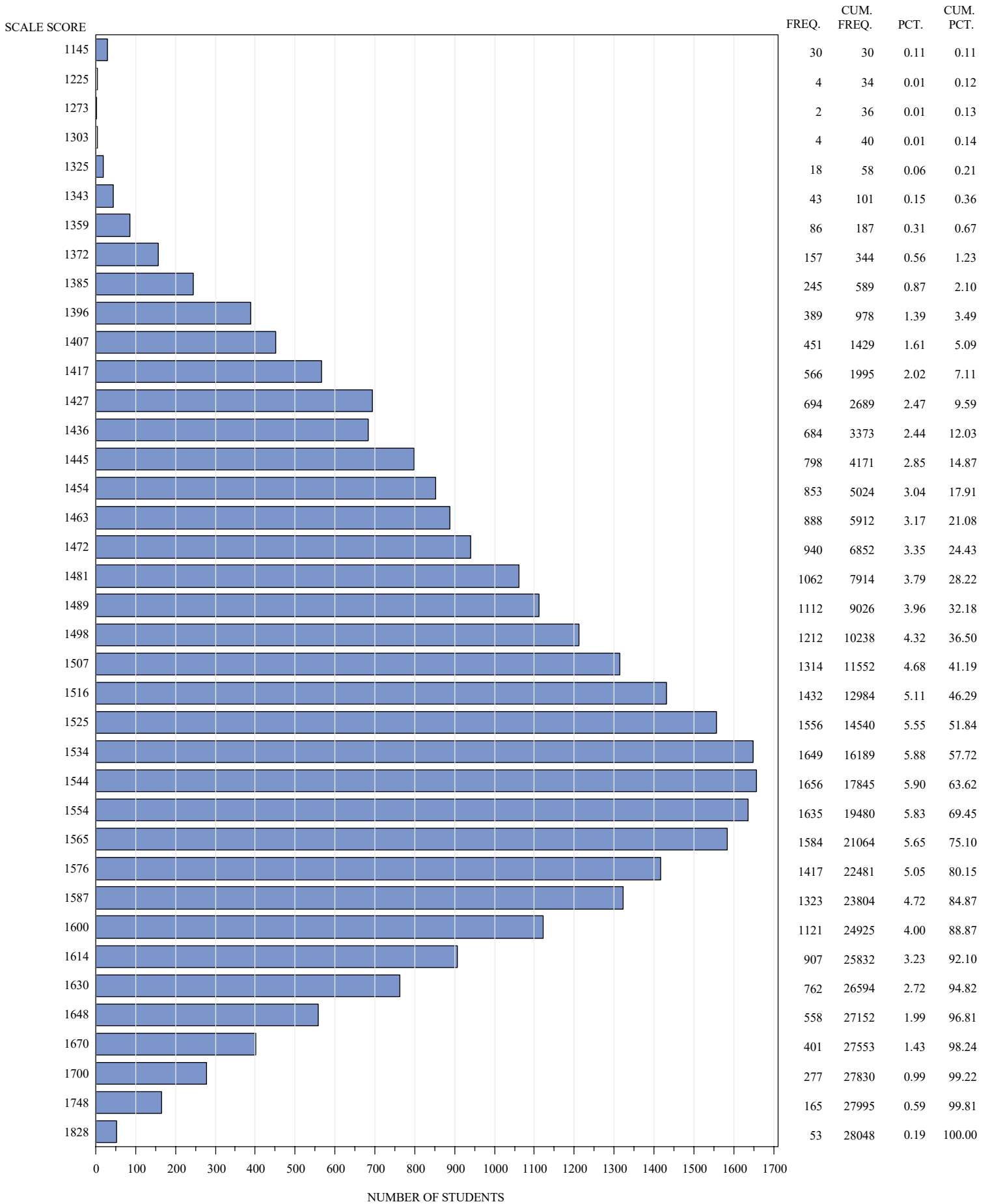
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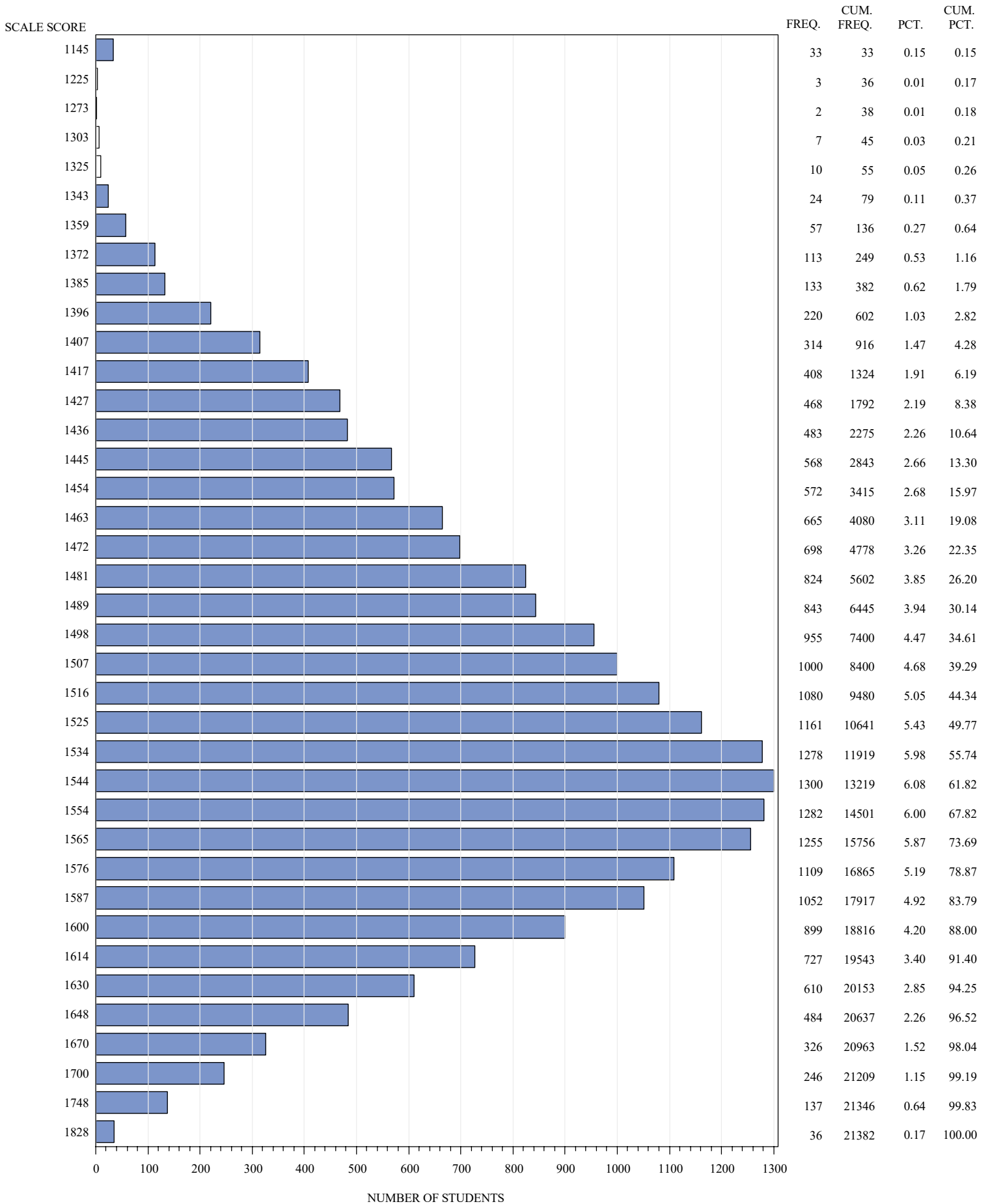
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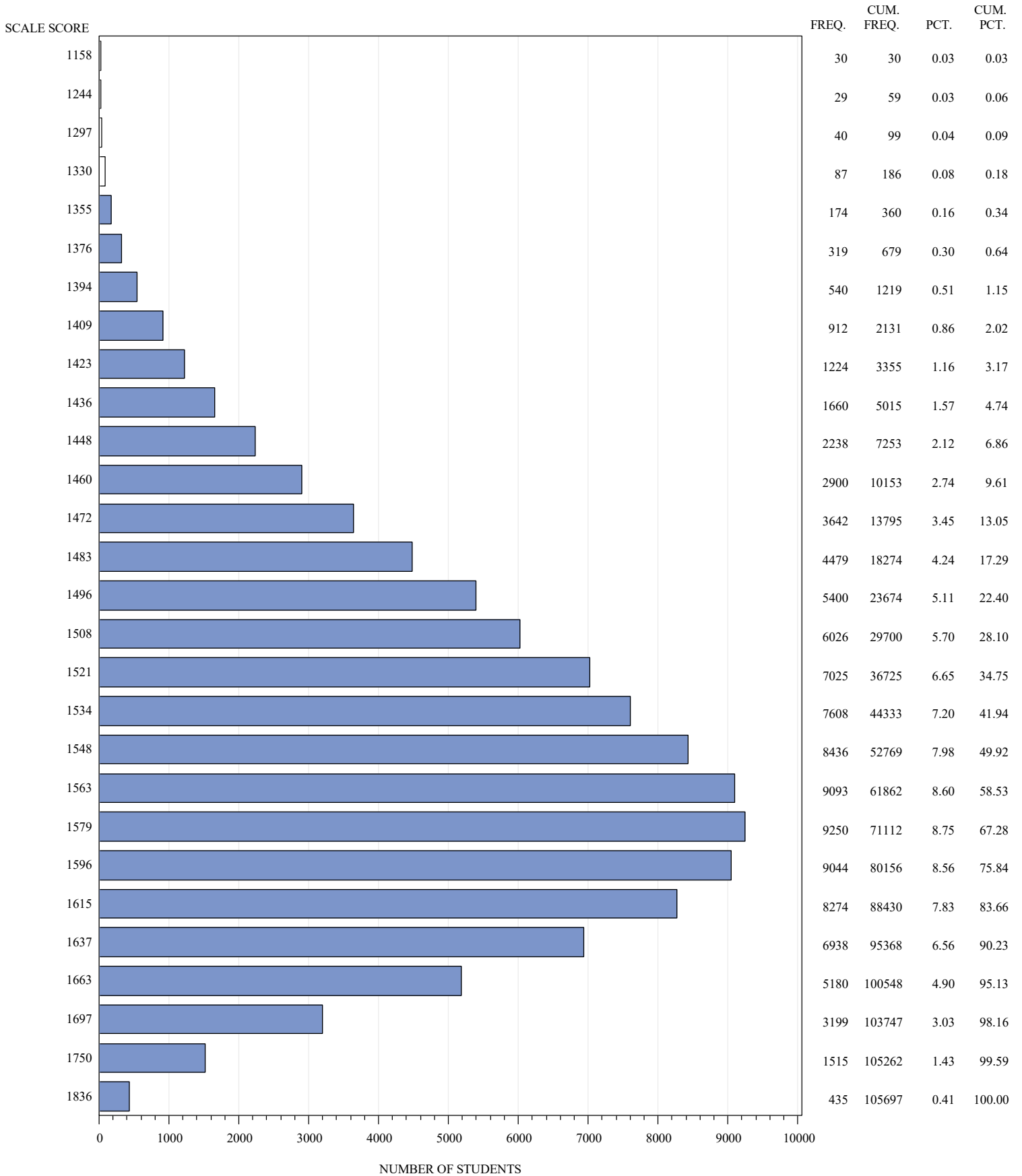
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**Figure D.5.11 2018 TELPAS Grade 12 Reading
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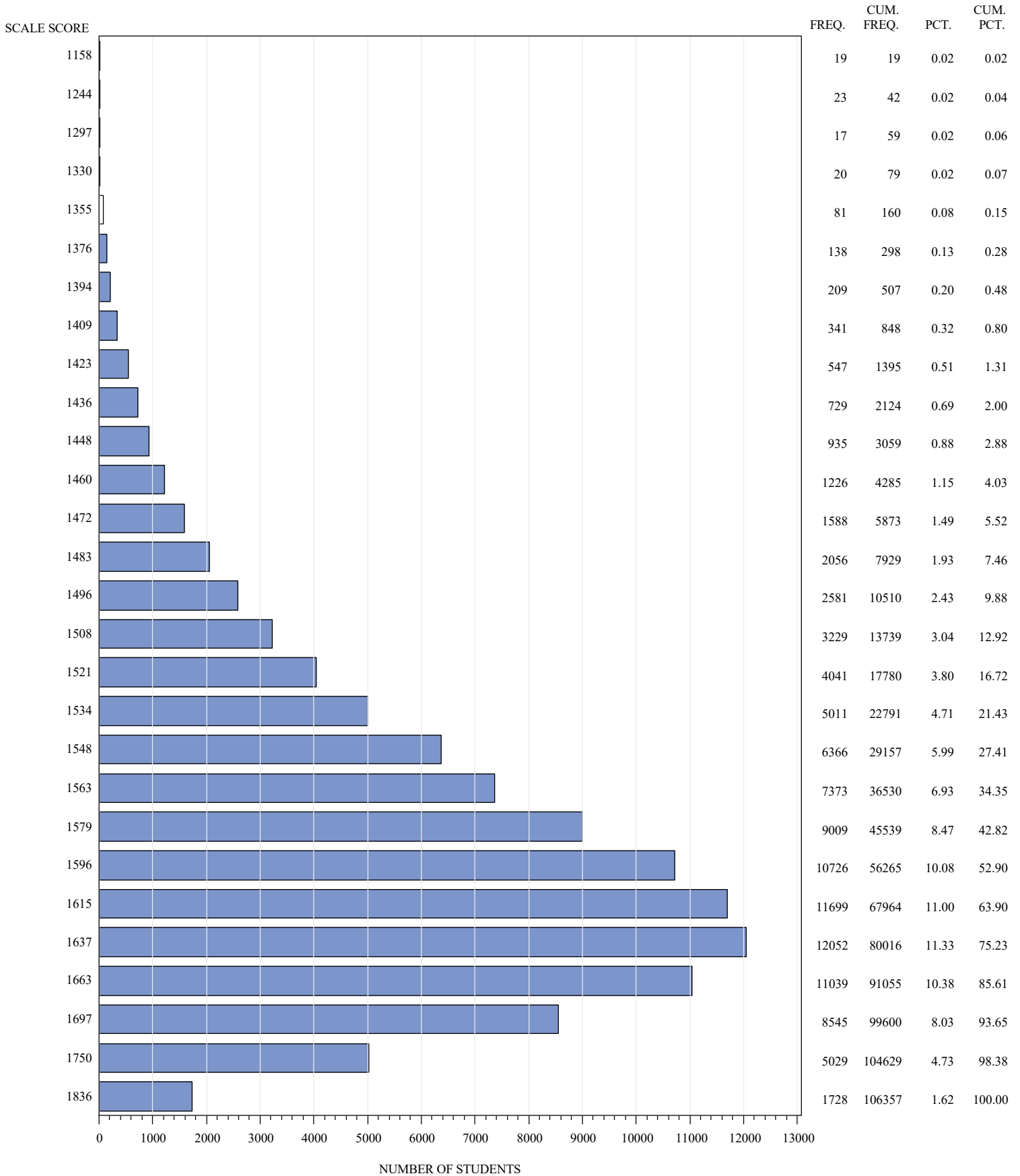
**Figure D.5.12 2018 TELPAS Grade 2 Listening
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All Students**



Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

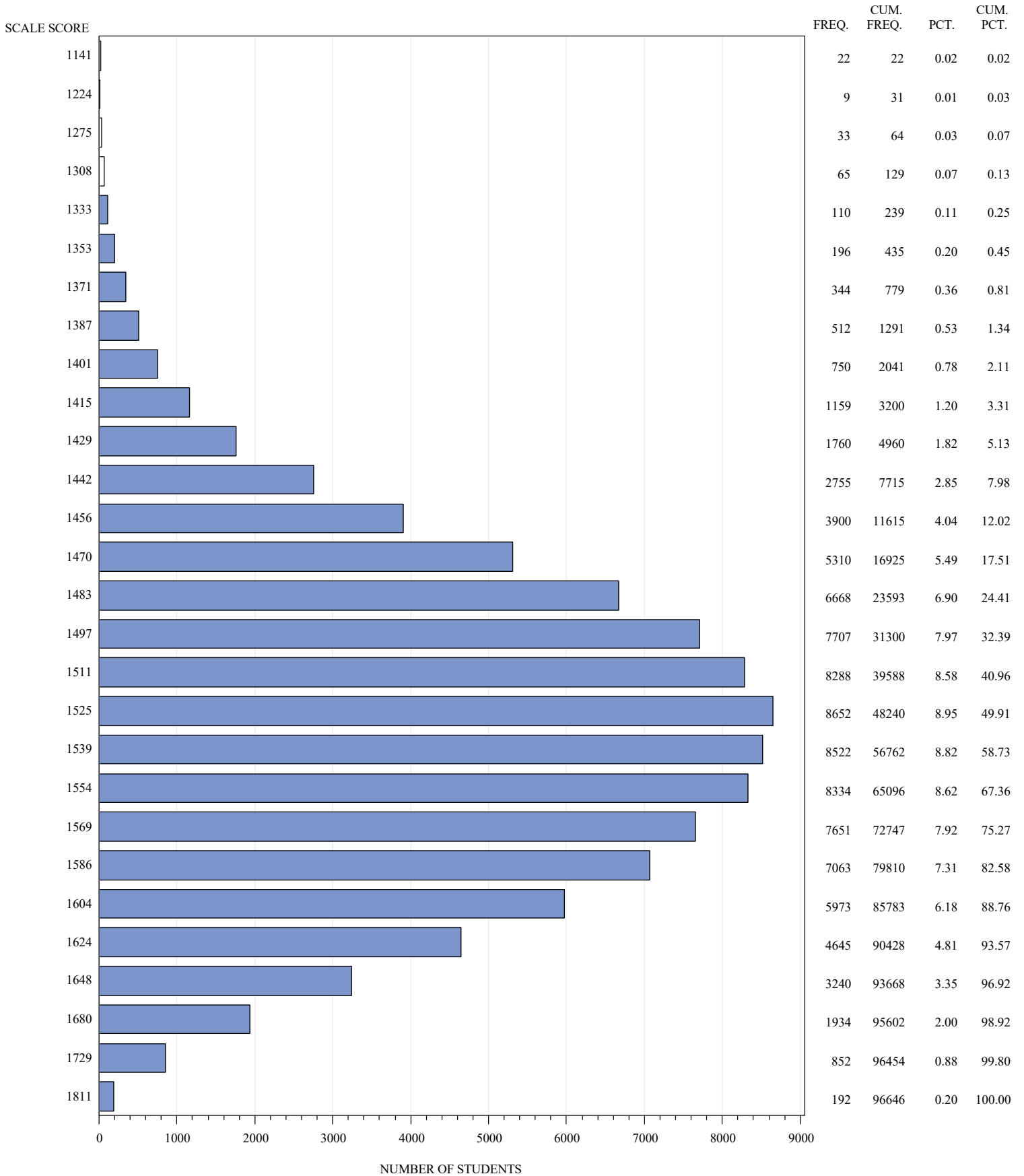
**Figure D.5.13 2018 TELPAS Grade 3 Listening
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All Students**



Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

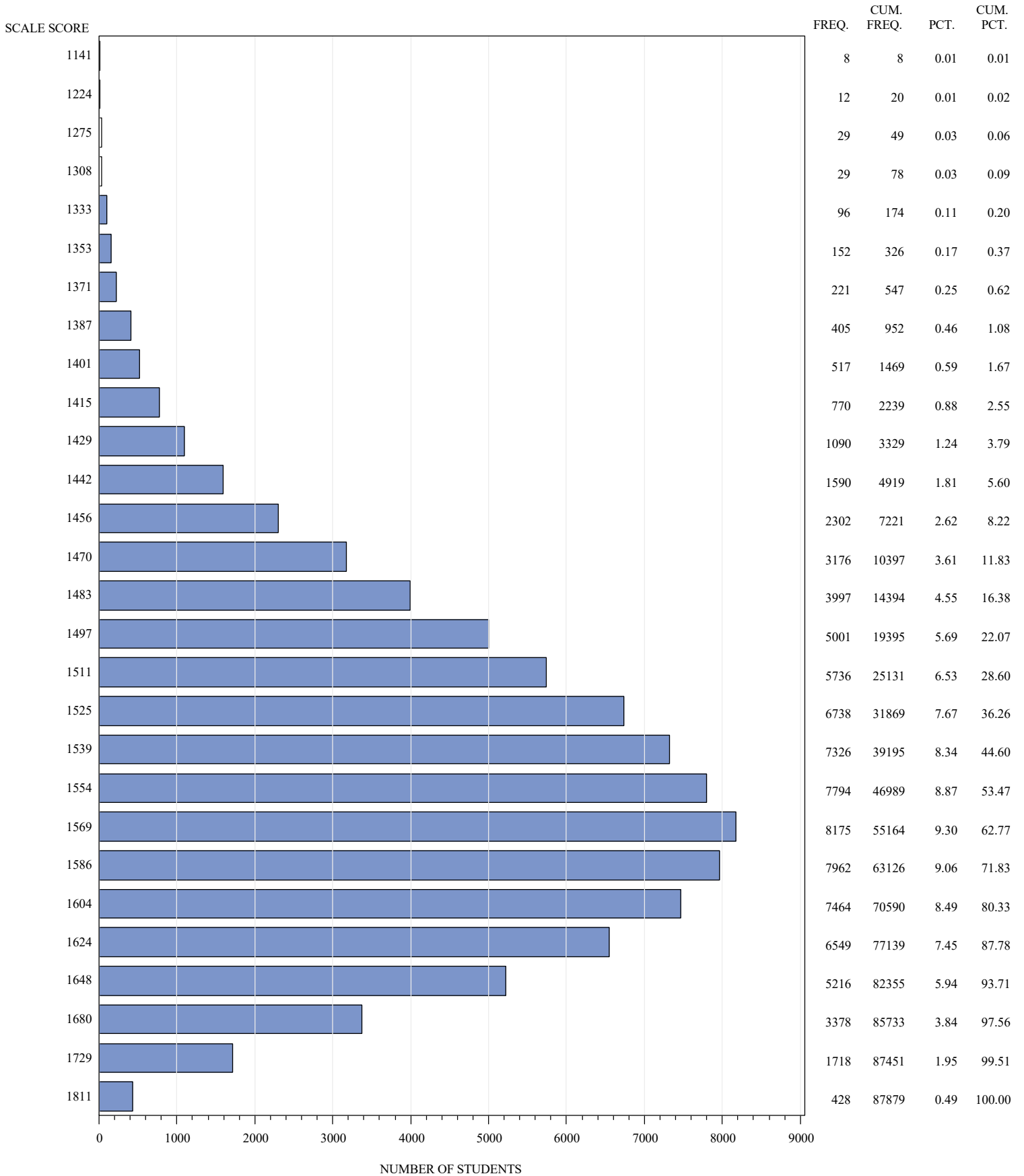
**Figure D.5.14 2018 TELPAS Grade 4 Listening
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Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

