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**Association of State and Provincial
Psychology Boards
Examination for Professional Practice in
Psychology (EPPP) Step 1**

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February 15, 2018–July 31, 2018

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Table of Contents

Scope of Work.....	4
Executive Summary.....	4
Background	4
Candidate Performance	5
Candidate Volume and Pass Rates	5
Timing Analysis	8
Examination Results.....	9
Measurement Model.....	9
Equating and Scaling.....	9
Test Scores.....	10
Reliability and Standard Error of Measurement.....	14
Testing Period Summary Statistics.....	14
References	15
Appendix A. Target Test Specifications.....	16
Appendix B. Summary Statistics across State and Provincial Jurisdictions.....	16

Table of Tables

Table 1. Candidate Volume and Pass Rates.....	5
Table 2. Candidate Volume and Pass Rates: First-Time Candidates.....	6
Table 3. Candidate Volume and Pass Rates: Repeat Candidates.....	7
Table 4. Exam Time Summary Statistics by Pretest Form.....	8
Table 5. Raw- and Scaled-Score Summary Statistics.....	10
Table 6. Raw Score Summary Statistics by Degree	10
Table 7. Scaled-Score Summary Statistics by Degree	12
Table 8. Candidate Volume and Pass Rates across Testing Periods	14
Table A1. Target Test Specifications	16
Table B1. Summary Statistics Across State and Provincial Jurisdiction for Independent Practice	16

Scope of Work

This Examination for Professional Practice in Psychology (EPPP) Step 1 is offered by the Association of State and Provincial Psychology Boards (ASPPB). The EPPP Step 1 is designed to assist state and provincial boards of psychology in determining licensure and certification of candidates for both independent practice and supervised practice. This report includes the development, administration, and scoring of the EPPP Step 1 for the February 15, 2018–July 31, 2018 administration.

Executive Summary

A total of 3,627 candidates for independent practice and 208 candidates for supervised practice took the EPPP Step 1 examination between February 15, 2018 and July 31, 2018. The overall pass rate for first-time candidates was 76.6% for independent practice and 65.1% for supervised practice, whereas the pass rate for repeat candidates was 37.7% for independent practice and 25.0% for supervised practice. Moreover, a higher reported academic degree generally related to a higher pass rate.

Timing analysis provides little indication that the exams were speeded. That is, candidates did not appear rushed to complete the exam items in the allotted time. Out of the 3,627 total candidates for independent practice, 30 (0.8%) candidates for independent practice were not administered all test questions within the allotted time. Also, out of 208 candidates for supervised practice, 3 (1.4%) candidates for supervised practice were not administered all test questions within the allotted time.

The coefficient alpha estimate of reliability for the EPPP Step 1 forms was acceptable at 0.930 for independent practice and 0.943 for supervised practice for Form 7168100, and 0.921 for independent practice and 0.940 for supervised practice for Form 7168110.

Background

Two EPPP Step 1 operational test forms (7168100, and 7168110) were administered continuously between February 15, 2018 and July 31, 2018. These tests are based on a new content blueprint. Each form contains 175 operational items plus one of one to four form-specific blocks of 50 pretest items.¹ The pretest blocks associated with any given form differ from the pretest blocks associated with any other form. Test specifications can be found in Appendix A.

Because all data in this report—except timing data and pretest item statistics—are based solely on operational items, each set of test forms sharing the same operational items is treated as one combined form in the report tables.

ASPPB also provides multiple translated exam forms—in Spanish and French—that are offered to candidates seeking licensure in Puerto Rico (for the forms in Spanish) or Canada (for the forms in French). Candidates who take the translated forms are excluded from any subsequent analyses. Pearson VUE will continue to monitor the volume and pass rates of the translated forms for any abnormalities.

¹ Form 7168100 and 7168110 had one pretest block per form administered between February 15, 2018 and July 31, 2018

Candidate Performance

Candidate Volume and Pass Rates

A total of 3,627 candidates for independent practice and 208 for supervised practice took the EPPP Step 1 examination from February 15, 2018 to July 31, 2018. Of these candidates, 2,529 (76.6%) for independent practice, and 152 (65.1%) for supervised practice were first-time test takers.

Table 1 shows (by form) the candidate volume and pass rates for first-time and repeat candidates. Table 2 shows the pass rate for first-time candidates and Table 3 shows the pass rates for repeat candidates, each broken down by highest degree obtained.

