



BOARD OF CERTIFICATION
FOR THE ATHLETIC TRAINER

2024-2025 Exam Report

Certification Exam for Athletic Trainers

Prepared by:

Ian Hembry, PhD
Director of Psychometrics and Examinations
Confidential: Not for Redistribution

May 2025

Introduction

The Board of Certification, Inc., (BOC) is a non-profit credentialing agency that provides certification for the athletic training profession. Although it had already operated for 20 years as a committee of the National Athletic Trainers Association, the BOC was incorporated in 1989 to govern the certification program and the standards for recertification. The entry-level certification exam is designed to establish a standard benchmark for the profession. The BOC serves the public interest by developing, administering and continually reviewing a certification process that reflects current standards of practice in athletic training.

Standard Setting and Equating of Exam Forms

The modified Angoff process was used to establish the performance standard for the forms based on PA8. In April 2023, a panel of nine certified ATs reviewed the scored items for forms PA801 and PA802. The cut score for Form PA802 was equated to the standard set on Form PA801. All new forms assembled under PA8, including PA802, will be equated using the Rasch model. The logit equivalent will establish for the new form in reference to the standard established for PA801 after the first exam window in which they appear.

Score Reporting

Because exam forms may have different difficulty, providing raw scores can be misleading. As a result, many programs, including the AT Exam, use scaled scores. Scaled scores are particularly useful because they provide the basis for meaningful long-term comparisons of results across different forms of an exam.

Scaled scores are used because, over the life of every testing program, situations arise in which changes in the length of the exam occur, a decision is made to assess more or fewer areas, the number of items that are scored versus unscored (experimental) changes or forms of the exam of different difficulty are compared. To ensure the scores have comparable meaning as these changes occur, the equated scores developed for all candidates are converted via linear transformation to a scale of 200 to 800 with the passing standard reported as 500. The BOC provides scaled scores and pass/fail standing to candidates approximately two to four weeks after the close of an exam window. Candidates pass or fail based on their exam performance compared to the equated, criterion-referenced passing standard for the form taken.

Analysis of the Certification Exam

Candidate Performance

Statistical reports are generated for each form and exam window. All exams administered during the 2024-2025 exam year have been classified as either first-time exams, retake exams or other exams:

- First-time exams – exams taken by candidates who never previously sat for any form of the AT Exam
- Retake exams – exams taken by candidates who previously sat one or more times for the AT Exam

Candidates Excluded from This Report

Beginning in 2018, candidates who were administered the AT Exam via paper and pencil (i.e., ADA candidates) have been included in the information provided in Table 1. They were omitted when the statistics were computed for other years reported in Table 1. Also, for the exam year 2024-2025, these candidates (n = 2 individuals and 3 exam administration events) are excluded from the analyses in the rest of the report. No candidates completed less than 25% of their exam. In this scenario, the candidates record would have been excluded from statistical reports because of the likelihood that their performance was affected by construct-irrelevant variance, such as being late to the site, limited English proficiency or other issues.

This report includes 3,791 administrations of the AT Exam, a 2.2% decrease from the 2023-2024 exam year (3,876). The number of first-time exams decreased from 2,285 in 2023-2024 to 2,256 in 2023-2024, a 1.3% decrease. Retake exams decreased from 1,591 in 2023-2024 to 1,535 in 2024-2025, a 3.38% decrease.

Pass Rates

Table 1. Historical BOC Exam Counts and Pass Rates

Year	First-time	Pass	% Pass	Retake	Pass	% Pass	All	Pass	% Pass
PA7									
2017-2018	1,606	1,091	67.9%	1,172	334	28.5%	2,780	1,426	51.3%
2018-2019*	3,974	3,091	77.8%	1,622	645	39.8%	5,596	3,736	66.8%
2019-2020*	3,913	3,038	77.6%	1,626	636	39.1%	5,539	3,674	66.3%
2020-2021*	3,035	1,871	61.6%	1,916	576	30.0%	4,951	2,447	49.4%
2021-2022*	2,625	2,027	77.2%	1,495	611	40.9%	4,120	2,638	64.0%
2022-2023*	2,427	1,799	74.1%	1,317	477	36.2%	3,744	2,276	60.8%
PA8									
2023-2024*	2,285	1,569	68.7%	1,591	463	29.1%	3,876	2,032	52.4%
2024-2025*	2,256	1,683	74.6%	1,535	449	29.3%	3,791	2,132	56.2%

*Note. Total numbers include ADA paper and pencil administrations.