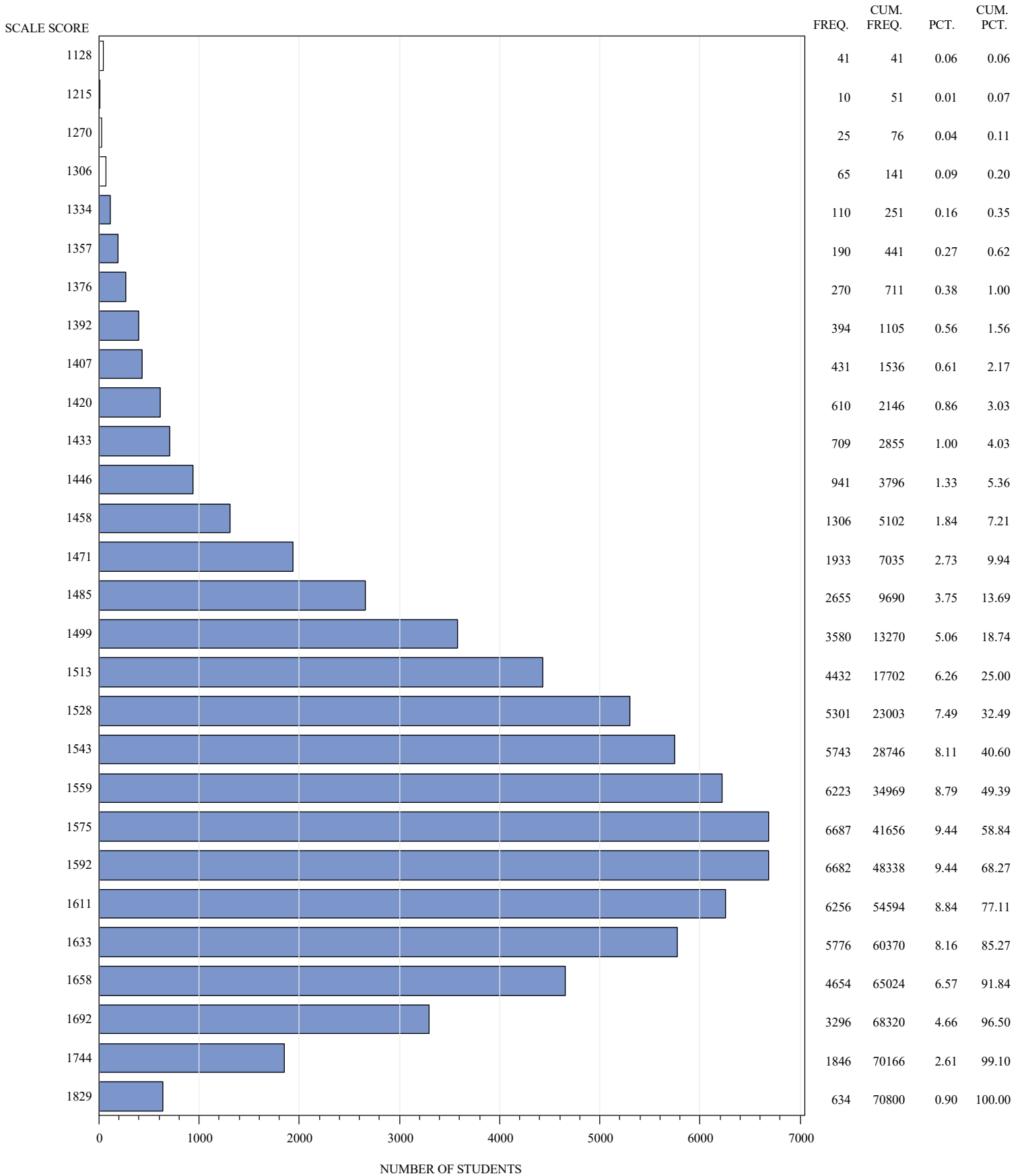
**Figure D.5.15 2018 TELPAS Grade 5 Listening
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All Students**



Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

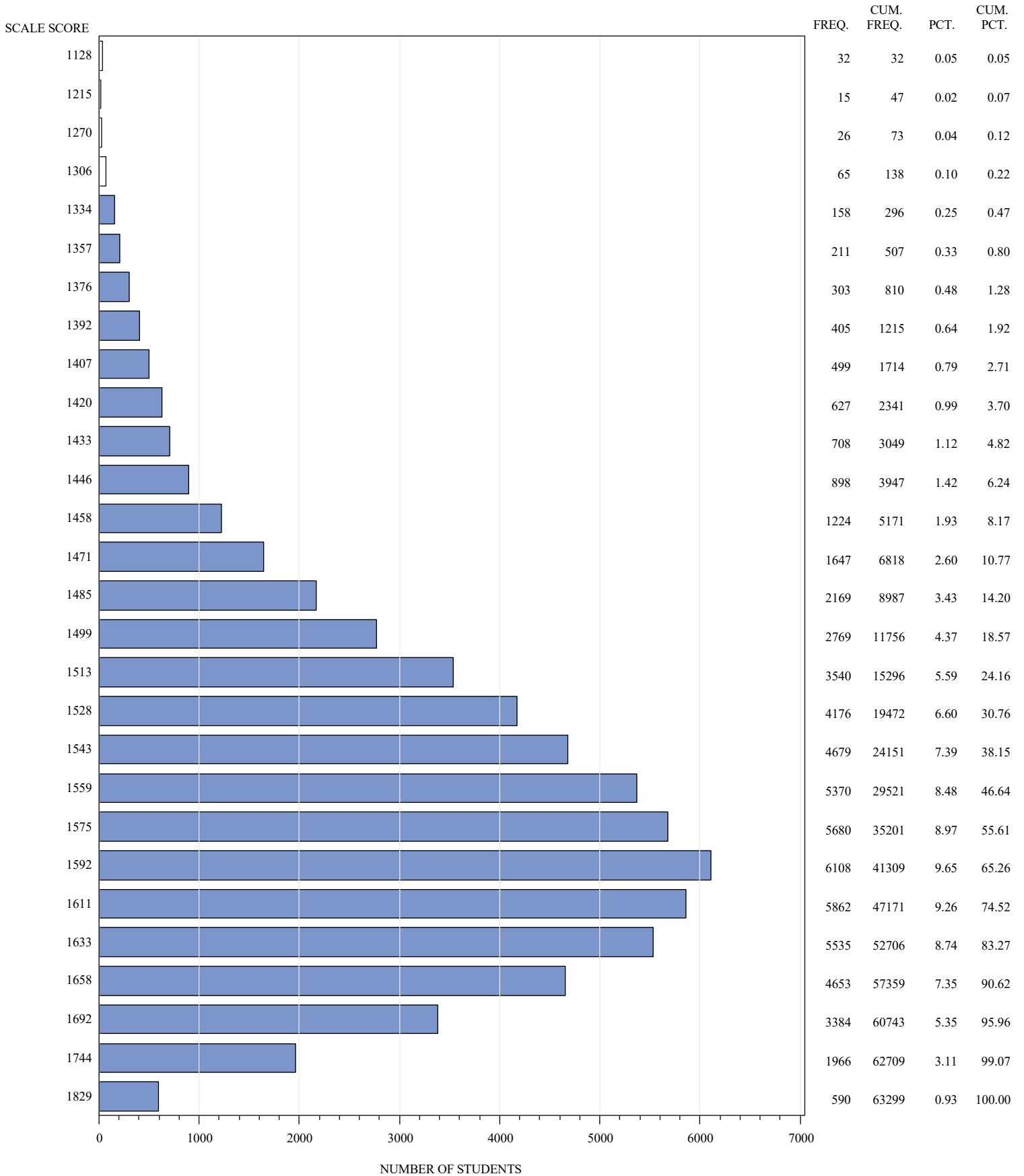
**Figure D.5.16 2018 TELPAS Grade 6 Listening
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All Students**



Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

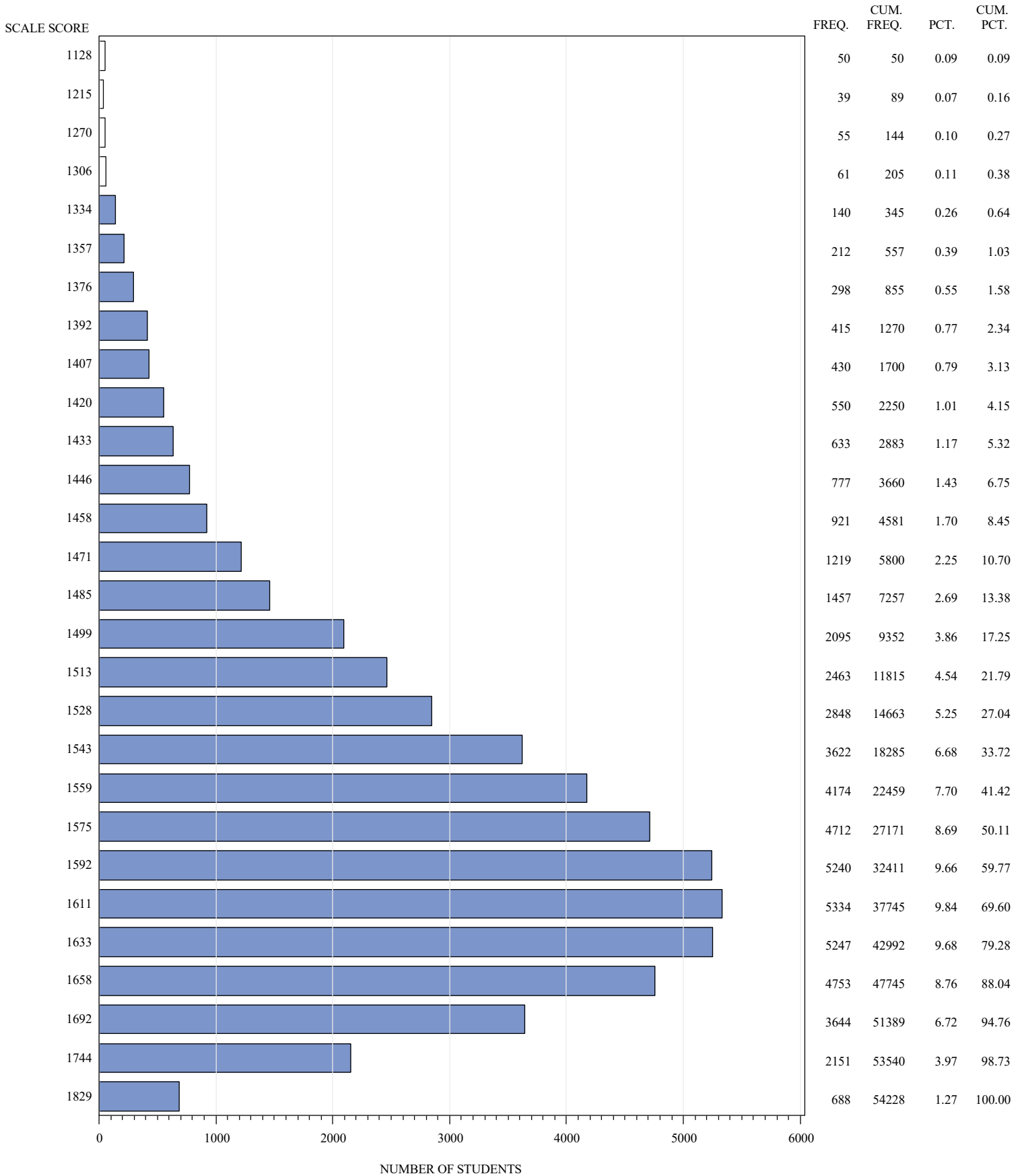
**Figure D.5.17 2018 TELPAS Grade 7 Listening
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Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

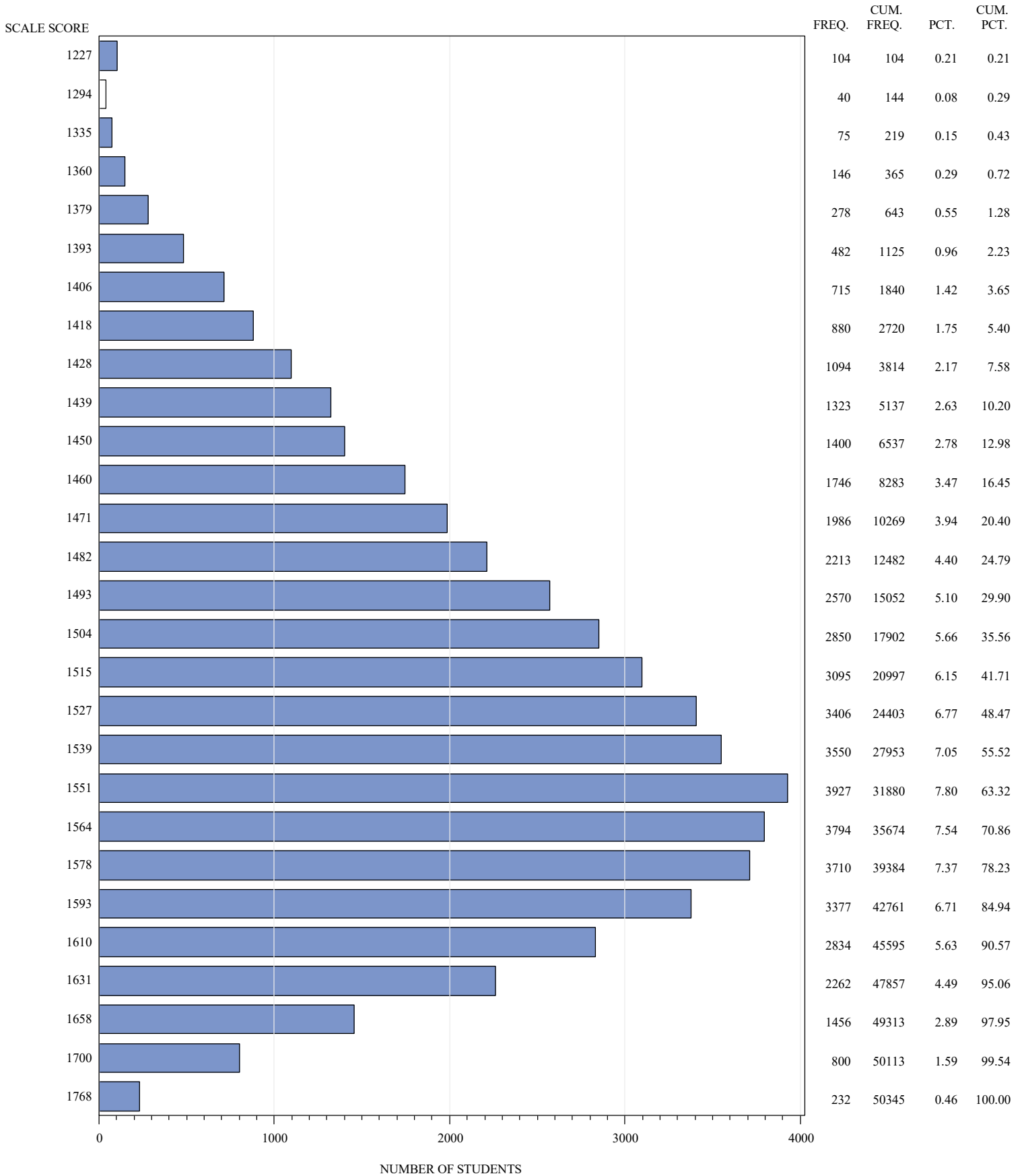
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Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

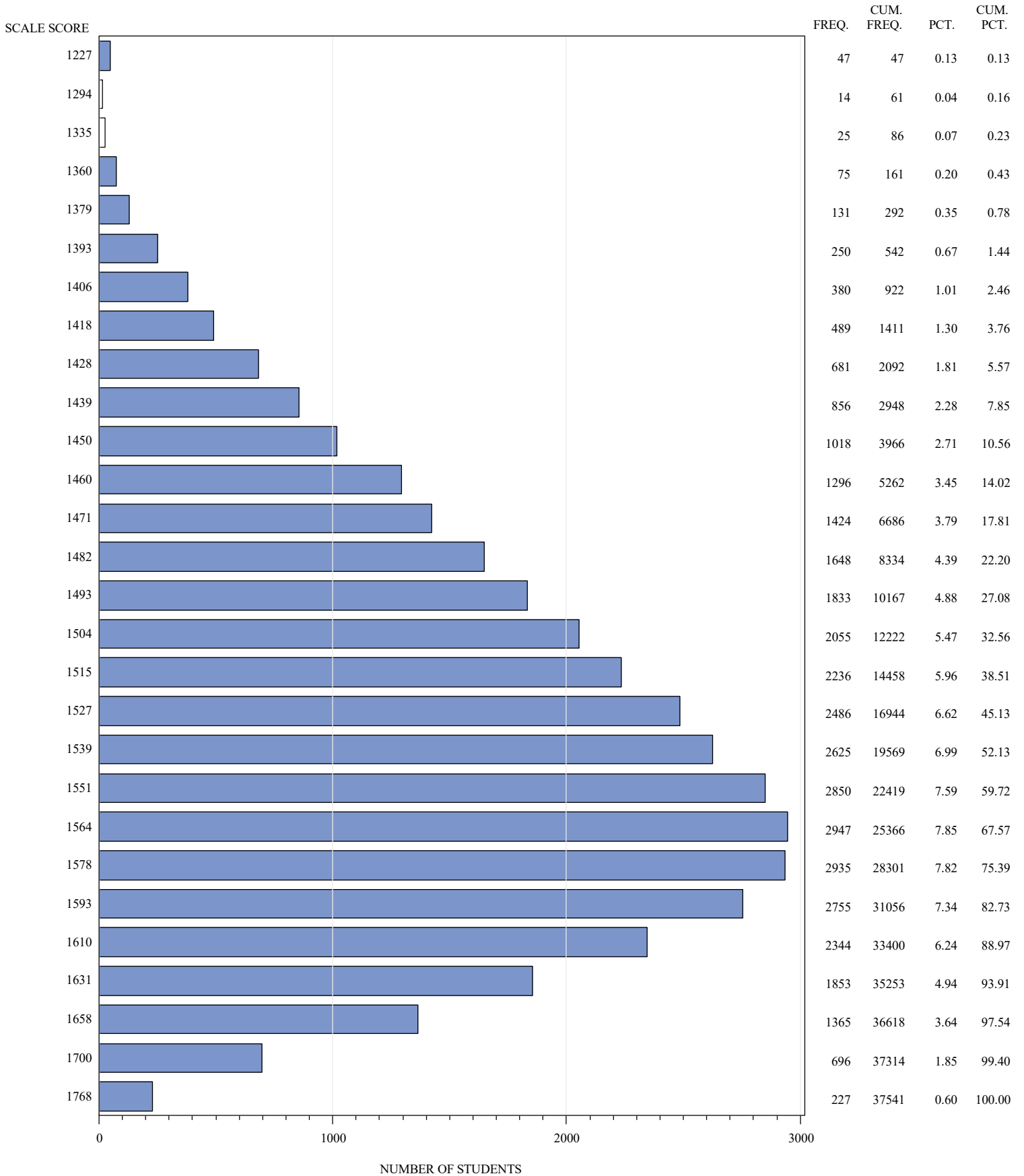
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Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

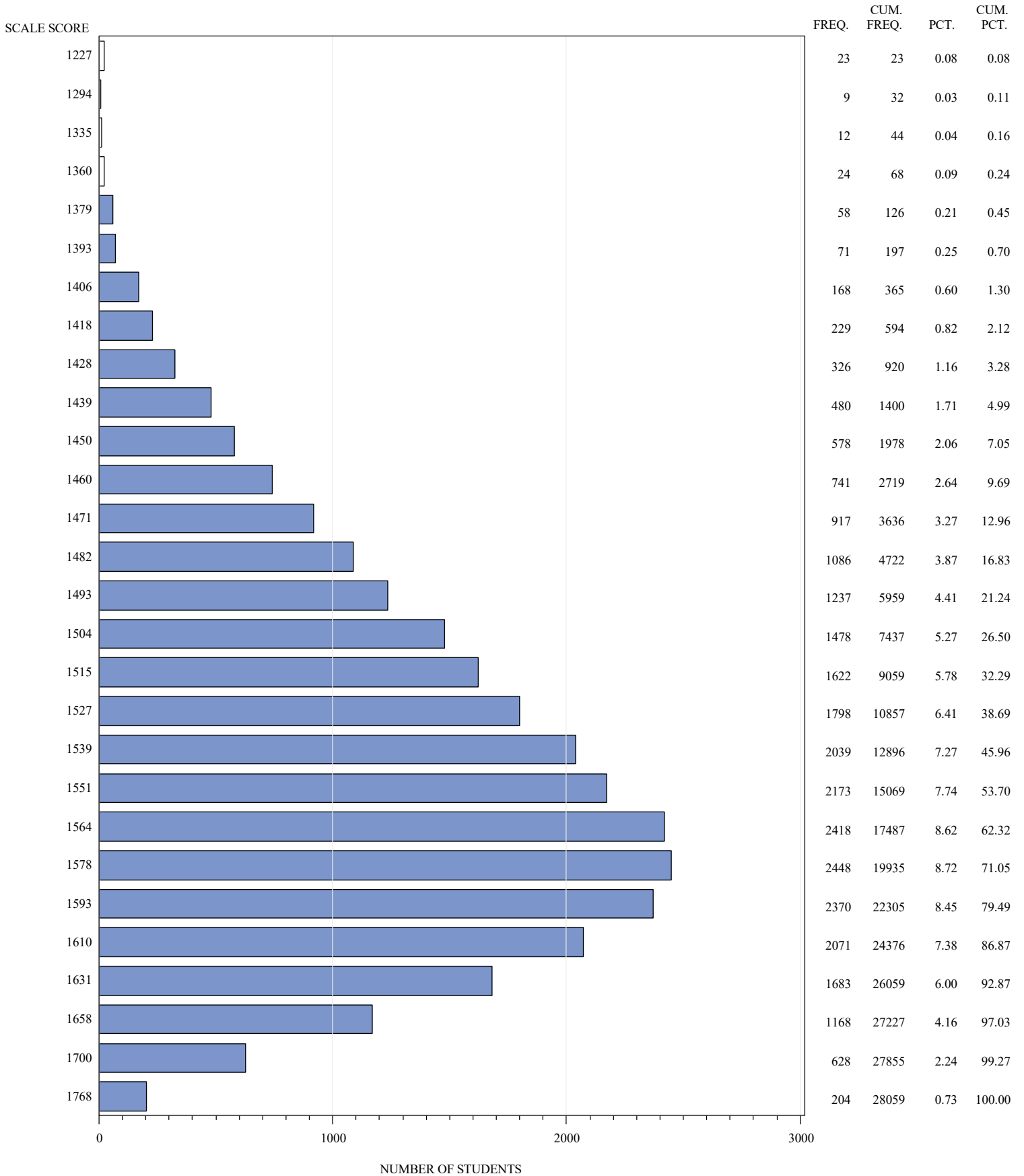
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Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

