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Summaries of Studies Included in the Computer-Assisted Instruction Meta-Analysis

This document is an appendix to *Evaluating the Effectiveness of Correctional Education: A Meta-Analysis of Programs That Provide Education to Incarcerated Adults*, by Lois M. Davis, Robert Bozick, Jennifer L. Steele, Jessica Saunders, and Jeremy N. V. Miles, Santa Monica, Calif.: RAND Corporation, RR-266-BJA, 2013, available at http://www.rand.org/pubs/research_reports/RR266.html. The following pages provide a research summary for each study included in the test score meta-analysis (total of 4).

Reference	Education Level of Program	Description of Program
John Stuart Batchelder and John R. Rachal, "Efficacy of a Computer-Assisted Instruction Program in a Prison Setting: An Experimental Study," <i>Adult Education Quarterly</i> , Vol. 50, No. 2, February 2000, pp. 120–133.	Adult Basic/Remedial Education	Computer-assisted instruction using the Advanced Instructional Management System (AIMS). The program consisted of self-paced basic skills tutoring on a computer in arithmetic and language use. Duration of the program was 4 weeks. Frequency was 1 hour per day, 5 days per week.
Setting of Program		Measure of Achievement
One maximum-security prison. The location and sector were not specified.		Difference between post-test and pre-test scores on the Comprehensive Adult Student Assessment System (CASAS)
Overview of Research Design and Analysis		
A treatment group, consisting of male inmates who received 1:1 computer-assisted instruction with AIMS while incarcerated, were compared to male inmates who instead received traditional classroom instruction in English, mathematics, history, or science during the same period of time. Both treatment and comparison groups also received an additional 3 hours per day of traditional classroom instruction in English, mathematics, history, or science for 20 days. Inmates were randomly assigned to the treatment and comparison groups. Having started with 75 inmates, the study experienced low overall and differential attrition.		
Treatment Group		Comparison Group
n=36 Reading Gain: 2.1 points (0.53 grade levels) Math Gain: 0.8 points (0.2 grade levels)		n=35 Reading Gain: 0.2 points (0.05 grade levels) Math Gain: -1.8 points (-0.45 grade levels)
Note: A one-unit gain represents approximately one-fourth of a grade level.		
WWC Rating		MD Scale Rating
Meets standards		5

Reference	Education Level of Program	Description of Program
Richard A. Diem and Peter G. Fairweather, "An Evaluation of a Computer-Assisted Education System in an Untraditional Academic Setting—A County Jail," <i>AEDS Journal</i> , Vol. 13 No. 3, Spring 1980, pp. 204–213.	Adult Basic/Remedial Education	Computer-assisted instruction using the Advanced Instructional Management System (AIMS). The program consisted of self-paced basic skills tutoring on a computer in arithmetic and language use. Duration of the program was 4 weeks. Frequency was 1 hour per day, 5 days per week.
Setting of Program		Measure of Achievement
One maximum-security prison. The location and sector were not specified.		Difference between post-test and pre-test scores on the Adult Basic Learning Examination (ABLE) Level II, which focuses on grade levels 5–8.
Overview of Research Design and Analysis		
A treatment group, consisting of male inmates who received 1:1 computer-assisted instruction with PLATO while incarcerated, were compared to male inmates who received a similar amount of basic skills instruction covering similar content in a traditional, lecture-based classroom setting while incarcerated. Inmates were randomly assigned to the treatment and comparison groups. Having started with 19 inmates per group, the study experienced relatively low overall attrition and no differential attrition.		
Treatment Group		Comparison Group
<p>n=15</p> <p>Reading Gain: 1.13 months (0.13 grade levels)</p> <p>Arithmetic Gain: 1.13 (0.13 grade levels)</p>		<p>n=15</p> <p>Reading Gain: 0.46 months (0.05 grade levels)</p> <p>Arithmetic Gain: 1.01 months (0.11 grade levels)</p>
Note: A one-unit gain represents approximately one-ninth of a grade level, or one month of learning.		
WWC Rating		MD Scale Rating
Meets standards		5

Reference	Education Level of Program	Description of Program
<p>P. Frank McKane and Barbara A. Greene, "The Use of Theory-Based Computer-Assisted Instruction in Correctional Centers to Enhance the Reading Skills of Reading-Disadvantaged Adults," <i>Journal of Educational Computing Research</i>, Vol. 15, No. 4, 1996, pp. 331–344.</p>	<p>Adult Basic/Remedial Education</p>	<p>Computer-assisted instruction using the Advanced Instructional Management System (AIMS). The program consisted of self-paced basic skills tutoring on a computer in arithmetic and language use. Duration of the program was 4 weeks. Frequency was 1 hour per day, 5 days per week.</p>
Setting of Program		Measure of Achievement
<p>One maximum-security prison. The location and sector were not specified.</p>		<p>Difference between post-test and pre-test scores on the Test of Adult Basic Education (TABE).</p>
Overview of Research Design and Analysis		
<p>A treatment group, consisting of inmates who received computer-assisted literacy instruction with the AUTOSKILL software as well as traditional literacy instruction while incarcerated, were compared to inmates who received traditional literacy instruction only while incarcerated. Traditional literacy instruction consisted of a combination of classroom instruction and peer tutoring. Total instruction time was the same for the two groups. Inmates were randomly assigned to the treatment and comparison groups. All inmates in the study tested at the 9th-grade reading level or below at baseline. Having started with 75 inmates per group, the study was affected by high overall and differential attrition, but includes an adjustment for baseline reading level.</p>		
Treatment Group		Comparison Group
<p>n=51 Reading Gain: 1.55 grade levels</p>		<p>n=43 Reading Gain: 1.23 grade levels</p>
WWC Rating		MD Scale Rating
<p>Meets standards with reservations</p>		<p>4</p>

Reference	Education Level of Program	Description of Program
Linda A. Meyer, John C. Ory, and Richard C. Hinckley, <i>Evaluation Research in Basic Skills with Incarcerated Adults</i> , Champaign, Ill.: University of Illinois Center for the Study of Reading, Technical Report No. 303, 1983.	Adult Basic/Remedial Education	Computer-assisted instruction using the Advanced Instructional Management System (AIMS). The program consisted of self-paced basic skills tutoring on a computer in arithmetic and language use. Duration of the program was 4 weeks. Frequency was 1 hour per day, 5 days per week.
Setting of Program		Measure of Achievement
One maximum-security prison. The location and sector were not specified.		Difference between post-test and pre-test scores on the Test of Adult Basic Education (TABE).
Overview of Research Design and Analysis		
A treatment group, consisting of male inmates who received 1:1 computer-assisted instruction with PLATO while incarcerated, were compared to male inmates who were taught similar content in traditional classrooms for the same period of time. Inmates were assigned nonrandomly to treatment by institutional personnel, and analysis of the treatment effect does not adjust for baseline characteristics.		
Treatment Group		Comparison Group
n=139 Reading Gain: 0.9 grade levels Math Gain: 1.0 grade levels		n=53 Reading Gain: 0.9 grade levels Math Gain: 0.5 grade levels
WWC Rating		MD Scale Rating
Does not meet standards		2