Table 1. Candidate Volume and Pass Rates

Level	Status	Exam Form				Total	
		7168100		7168110		N	Pass %
		N	Pass %	N	Pass %		
Independent	First-time	1,271	76.9	1,258	76.2	2,529	76.6
	Repeat	566	37.6	532	37.8	1,098	37.7
	Total	1,837	64.8	1,790	64.8	3,627	64.8
Supervised	First-time	74	60.8	78	69.2	152	65.1
	Repeat	28	17.9	28	32.1	56	25.0
	Total	102	49.0	106	59.4	208	54.3

Table 2. Candidate Volume and Pass Rates: First-Time Candidates

Level	Status	Exam Form				Total	
		7168100		7168110			
		N	Pass %	N	Pass %	N	Pass %
Independent	Doctoral	1,166	77.8	1,168	77.1	2,334	77.4
	PhD	564	86.0	622	84.6	1,186	85.2
	PsyD	594	70.5	545	68.6	1,139	69.6
	EdD	8	37.5	1	0.0	9	33.3
	Masters	102	66.7	83	65.1	185	65.9
	Unknown	3	100.0	7	71.4	10	80.0
	Total	1,271	76.9	1,258	76.2	2,529	76.6
Supervised	Doctoral	4	75.0	9	88.9	13	84.6
	PhD	1	100.0	6	100.0	7	100.0
	PsyD	3	66.7	3	66.7	6	66.7
	EdD	—	—	—	—	—	—
	Masters	66	59.1	66	66.7	132	62.9
	Unknown	4	75.0	3	66.7	7	71.4
	Total	74	60.8	78	69.2	152	65.1

Table 3. Candidate Volume and Pass Rates: Repeat Candidates

Level	Status	Exam Form				Total	
		7168100		7168110		N	Pass %
		N	Pass %	N	Pass %		
Independent	Doctoral	509	37.7	482	37.3	991	37.5
	PhD	135	40.0	136	42.6	271	41.3
	PsyD	369	37.4	341	35.2	710	36.3
	EdD	5	0.0	5	40.0	10	20.0
	Masters	56	37.5	48	43.8	104	40.4
	Unknown	1	0.0	2	0.0	3	0.0
	Total	566	37.6	532	37.8	1,098	37.7
Supervised	Doctoral	—	—	—	—	—	—
	PhD	—	—	—	—	—	—
	PsyD	—	—	—	—	—	—
	EdD	—	—	—	—	—	—
	Masters	27	14.8	24	33.3	51	23.5
	Unknown	1	100.0	4	25.0	5	40.0
	Total	28	17.9	28	32.1	56	25.0

Candidate volume, broken down by jurisdiction, can be found in Appendix B.

Timing Analysis

Table 4 and Figures 1-4 present exam-time summary information for all candidates. Exam time was computed by summing item response times. The maximum time allowed for the complete 225-item examination (175 operational items plus 50 pretest items) is 4 hr 15 min (255 min in total, excluding time for the tutorial and the survey at the conclusion of the exam). The median (*Mdn*) testing time indicates the amount of time within which 50% of the examinees completed the EPPP Step 1 exam.

Table 4. Exam Time Summary Statistics by Pretest Form

Level	Exam form	Pretest form	No. of candidates	Time (in hr)				
				Min	<i>Mdn</i>	<i>M</i>	Max	<i>SD</i>
Independent	7168100	7168101	1,751	1:03:32	3:51:43	3:38:52	4:13:30	0:35:22
	7168110	7168111	1,691	1:21:20	3:45:15	3:33:46	4:13:27	0:37:30
	Total		3,442	1:03:32	3:48:38	3:36:22	4:13:30	0:36:31
Supervised	7168100	7168101	99	1:35:35	3:33:42	3:22:54	4:13:10	0:43:25
	7168110	7168111	104	1:36:33	3:27:43	3:24:20	4:13:17	0:40:36
	Total		203	1:35:35	3:31:18	3:23:38	4:13:17	0:41:54

Note. 185 candidates for independent practice and 5 for supervised practice who received time accommodations during the exam were excluded.

Examination Results

All statistics presented in this section are based solely on first-time candidates.

Measurement Model

Item response theory (IRT) is a general theoretical framework associated with several mathematical models that assumes test responses are based on the interaction between the attributes of candidates as well as test items. The advantage of using IRT models in scaling is that all of the items measuring performance in one latent construct can be placed on the same scale of difficulty. Placing items on the same scale across years facilitates the creation of equivalent forms each year.