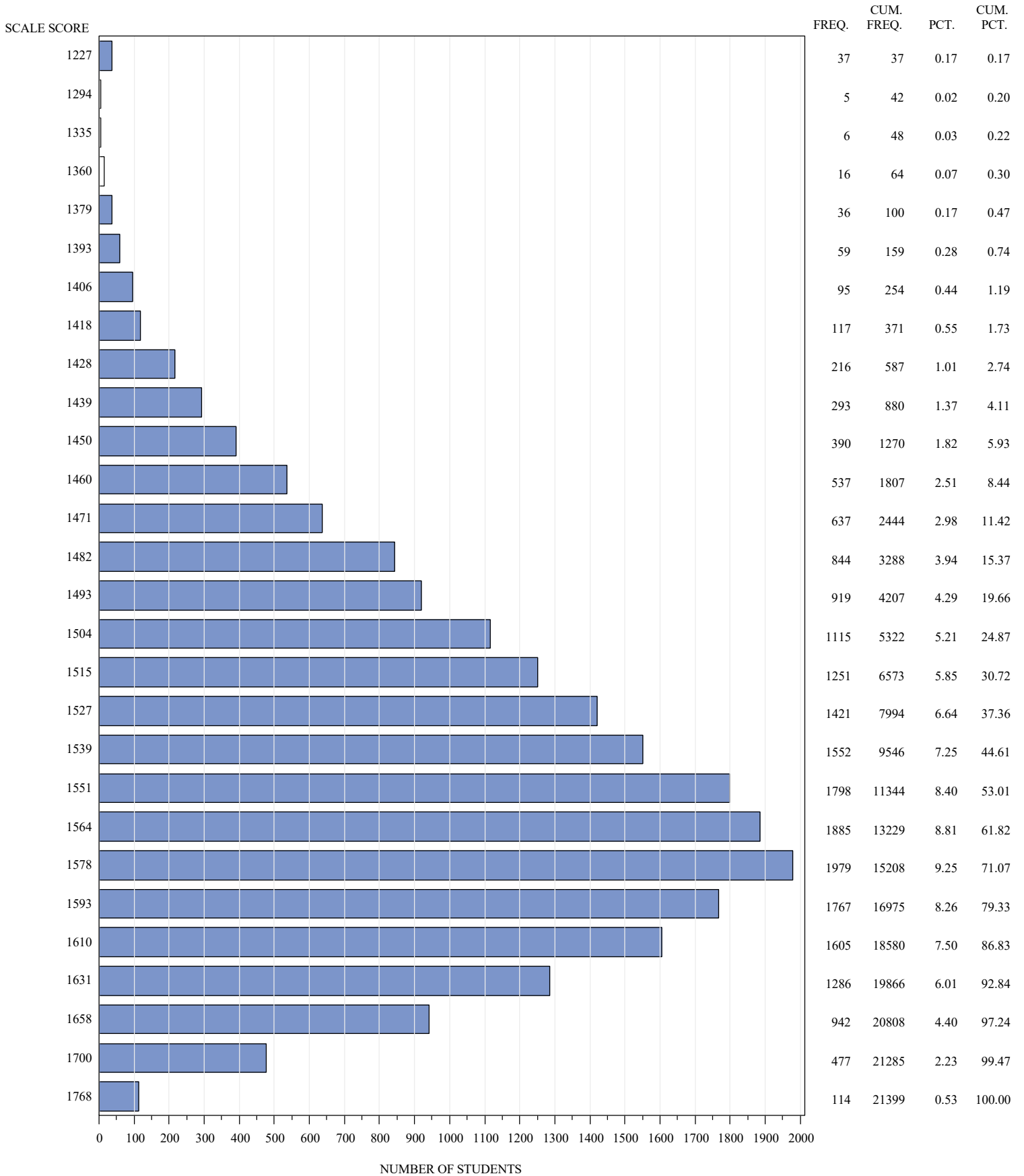
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Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

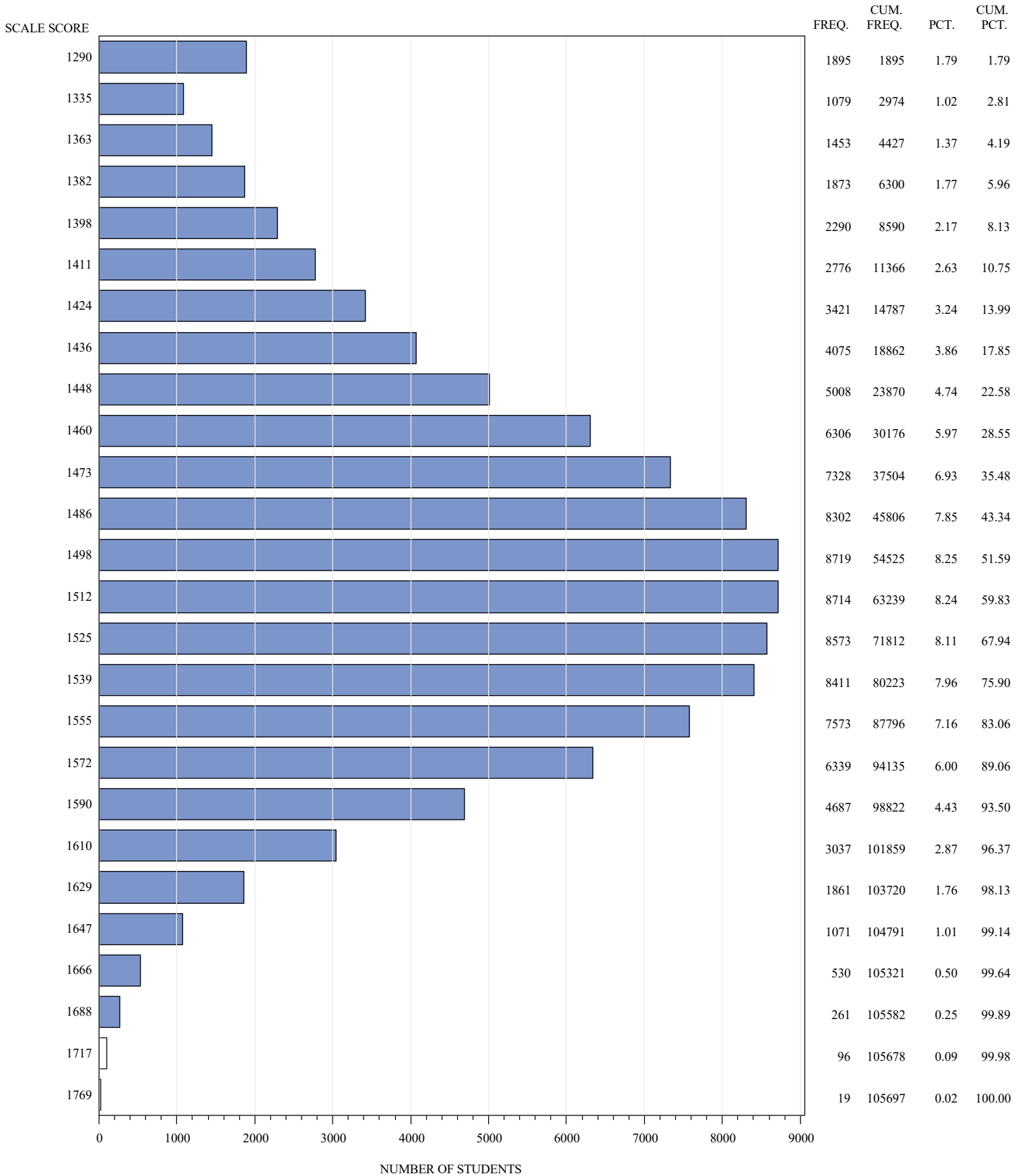
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Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

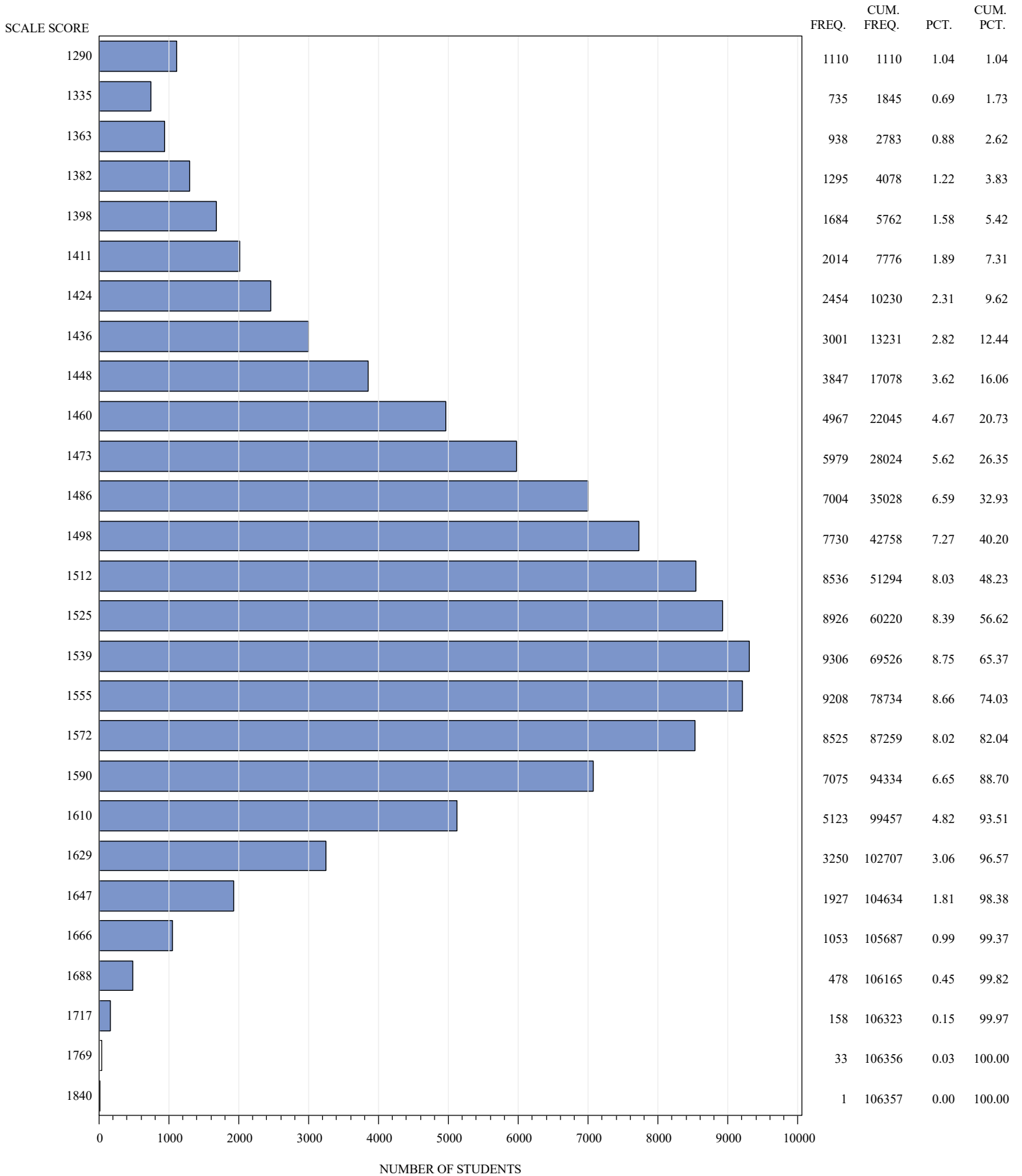
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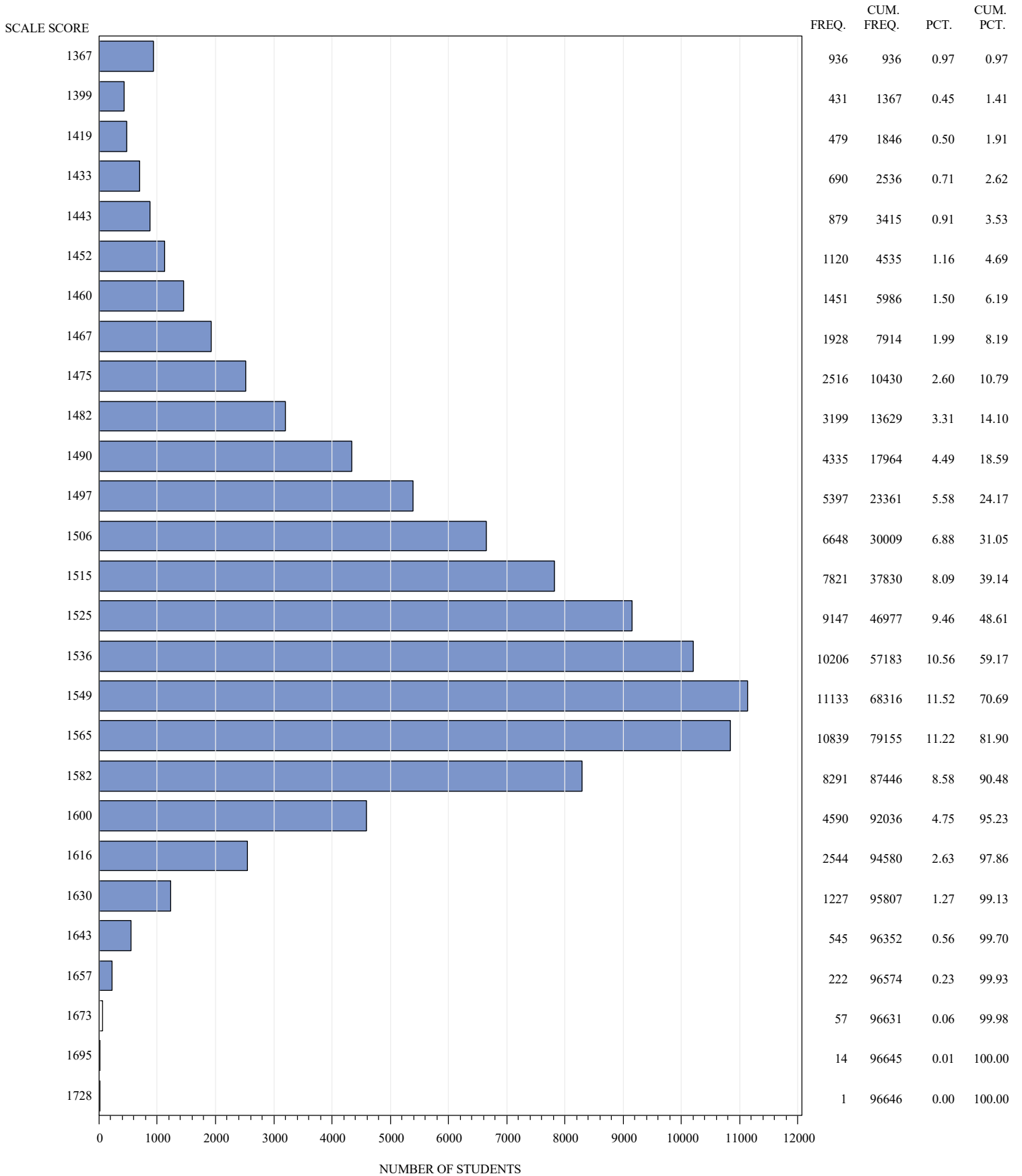
Students who took the speaking holistic rating version of the test are not included in the frequency distribution tables.

