

Administration Training & Fidelity of IAAT

Project STAIR

Technical Report 11

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Administration and Fidelity of IAAT

Purpose

The purpose of this technical report is to describe the administration training and fidelity, including double coding procedures, of the *Iowa Algebra Aptitude Test* (IAAT) for the second cohort of students.

Method

The *Iowa Algebra Aptitude Test* (IAAT) (University of Iowa, 2006) is a timed, written assessment administered in four separate and time sections. The four sections of the assessment include: pre-algebraic number skills and concepts, interpreting mathematical information, representing relationships, and using symbols (Schoen & Ashly, 2020). Each section included 15 questions, and students were given 10 minutes to complete each section. The students were not able to return to previously completed sections or work ahead in different sections. The test administrator followed a script and timed the students (Schoen & Ashley, 2020).

The STAIR team developed the fidelity checklist for IAAT administration to ensure uniform practices across all sites. The form was not utilized during the 2019-2020 school year at any site. Instead, all teams relied on the published IAAT administration guide, which lists precise steps for the procedures and timing of each section. The administration guide can be found here:

<https://missouri.box.com/s/a139masp5gfeykwr3gw1avl4h45ux1py>

All students in Project STAIR, including students in both the control and treatment classes, completed form A in the fall as a pre-test. Three students were able to complete form B in the spring as a posttest before schools closed due to COVID-19. All assessments were scored by hand by a GRA, using the answer key and a spreadsheet designed by the researchers to calculate scores. All tests were scored

twice, and all discrepancies were resolved by discussing differences, referring back to the original tests, and identifying on the correct answer.

Results

Interrater reliability across all pre- and posttest assessments was above 99% with all discrepancies resolved by the GRAs for 100% agreement.

APPENDICES

Fidelity Check – Project STAIR Iowa Algebra Aptitude Test (IAAT)

IAAT: Administration Introduction p 1	Yes	No	Notes
<i>Administrator turns top 1 of IAAT directions for administration.</i>	1	0	
<i>Administrator reviews IAAT protocol preparations checklist.</i>	1	0	
<i>Administrator turns top 2 of IAAT directions for administration.</i>	1	0	
<i>Administration begins with preliminary instructions.</i>	1	0	
IAAT: Preliminary Instructions p 2-3, skip p 4	Yes	No	Notes
<i>Administrator welcomes students.</i>	1	0	
<i>Administrator asks students to be seated.</i>	1	0	
<i>Administrator asks students to clear their desk.</i>	1	0	
<i>Administrator asks makes sure each student has scratch paper.</i>	1	0	
<i>Administrator makes sure each student has two No. 2 pencils.</i>	1	0	
<i>Administrator says "Today you are going to a mathematics test ..."</i>	1	0	
<i>Administrator distributes test booklet.</i>	1	0	
<i>Administrator distributes self-scoring answer sheet.</i>	1	0	
<i>Administrator shares says "Open your test booklet to page 1 ..."</i>	1	0	
<i>Administrator reads aloud "To help you understand how to ..."</i>	1	0	
<i>Administrator pauses while student study the practice test.</i>	1	0	
<i>Administrator says "Now read the directions below the ..."</i>	1	0	
<i>Administrator turns to p 3 of IAAT directions for administration.</i>	1	0	
<i>Administrator reads aloud "Your answers to the test exercises ..."</i>	1	0	
<i>Administrator reads aloud "Do not spend too much time ..."</i>	1	0	
<i>Administrator asks "Do you have any questions ..."</i>	1	0	
<i>Administrator answers any questions.</i>	1	0	
<i>Administrator says "Now look at the Information Box near ..."</i>	1	0	
<i>Administrator skips p 4 does not apply to self-scoring answer sheets.</i>	1	0	
<i>Administrator skips turns to p 5 marking self-scoring answer sheets.</i>	1	0	
IAAT: Marking Self-Scoring Answer Sheets p 5	Yes	No	Notes
<i>Administrator prompts students to turn to page 1 of the IAAT.</i>	1	0	
<i>Administrator reads aloud "Now read the directions below ..."</i>	1	0	
<i>Administrator reads directions aloud.</i>	1	0	
<i>Administrator reminds students to make a heavy mark.</i>	1	0	