Table 2. Historical BOC Exam Scaled Score Summary Statistics

Cohort	N	Mean	Median	Std Dev	Min	Max
All 2024-25	3,788	510.2	510	98.5	200	760
First-time	2,256	550.1	560	92.3	200	760
Retake	1,532	451.4	460	75.1	200	670
All 2023-24	3,866	502.0	500	100.4	200	800
First-time	2,282	537.1	540	98.9	200	800
Retake	1,584	451.4	450	78.7	200	750
All 2022-23	3,738	525.0	530	100.0	200	800
First-time	2,424	556.6	570	96.8	200	800
Retake	1,314	466.8	470	77.1	200	710
All 2021-22	4,118	532.6	540	107.7	200	800
First-time	2,624	568.4	580	102.9	200	800
Retake	1,494	469.8	480	84.8	200	710
All 2020-21	4,953	498.1	495	87.7	200	750
First-time	3,035	521.5	520	88.2	200	750
Retake	1,911	461.0	470	72.8	200	690
All 2019-20	5,528	540.2	532	66.1	358	735
First-time	3,912	558.8	558	65.2	382	735
Retake	1,616	495.2	489	42.3	358	683
All 2018-19	5,591	539.0	532	66.3	340	729
First-time	3,970	557.6	555	64.8	352	729
Retake	1,621	493.4	488	44.0	340	642
All 2017-18	5,369	536.9	538	71.3	275	743
First-time	4,012	557.8	560	65.1	304	743
Retake	1,357	475.0	478	49.9	275	665

Exam Form Reliabilities and Other Summary Data

The performance of the forms of the AT Exam used during the year is consistent with reporting requirements for the National Commission for Certifying Agencies accreditation. Reliability is assessed using Cronbach's alpha (Cronbach, 1951), the most widely used measure of overall exam form reliability; Livingston-Lewis (Livingston & Lewis, 1995), a measure used for estimating the decision consistency (i.e., the reliability of pass/fail decisions based on the exam); and the standard error of measurement (SEM) presented in raw score units, a measure of the precision of the exam form. The results indicate that each scored set meets general guidelines for reliability. In addition, the standard errors of measurement (SEM) are acceptably small, indicating that each scored set functions as an acceptably precise measurement instrument.

Summary

Statistics concerning the quality of the AT Exam as a measurement instrument indicate that the exam complies with psychometric requirements that pertain to certification and licensure exams. Reliability coefficients were consistent with prior exam years. Estimates of equivalence across forms for the various parts of the exam are acceptable. Likewise, candidate performance on all parts of the exam is consistent with the public protection mission of the BOC.

References

- American Educational Research Association, American Psychological Association, National Council on Measurement in Education (2014). *Standards for Educational and Psychological Testing*. Washington, D.C.: AERA.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16, 297–334.
- Equal Employment Opportunity Commission (EEOC), U.S. Civil Service Commission, U.S. Department of Labor, and U.S. Department of Justice. (1978). *Uniform Guidelines on Employee Selection Procedures*. Federal Register, 43 (166), 38290–38315.
- Impara, J. C., & Plake, B. S. (1997). Standard setting: An alternative approach. *Journal of Educational Measurement*, 34, 353–366.
- Livingston, S. A., & Lewis, C. (1995). Estimating the consistency and accuracy of classifications based on scores. *Journal of Educational Measurement*, 32, 179-197.
- National Commission for Certifying Agencies (2016). *Standards for the Accreditation of Certification Programs*. Washington, DC: Institute for Credentialing Excellence.
- Kolen, M. J., & Brennan, R. L. (2004) *Test Equating, Scaling and Linking: Methods and Practices Statistics for Social Science and Behavioral Sciences* (2 ed.). Springer-Verlag New York Inc.
- Kuder, G. F., & Richardson, M. W. (1937). The theory of the estimation of test reliability. *Psychometrika*, 2, 151–160.