**Figure D.5.24 2018 TELPAS Grade 3 Speaking
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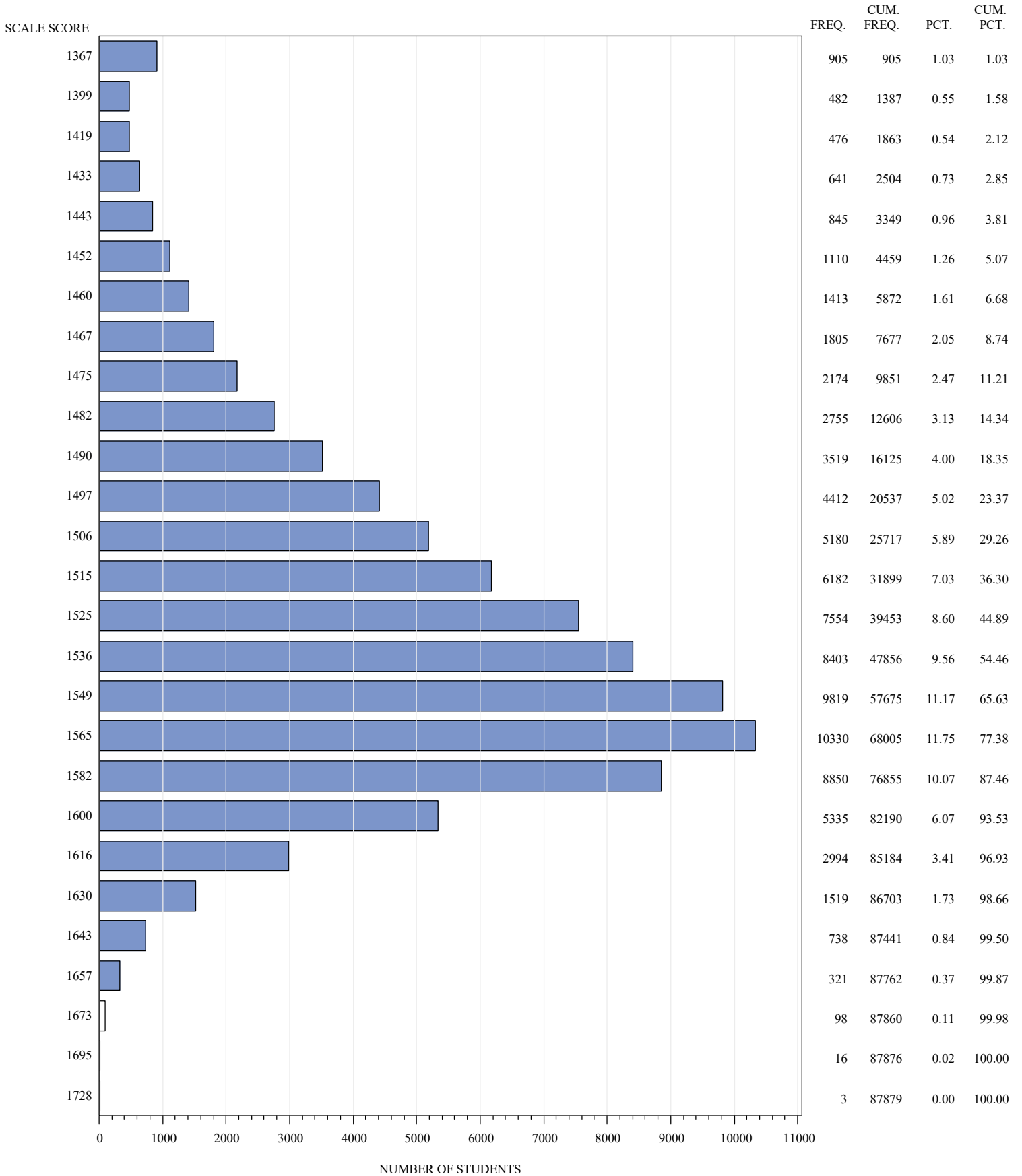
Notes:
Students who took the speaking holistic rating version of the test are not included in the frequency distribution tables.

**Figure D.5.25 2018 TELPAS Grade 4 Speaking
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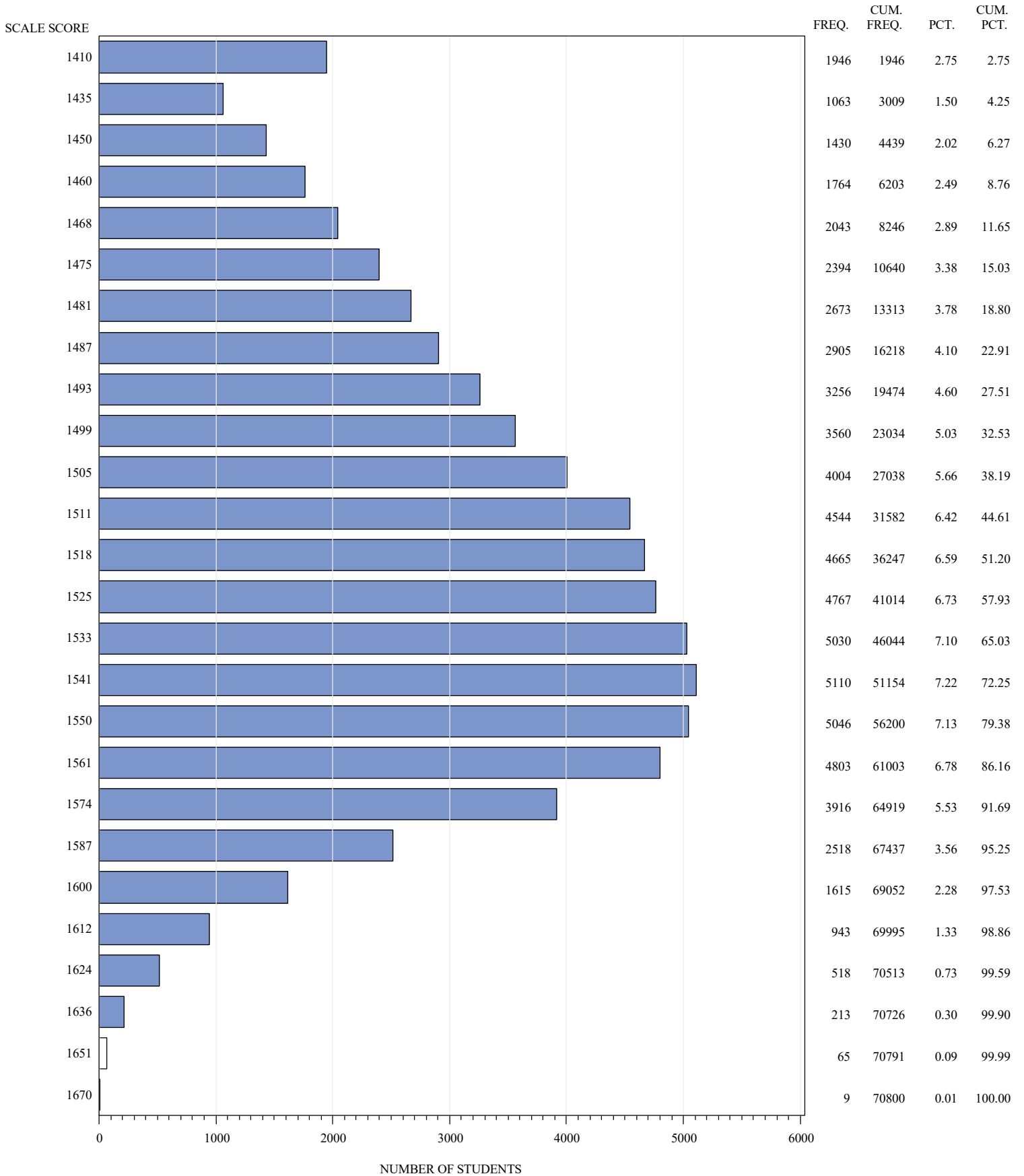
Notes:
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**Figure D.5.26 2018 TELPAS Grade 5 Speaking
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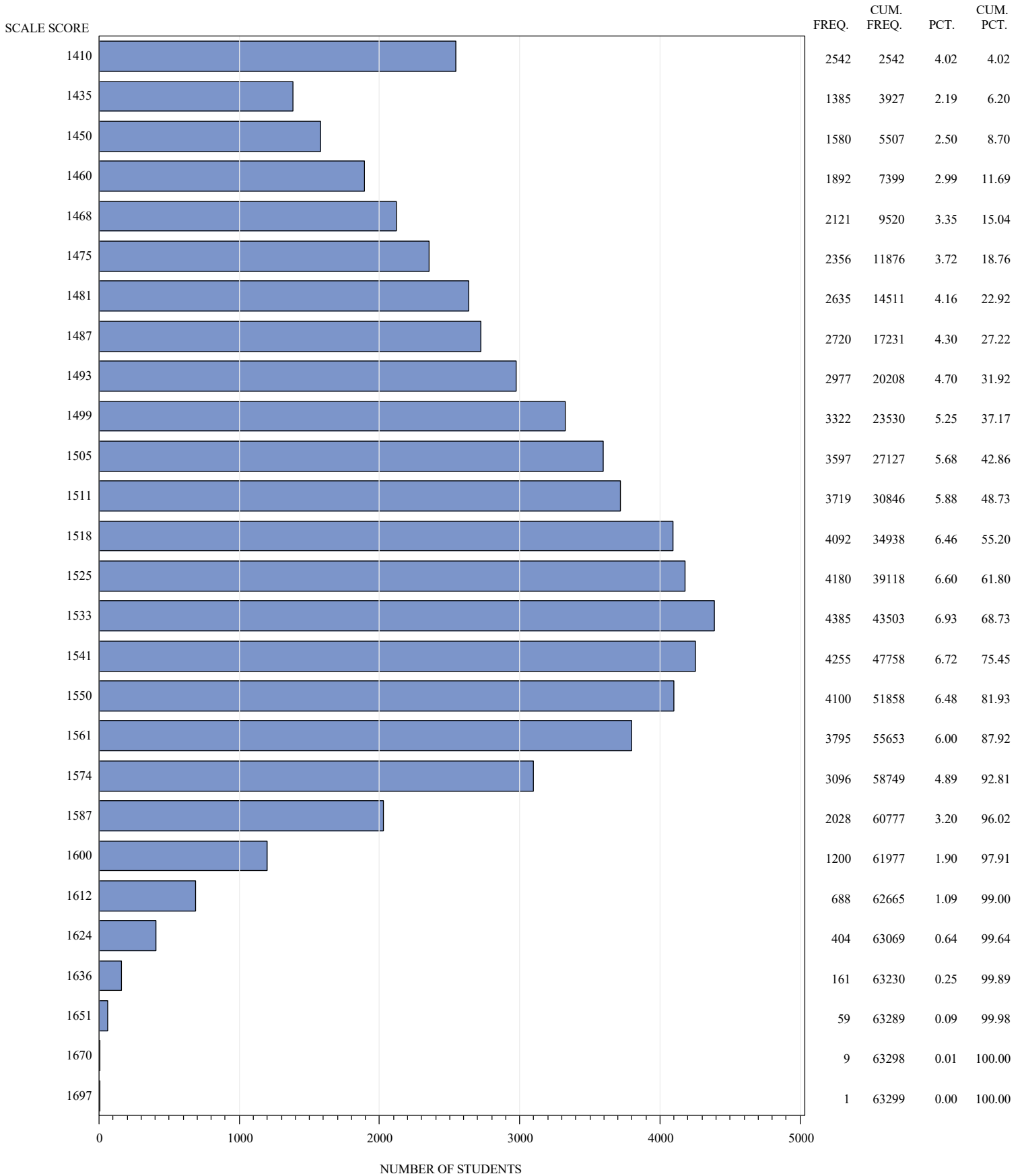
Notes:
Students who took the speaking holistic rating version of the test are not included in the frequency distribution tables.