Administrator reminds students to keep place on answer sheet.	1	0	
Administrator reminds students to make only one mark on a row.	1	0	
Administrator reads aloud "Do not spend too much time on one ..."	1	0	
Administrator reminds students "Make no marks on any pages ..."	1	0	
Administrator asks "Do you have any questions ..."	1	0	
Administrator answers any questions.	1	0	
Administrator turns to p 6 for Administering Part 1.	1	0	
IAAT: Part 1 Pre-Algebraic Number Skills and Concepts p 6	Yes	No	Notes
Administrator says "Now you are ready to begin the test ..."	1	0	
Administrator tells students to turn to p 4 in the IAAT test booklet.	1	0	
Administrator reads aloud What Part 1 Tests.	1	0	
Administrator reads aloud How to Use the Skills Tested.	1	0	
Administrator says "Now, find the directions for Part 1 ..."	1	0	
Administrator reads aloud "This part of the test contains ..."	1	0	
Administrator says "Now study the Sample Exercise for Part 1 ..."	1	0	
Administrator pauses for 1 to 2 minutes.	1	0	
Administrator says "Notice that the circle for B ..."	1	0	
Administrator asks if there are any questions.	1	0	
Administrator answers questions.	1	0	
Administrator states "You will have 10 minutes to finish ..."	1	0	
Administrator instructs students to turn page and begin now.	1	0	
Administrator notes time for the beginning of Part 1.	1	0	
Administrator makes sure students have started with correct item.	1	0	
Administrator notes when 10 minutes expires.	1	0	
Administrator says "Stop. Put your pencils down."	1	0	
Administrator turns top 7 for Administering Part 2.	1	0	
IAAT: Part 2 Interpreting Mathematical Information p 7-8	Yes	No	Notes
Administrator says "Now turn to the beginning of Part 2 on p 10 ..."	1	0	
Administrator reads aloud What Part 2 Tests	1	0	
Administrator reads aloud How to use the Skills Tested	1	0	
Administrator says "Now, find the directions for Part 2 ..."	1	0	
Administrator reads aloud "This part of the test ..."	1	0	
Administrator instructs students to "Now turn to page 11 ..."	1	0	
Administrator says "Notice that the circle for D ..."	1	0	
Administrator asks if there are any questions.	1	0	

Administrator answers questions.	1	0	
Administrator states "You will have 10 minutes to finish Part 2"	1	0	
Administrator instructs students to turn page and begin now.	1	0	
Administrator notes time for the beginning of Part 2.	1	0	
Administrator makes sure students have started with correct item.	1	0	
Administrator notes when 10 minutes expires.	1	0	
Administrator says "Stop. Put your pencils down."	1	0	
Administrator stays on p 8 for Administering Part 3.	1	0	
IAAT: Part 3 Representing Relationships p 8-9	Yes	No	Notes
Administrator says "Now turn to the beginning of Part 3 on p 16 ..."	1	0	
Administrator reads aloud What Part 3 Tests	1	0	
Administrator reads aloud How to Use the Skills Tested	1	0	
Administrator says "Now, find the directions for Part 3 ..."	1	0	
Administrator reads aloud "For each of the exercises ..."	1	0	
Administrator says "Study the first Sample Exercise for Part 3 ..."	1	0	
Administrator pauses one to two minutes.	1	0	
Administrator reads aloud "To do this exercise ..."	1	0	
Administrator says "Study the second Sample Exercise for Part 3 ..."	1	0	
Administrator pauses one to two minutes.	1	0	
Administrator reads aloud "Since there are no tie games ..."	1	0	
Administrator asks "Are there any questions about Part 3?"	1	0	
Administrator answers questions.	1	0	
Administrator states "You will have 10 minutes to finish Part 3 ..."	1	0	
Administrator instructs students to turn page and begin now.	1	0	
Administrator notes time for the beginning of Part 3.	1	0	
Administrator makes sure students have started with correct item.	1	0	
Administrator notes when 10 minutes expires.	1	0	
Administrator says "Stop. Put your pencils down."	1	0	
Administrator stays on p 9 for Administering Part 4.	1	0	
IAAT: Part 4 Using Symbols 9-10	Yes	No	Notes
Administrator says "Now turn to the beginning of Part 4 on p 22 ..."	1	0	
Administrator reads aloud What Part 4 Tests	1	0	
Administrator reads aloud How to Use the Skills Tested	1	0	
Administrator says "Now find the directions on you answer ..."	1	0	

<i>Administrator reads aloud "For each of the questions in this part ..."</i>	1	0	
<i>Administrator says "Study the Sample Exercise for Part 4 ..."</i>	1	0	
<i>Administrator pauses for one to two minutes.</i>	1	0	
<i>Administrator reads aloud "If Y is made less, and the sum ..."</i>	1	0	
<i>Administrator asks "Are there any questions about Part 4?"</i>	1	0	
<i>Administrator answer questions.</i>	1	0	
<i>Administrator states "You will have 10 minutes to finish Part 4 ..."</i>	1	0	
<i>Administrator instructs students to turn page and begin now.</i>	1	0	
<i>Administrator notes time for the beginning of Part 4.</i>	1	0	
<i>Administrator makes sure students have started with correct item.</i>	1	0	
<i>Administrator notes when 10 minutes expires.</i>	1	0	
<i>Administrator says "Stop. Close your test booklet ..."</i>	1	0	
IAAT: Administration Conclusion p 10	Yes	No	Notes
<i>Administrator collects booklets.</i>	1	0	
<i>Administrator collects scratch paper.</i>	1	0	
<i>Administrator collects answer sheets.</i>	1	0	

Reflections / Areas for Improvement: