Exam Report for 2022-2023 Testing Year
Board of Certification (BOC) Certification Exam for Athletic Trainers

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Credentialing Examination Consulting, LLC

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 common 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 PA7. In April 2017, a panel of twelve certified ATs reviewed the scored items for forms PA701 and PA702. Some minor changes were made to the scored set of items on form PA702. When the forms were introduced in May 2017, the cut score for Form PA702 was equated to the standard set on Form PA701. All new forms assembled under PA7, including PA711 and PA712, have been equated using the Rasch model after the first testing window in which they are used to the passing standard established for PA701.

Score Reporting

Because exam forms are possibly of different difficulty, providing raw scores can be misleading. As a result, many programs, including the BOC 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 test length 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 test 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 a testing window. Candidates pass or fail based on how their test performance compares 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 testing window. All BOC exams administered during the 2022-2023 testing year have been classified as either first-time exams or retake exams:

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

Candidates Excluded from this Report

Beginning with 2018, candidates who were administered the BOC certification exam via paper and pencil (i.e., ADA candidates) have been included in the information provided in Table 1. They were not included when the statistics were computed for other years reported in Table 1. Also, for the testing year 2022-2023, these candidates (n = 5 individuals, but 7 testing events) are excluded from the analyses in the rest of the report. No candidates completed less than 25% of their exam, but if there had been they 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.

There are 3,744 administrations of the BOC certification exam included in this report, which represents a 9.2% decrease from the 2021-2022 testing year (4,120). The number of first-time exams decreased from 2,654 in 2021-2022 to 2,427 in 2022-2023, which represents an 8.6% decrease. Retake exams decreased from 1,466 in 2021-2022 to 1,317 in 2022-2023, a 10.2% decrease.

Pass Rates

Table 1. Historical BOC Exam Counts and Pass Rates

Year	First-time	Pass	% Pass	Retake	Pass	% Pass	All	Pass	% Pass
RD/PA6									
2011-2012	3,222	2,653	82.3%	1,664	696	41.8%	4,886	3,269	66.9%
2012-2013	3,631	2,935	80.8%	1,319	507	38.4%	4,950	3,442	69.5%
2013-2014	3,679	3,048	82.8%	1,210	497	41.1%	4,889	3,545	72.5%
2014-2015	3,768	3,039	80.7%	1,283	466	36.3%	5,051	3,505	69.4%
2015-2016	4,059	3,357	82.7%	1,308	547	41.8%	5,367	3,904	72.7%
2016-2017	4,119	3,444	83.6%	1,204	465	38.6%	5,323	3,909	73.4%
2017-2018	2,406	2,149	89.3%	185	85	45.9%	2,591	2,234	86.2%
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%

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

Table 2. Historical BOC Exam Scaled Score Summary Statistics

Cohort	N	Mean	Median	Std Dev	Min	Max
All 2022-23	3738	525.0	530	100.0	200	800
First-time	2424	556.6	570	96.8	200	800
Retake	1314	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
All 2016-17	5,323	551.3	554	72.2	265	751
First-time	4,119	569.6	577	67.2	315	751
Retake	1,204	488.8	489	50.7	265	678
All 2015-16	5,367	543.5	544	67.5	217	729
First-time	4,059	561.2	564	62.8	356	729
Retake	1,308	488.6	489	49.9	217	661
All 2014-15	5,051	543.3	542	71.4	259	733
First-time	3,768	563.0	567	67.1	272	733
Retake	1,283	485.5	484	48.7	259	650
All 2013-14	4,889	529.7	536	57.1	272	680
First-time	3,679	545.1	548	51.9	332	680
Retake	1,210	482.8	488	45.5	272	650
All 2012-13	4,950	524.0	524	54.0	302	674
First-time	3,631	539.0	548	51.0	302	674
Retake	1,319	484.0	488	41.0	314	632
All 2011-12	4,886	525.0	524	54.0	230	692
First-time	3,222	542.0	548	51.0	272	692
Retake	1,664	491.0	494	44.0	230	644
All 2010-11	5,711	490.0	494	67.0	200	672
First-time	2,963	508.0	517	71.0	200	672
Retake	2,748	470.0	476	56.0	220	624

Exam Form Reliabilities and Other Summary Data

The performance of the forms of the BOC certification exam used during the year are 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 test); and the standard error of measurement (SEM) presented in raw score units, a measure of the precision of the exam form.

Summary

Statistics concerning the quality of the BOC certification exam as a measurement instrument indicate that the exam complies with psychometric requirements that pertain to certification and licensure tests. 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. However, the reliability coefficients for the testing year were lower than in previous years.

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