A Rasch IRT model was used for item calibration using Winsteps[®] (Version 3.92.1; Linacre, 2016). Under the Rasch model, the probability of a candidate answering an item correctly is a function only of the item's difficulty and the candidate's ability. Mathematically, the probability of candidate i correctly answering item j can be defined as

$$P_{ij} = \frac{\exp(\theta_i - b_j)}{1 + \exp(\theta_i - b_j)} \quad (1)$$

where

θ_i represents the ability of person i , and

b_j indicates the difficulty of item j .

One can regard ϑ and b as depicting the general case, where individual candidate abilities and item difficulties are a subset. In the case of Equation 1, both ϑ and b are expressed on the same metric ranging over the real number line, with greater values representing either greater ability or greater item difficulty. Note that as ability increases for any given item (i.e., θ_i increases for any fixed b_j), $\exp(\theta_i - b_j)$ increases, which implies that P_{ij} increases. Therefore, increased ability corresponds to a concomitant increase in the model-predicted probability of answering any item correctly.

Equating and Scaling

Equating was accomplished using the operational items' predetermined measures from the calibrated item bank (common item equating)².

The EPPP Step 1 is scaled so that all candidates receive a score in the range of 200 to 800, with a scaled cut score of 500 for independent practice and 450 for supervised practice. Scaling is achieved by applying a linear transformation to the logit abilities obtained during equating. The linear transformation will take the generalized form of scaled score = $A*\vartheta + B$ (truncated to the next lowest integer).

Jurisdictions can report scaled scores in a different metric than those recommended by ASPPB. For instance, New York provides scaled scores converted to a range of 51 to 99, with a scaled cut of 75. All statistics and graphs presented in this section use the standard scaled score rather than any converted scaled score.

² The predetermined item parameters in the item bank was on the independent practice scale.

Test Scores

Table 5 contains the raw- and scaled-score summary statistics for first-time candidates for the EPPP examination taken between February 15, 2018 and July 31, 2018.

Table 5. Raw- and Scaled-Score Summary Statistics

Level	Exam form	Score	N	Min	Mdn	M	Max	SD
Independent	7168100	Raw	1,271	54.0	130.0	126.2	167.0	20.5
		Scaled	1,271	200.0	588.0	567.3	794.0	113.4
	7168110	Raw	1,258	50.0	129.0	126.5	170.0	18.7
		Scaled	1,258	200.0	577.0	563.3	800.0	103.3
Supervised	7168100	Raw	74	48.0	112.5	109.4	162.0	24.3
		Scaled	74	200.0	491.0	475.4	766.0	131.7
	7168110	Raw	78	49.0	118.0	113.2	154.0	22.9
		Scaled	78	200.0	516.0	490.8	716.0	123.6

Table 6 contains raw-score distributions for each operational form, broken down by the highest degree obtained, whereas Table 7 contains the equivalent breakdown for scaled-score distributions.

Table 6. Raw Score Summary Statistics by Degree

Level	Exam form	Score	N	Min	Mdn	M	Max	SD
Independent	7168100	Doctoral	1,166	54.0	131.0	126.8	167.0	20.3
		PhD	564	54.0	137.0	132.2	162.0	18.8
		PsyD	594	54.0	125.0	121.9	167.0	20.3
		EdD	8	73.0	105.0	106.1	134.0	22.0
		Masters	102	60.0	123.0	119.1	162.0	21.7
		Unknown	3	123.0	140.0	135.0	142.0	10.4
		All	1,271	54.0	130.0	126.2	167.0	20.5

	7168110	Doctoral	1,168	50.0	129.0	126.8	170.0	18.7
		PhD	622	50.0	134.0	131.5	170.0	17.5
		PsyD	545	65.0	124.0	121.4	163.0	18.5
		EdD	1	111.0	111.0	111.0	111.0	—
		Masters	83	73.0	126.0	122.7	155.0	17.8
		Unknown	7	63.0	128.0	118.7	138.0	26.3
		All	1,258	50.0	129.0	126.5	170.0	18.7
Supervised	7168100	Doctoral	4	76.0	116.0	107.8	123.0	22.0
		PhD	1	122.0	122.0	122.0	122.0	—
		PsyD	3	76.0	110.0	103.0	123.0	24.3
		EdD	—	—	—	—	—	—
		Masters	66	48.0	112.0	109.0	162.0	25.0
		Unknown	4	92.0	122.0	116.8	131.0	17.2
		All	74	48.0	112.5	109.4	162.0	24.3
	7168110	Doctoral	9	101.0	125.0	126.2	154.0	15.5
		PhD	6	110.0	132.0	131.7	154.0	14.8
		PsyD	3	101.0	122.0	115.3	123.0	12.4
		EdD	—	—	—	—	—	—
		Masters	66	49.0	116.5	111.8	154.0	23.4
		Unknown	3	80.0	109.0	103.7	122.0	21.5
		All	78	49.0	118.0	113.2	154.0	22.9

Table 7. Scaled-Score Summary Statistics by Degree

Level	Exam form	Score	N	Min	Mdn	M	Max	SD
Independent	71680100	Doctoral	1,166	200.0	594.0	570.6	794.0	112.2
		PhD	564	200.0	627.0	600.6	766.0	103.6
		PsyD	594	200.0	561.0	543.7	794.0	112.4
		EdD	8	272.0	449.5	455.9	611.0	122.1
		Masters	102	200.0	550.0	528.0	766.0	120.7
		Unknown	3	550.0	644.0	616.3	655.0	57.7
		All	1,271	200.0	588.0	567.3	794.0	113.4
	7168110	Doctoral	1,168	200.0	577.0	565.0	800.0	103.3
		PhD	622	200.0	605.0	591.6	800.0	96.4
		PsyD	545	222.0	550.0	534.8	766.0	102.6
		EdD	1	477.0	477.0	477.0	477.0	—
		Masters	83	266.0	561.0	542.1	722.0	98.7
		Unknown	7	211.0	572.0	520.3	627.0	146.1
		All	1,258	200.0	577.0	563.3	800.0	103.3
Supervised	7168100	Doctoral	4	288.0	510.5	464.8	550.0	122.4
		PhD	1	544.0	544.0	544.0	544.0	—
		PsyD	3	288.0	477.0	438.3	550.0	135.2
		EdD	—	—	—	—	—	—
		Masters	66	200.0	488.0	473.7	766.0	135.1
		Unknown	4	377.0	544.0	514.8	594.0	95.8
		All	74	200.0	491.0	475.4	766.0	131.7

	7168110	Doctoral	9	422.0	555.0	561.9	716.0	86.3
		PhD	6	472.0	594.0	592.2	716.0	82.0
		PsyD	3	422.0	538.0	501.3	544.0	68.8
		EdD	—	—	—	—	—	—
		Masters	66	200.0	508.0	483.6	716.0	125.9
		Unknown	3	305.0	466.0	436.3	538.0	119.3
		All	78	200.0	516.0	490.8	716.0	123.6

Reliability and Standard Error of Measurement

Reliability, as it applies to testing, is the consistency or reproducibility of the observed exam scores. Test reliability is directly related to score stability and standard error and, as such, is an essential element of fairness and validity. A common estimate of test-score reliability is Cronbach’s alpha (α), which is an indicator of the exam’s internal consistency (Cronbach, 1951). The reliability of the test is then estimated by considering how well the items that reflect the same construct yield similar results (or how consistent the results are for different items that reflect the same construct measured by the test). Cronbach’s alpha is based on the degree of score intercorrelations among the items comprising the exam and generally ranges from 0 to 1. High reliability indicates that scores are consistent and not unduly influenced by random error. A general rule of thumb for high-stakes tests is that α should be at least 0.80, but preferably 0.90 or higher (Nunnally & Bernstein, 1994). The reliability for Forms 7168100–7168110 between February 15, 2018 and July 31, 2018 was found to be acceptably reliable at 0.930, and 0.921 for independent practice, and 0.943, and 0.940 for supervised practice, respectively.

Testing Period Summary Statistics

In Table 8, summary statistics for the number of candidates tested and pass rates are presented across all exams for each testing period that Pearson VUE has been responsible for exam development or measurement services.

Table 8. Candidate Volume and Pass Rates across Testing Periods

Level	Exam form	Testing period	Status					
			First-time		Repeat		Total	
			N	Pass rate	N	Pass rate	N	Pass rate
Independent	7168100	Feb 2018–July 2018	1,271	76.9	566	37.6	1,837	64.8
	7168110	Feb 2018–July 2018	1,258	76.2	532	37.8	1,790	64.8
Supervised	7168100	Feb 2018–July 2018	74	60.8	28	17.9	102	49.0
	7168110	Feb 2018–July 2018	78	69.2	28	32.1	106	59.4

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Appendix A. Target Test Specifications

Table A1. Target Test Specifications

Domain area		Emphasis	No. of items	
			Operational	Pretest
1	Biological Bases of Behavior	10%	18	5
2	Cognitive-Affective Bases of Behavior	13%	23	6 – 7
3	Social & Cultural Bases of Behavior	11%	19	5 – 6
4	Growth & Lifespan Development	12%	21	6
5	Assessment & Diagnosis	16%	28	8
6	Treatment, Intervention, Prevention and Supervision	15%	26	7 – 8
7	Research Methods and Statistics	7%	12	3 – 4
8	Ethics/Legal/Professional Issues	16%	28	8
Total		100%	175	50

Appendix B. Summary Statistics across State and Provincial Jurisdictions

Table B1. Summary Statistics Across State and Provincial Jurisdiction for Independent Practice

Jurisdiction	Abbreviation	2018 ^a		Total	
		N	Pass %	N	Pass %
Alberta	AB	222	58.1	222	58.1
Alaska	AK	7	57.1	7	57.1
Alabama	AL	16	75.0	16	75.0
Arkansas	AR	15	53.3	15	53.3
Arizona	AZ	54	68.5	54	68.5
British Columbia	BC	18	83.3	18	83.3
California	CA	850	52.4	850	52.4
Colorado	CO	99	75.8	99	75.8
Connecticut	CT	33	54.5	33	54.5
District of Columbia	DC	10	60.0	10	60.0

Delaware	DE	8	87.5	8	87.5
Florida	FL	171	59.6	171	59.6
Georgia	GA	42	76.2	42	76.2
Guam	GU	0	—	0	—
Hawaii	HI	26	34.6	26	34.6
Iowa	IA	23	69.6	23	69.6
Idaho	ID	14	64.3	14	64.3
Illinois	IL	78	57.7	78	57.7
Indiana	IN	53	71.7	53	71.7
Kansas	KS	34	64.7	34	64.7
Kentucky	KY	29	51.7	29	51.7
Louisiana	LA	11	100.0	11	100.0
Massachusetts	MA	93	69.9	93	69.9
Manitoba	MB	3	100.0	3	100.0
Maryland	MD	80	70.0	80	70.0
Maine	ME	8	62.5	8	62.5
Michigan	MI	92	58.7	92	58.7
Minnesota	MN	74	77.0	74	77.0
Missouri	MO	30	70.0	30	70.0
Mississippi	MS	3	100.0	3	100.0
Montana	MT	3	100.0	3	100.0
New Brunswick	NB	6	66.7	6	66.7
North Carolina	NC	52	76.9	52	76.9
North Dakota	ND	5	100.0	5	100.0

Nebraska	NE	7	42.9	7	42.9
New Hampshire	NH	1	0.0	1	0.0
New Jersey	NJ	50	54.0	50	54.0
Newfoundland	NL	4	50.0	4	50.0
New Mexico	NM	10	90.0	10	90.0
Nova Scotia	NS	11	90.9	11	90.9
Nevada	NV	17	64.7	17	64.7
New York	NY	314	73.2	314	73.2
Ohio	OH	88	73.9	88	73.9
Oklahoma	OK	11	81.8	11	81.8
Ontario	ON	91	85.7	91	85.7
Oregon	OR	53	83.0	53	83.0
Pennsylvania	PA	142	74.6	142	74.6
Prince Edward ISL	PE	0	—	0	—
Quebec	PQ	0	—	0	—
Puerto Rico	PR	8	25.0	8	25.0
Rhode Island	RI	38	94.7	38	94.7
South Carolina	SC	13	84.6	13	84.6
South Dakota	SD	3	66.7	3	66.7
Saskatchewan	SK	19	52.6	19	52.6
Tennessee	TN	26	61.5	26	61.5
Texas	TX	142	57.0	142	57.0
Utah	UT	23	82.6	23	82.6
Virginia	VA	93	68.8	93	68.8

US Virgin ISL	VI	0	—	0	—
Vermont	VT	10	60.0	10	60.0
Washington	WA	73	82.2	73	82.2
Wisconsin	WI	85	67.1	85	67.1
West Virginia	WV	19	52.6	19	52.6
Wyoming	WY	14	85.7	14	85.7
Total		3,627	64.8	3,627	64.8

Note. All candidates, including those who took translated forms, are included.

^aIncludes exams from Feb. 15, 2018–Jul. 31, 2018