**Figure D.5.27 2018 TELPAS Grade 6 Speaking
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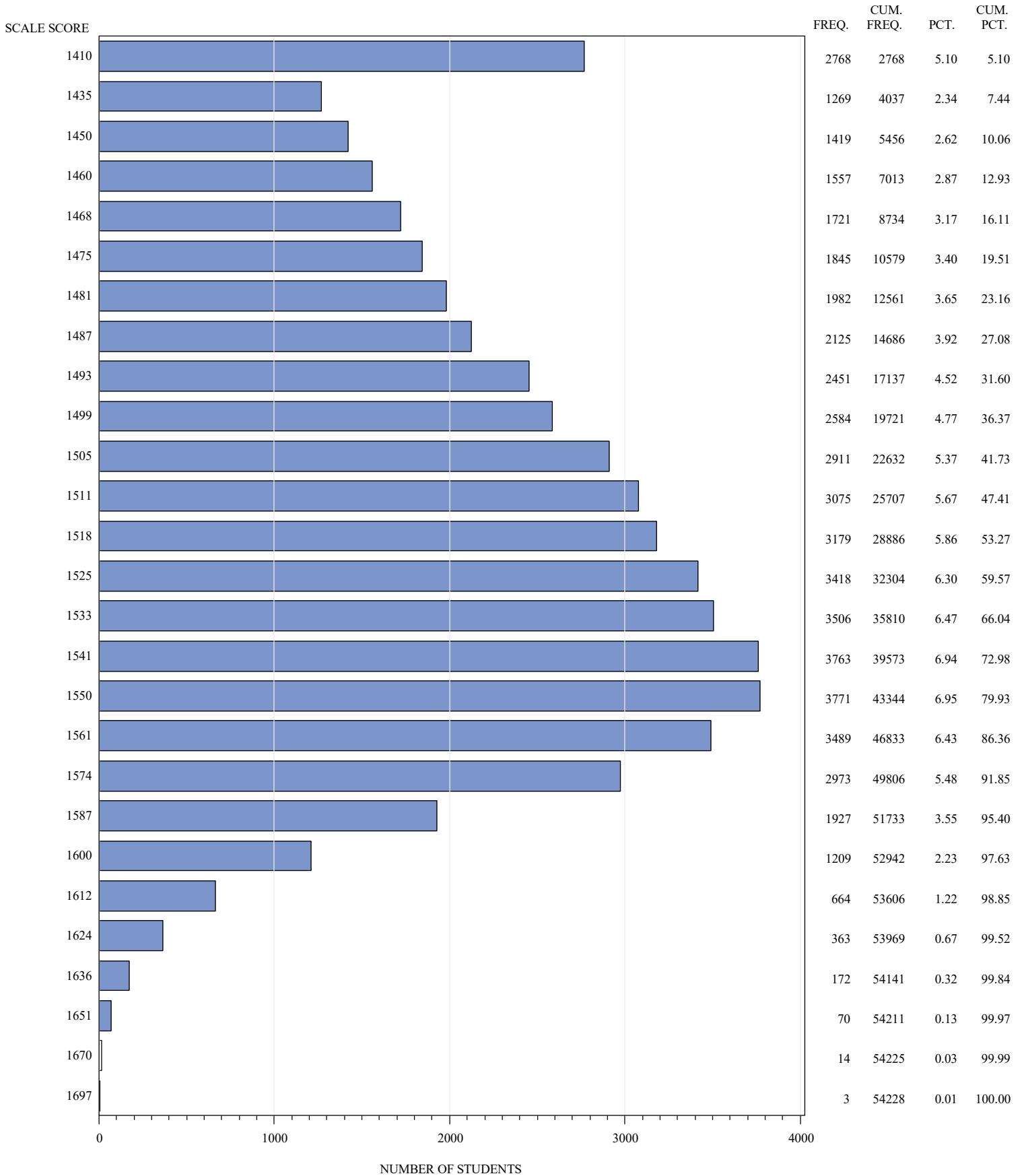
Notes:
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**Figure D.5.28 2018 TELPAS Grade 7 Speaking
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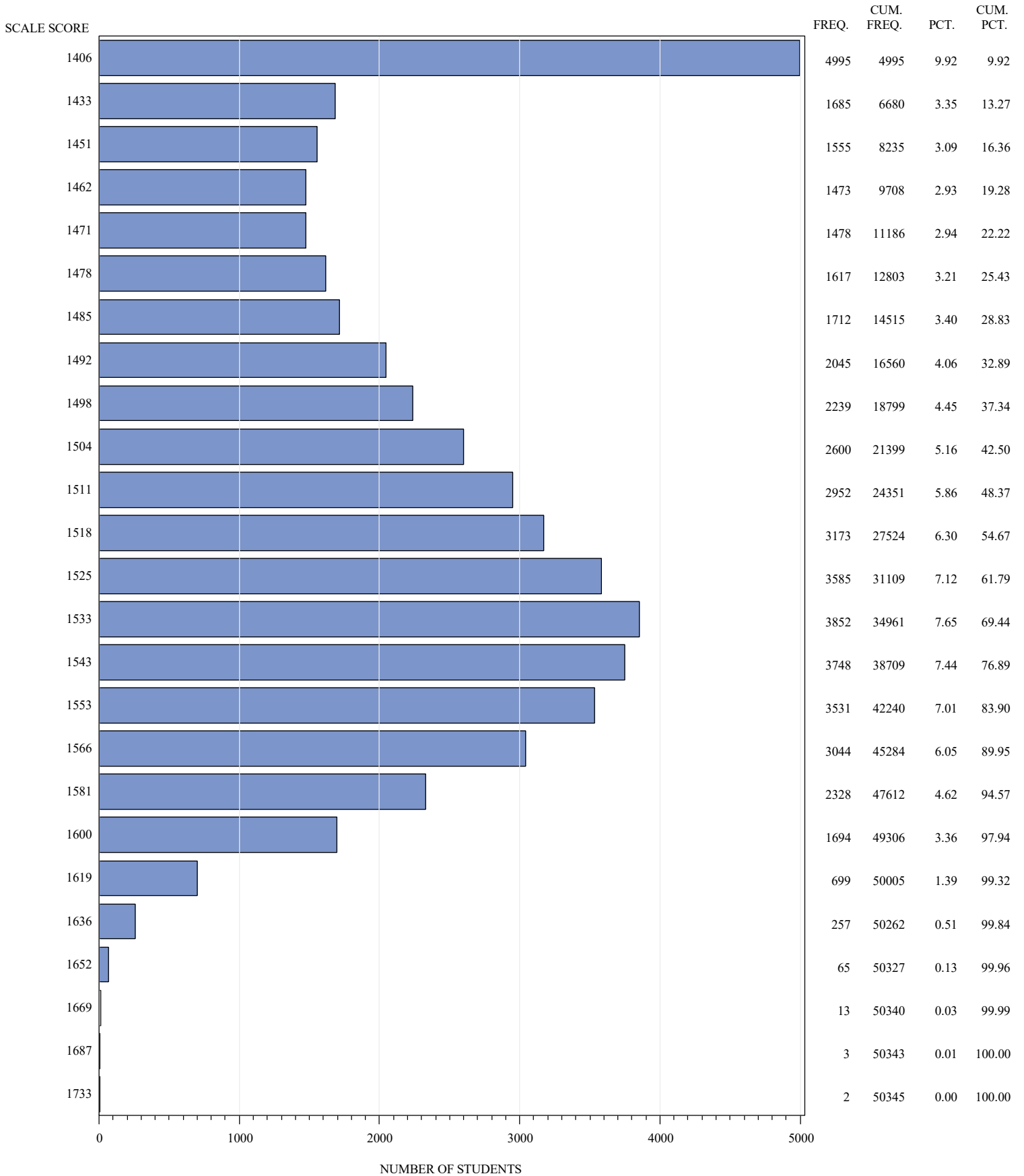
Notes:
Students who took the speaking holistic rating version of the test are not included in the frequency distribution tables.

**Figure D.5.29 2018 TELPAS Grade 8 Speaking
Frequency Distribution of Scale Scores
All Students**



Notes:
Students who took the speaking holistic rating version of the test are not included in the frequency distribution tables.

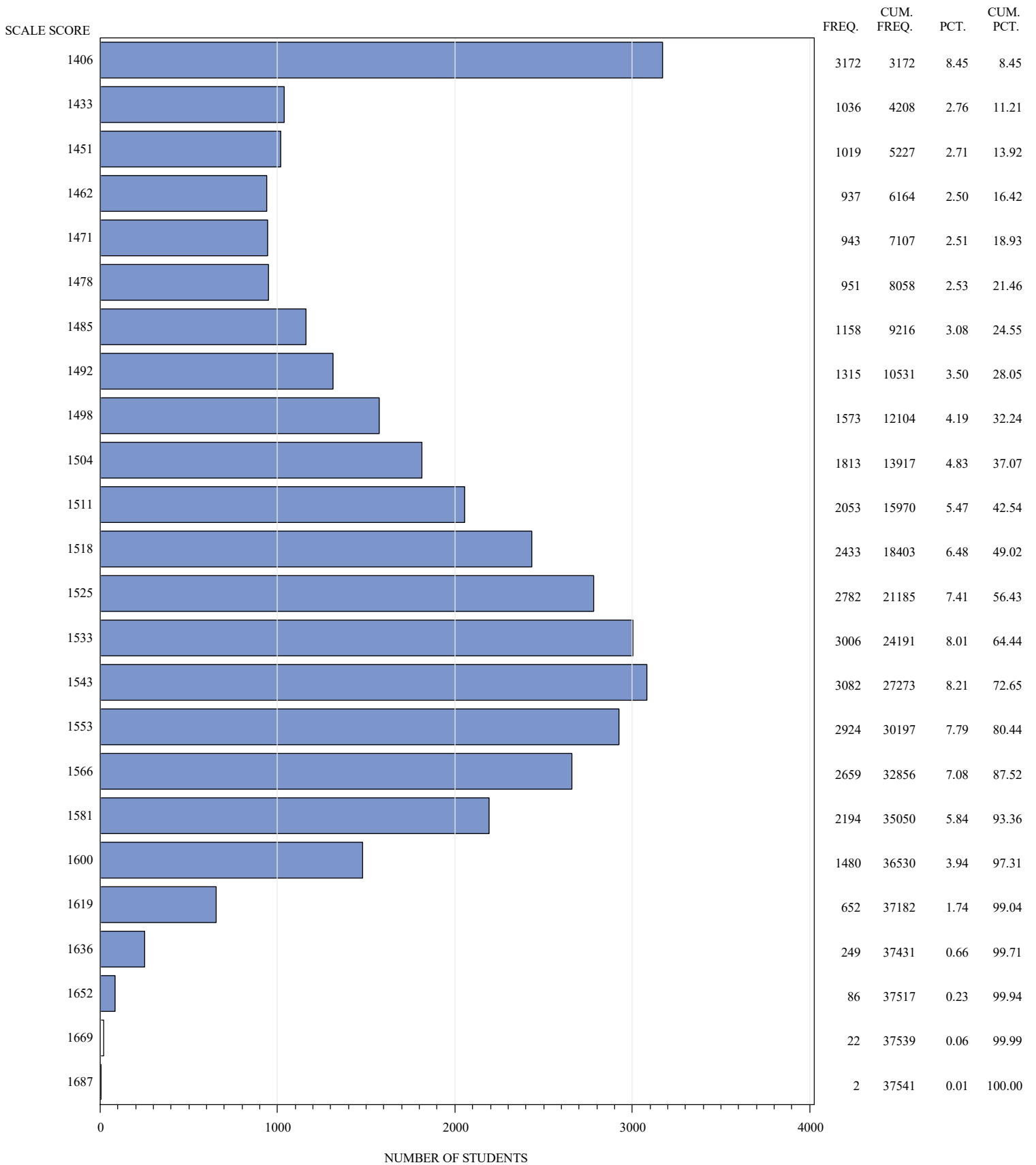
**Figure D.5.30 2018 TELPAS Grade 9 Speaking
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Notes:

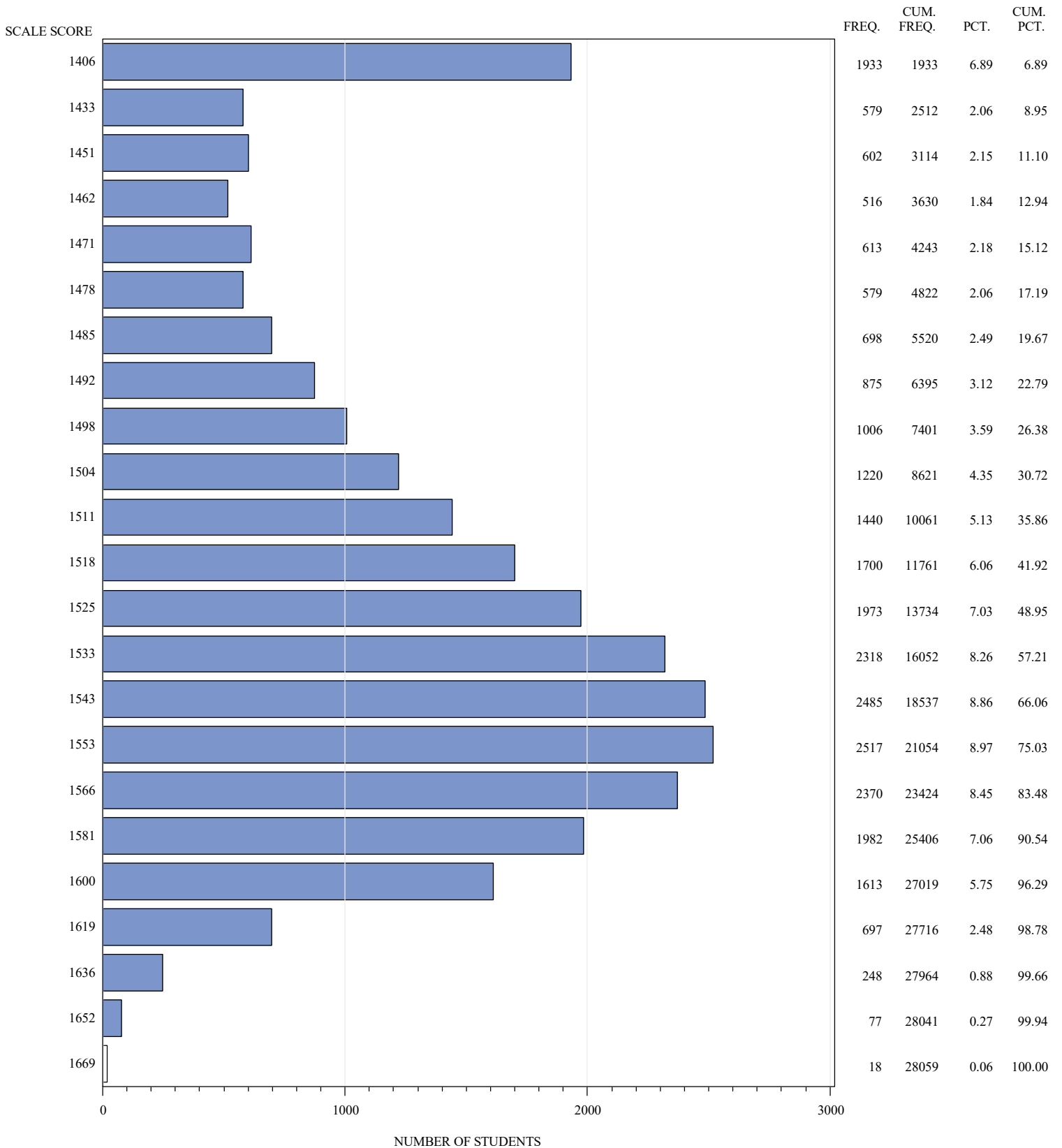
Students who took the speaking holistic rating version of the test are not included in the frequency distribution tables.

**Figure D.5.31 2018 TELPAS Grade 10 Speaking
Frequency Distribution of Scale Scores
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Notes:
Students who took the speaking holistic rating version of the test are not included in the frequency distribution tables.

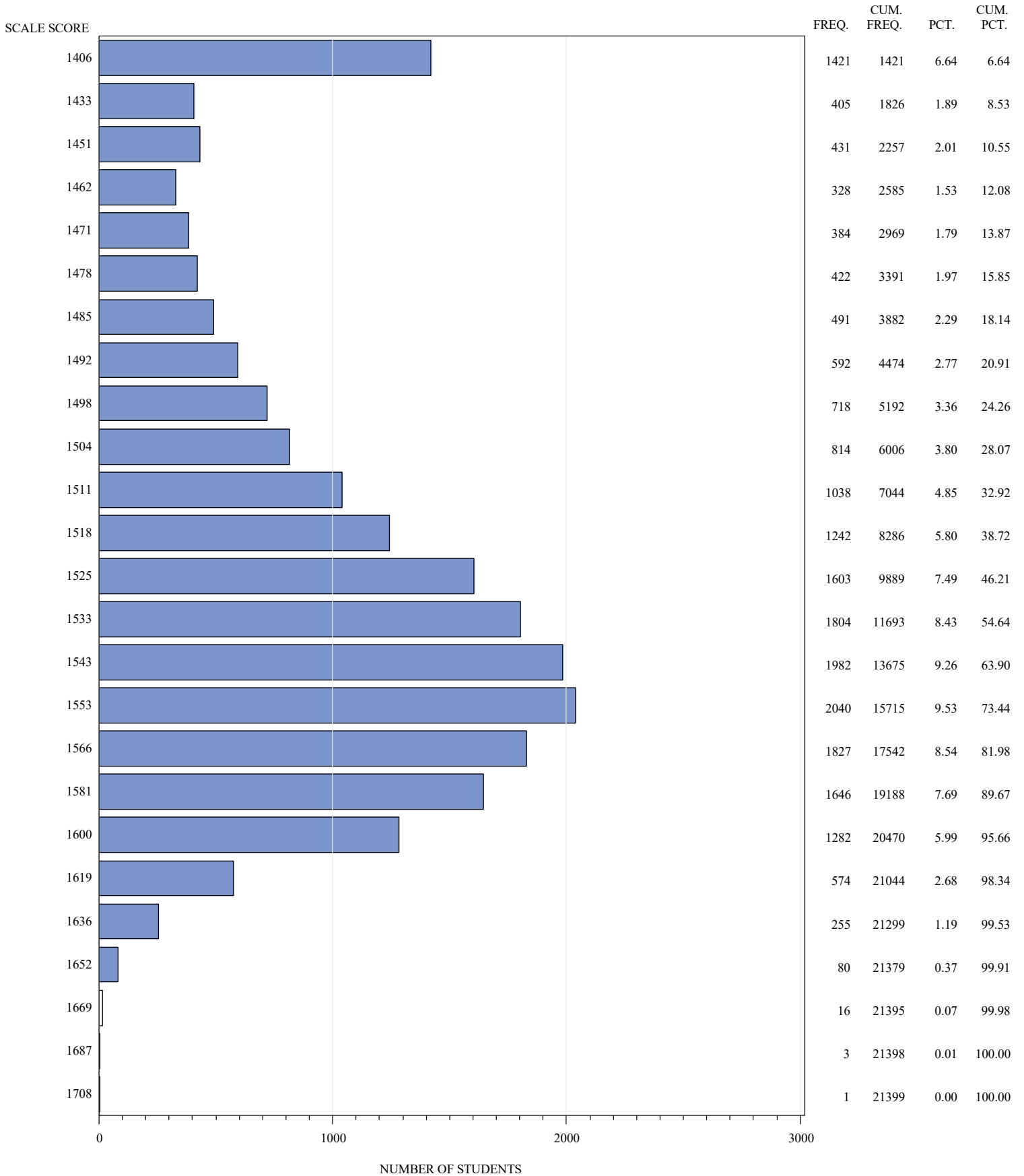
**Figure D.5.32 2018 TELPAS Grade 11 Speaking
Frequency Distribution of Scale Scores
All Students**



Notes:

Students who took the speaking holistic rating version of the test are not included in the frequency distribution tables.

**Figure D.5.33 2018 TELPAS Grade 12 Speaking
Frequency Distribution of Scale Scores
All Students**



Notes:
Students who took the speaking holistic rating version of the test are not included in the frequency distribution tables.