

Early Intervention Computer Software (Y1) Report

Report of FY13



Prepared by the

Utah State Office of Education
Teaching and Learning Division

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Background and Summary

During the 2012 General Session, the Utah State Legislature allocated \$2.5 million dollars of funding through the Early Intervention Program to provide an electronic adaptive learning technology and assessment reading and numeracy program for students in grades K-1. This augments the program offered to grade K-1 in 2012-2013. (Statue 53A-17a-167, Early Intervention Program). Funding for this program is ongoing pending continued legislative appropriation.

The State Board of Education selected five (5) technology providers, through a request for proposals process, to provide an interactive computer software program for reading and mathematics/numeracy instruction and assessment appropriate for students in kindergarten and grade 1. Of the five (5) vendors selected, two (2) also provided software focused on the development of mathematics/numeracy skills.

Districts and charter schools were invited to attend a state-wide information session on August 30, 2013 with all five vendors and were provided with information about each program. Each LEA choosing to participate in the program then selected a software vendor and submitted an application, due on September 20, 2012, to the Utah State Office of Education. The applications were compiled, and it was determined that there was sufficient funding to provide the requested licenses to 227 schools in 28 districts and 22 charter schools. Licenses were distributed beginning on September 25, 2012, and implementation at the school level began in October.

The vendor selection by districts was as follows:

Waterford Early Math and Reading	\$282,801
Imagine Learning	\$1,982,000
Voyager	\$33,070
Curriculum Associates	\$132,036
Compass Learning	\$19,220
TOTAL	\$2,449,127

In addition, an external evaluation of the program was conducted by the Utah Education Policy Center at a cost of \$50,000, bringing the expenditures of the program to **\$2,499,127**.

LEAs signed an assurance form that stated they had access to sufficient technology to implement the program, that they would provide technical support for the program, and that they would implement the program with students as recommended by the software vendor (minutes per week). LEAs also agreed to information reporting requirements. LEAs certified that principals and teachers had been informed about the program and had agreed to the Assurances as well.

Because of several technical problems, the program was not fully implemented until the second quarter of

the school year; however, by the end of November, most schools were operational. The five vendors provided seven different programs: five with a reading focus and two with a mathematics/numeracy focus. The _____ majority of schools selected reading programs, but about 9% of the licenses selected were mathematics/numeracy.

The University of Utah Education Policy Center worked with USOE to design an external evaluation that included a review of (1) the implementation of the program; (2) benefits of the program; and (3) student learning outcomes where data were available. The evaluation included (a) surveys of teachers, principals, and technology directors/support personnel relative to implementation, ease of use, and perceived challenges and benefits; and (b) a review of student performance data.

The review of student data discovered that this state-wide implementation required greater program accountability than had been previously required, and while data could be collected on student performance on each program, each software program had not been configured to link individual performance data to the state-wide DIBELS assessment. This resulted in changes for 2013-14 in the way students are entered into the software programs to provide increased accountability of the software providers in a state-wide evaluation.

The following document is the Executive Summary of the H.B. 513 Early Intervention Program as presented by the Utah Education Policy Center. A full analysis of the data is available.

2013

Evaluation of the H.B. 513 Early
Intervention Program
Executive Summary



Evaluation of the H.B. 513 Early Intervention Program

Executive Summary

Program Overview

A computer adaptive learning technology program for early intervention in reading, math, and science was approved during the 2012 Utah legislative session. The H.B. 513 Early Intervention Program allocated \$2.5 million to school districts and charter schools across the state to purchase adaptive learning technology software that would target kindergarten and first grade students at risk in the areas of reading, math, or science. Administered by the Utah State Office of Education (USOE), the H.B. 513 Early Intervention Program provided funding for five vendors and seven computer software programs that were identified through a request for proposals process. Five of the seven software programs focus on literacy and reading development and two focus on math programs.

School districts and charters submitted their requests for funding to implement the program in September of 2012 and the program was initiated in **277 schools** across **28 districts** and **22 charter schools** during the 2012-13 academic year.

Evaluation Overview

The Utah Education Policy Center conducted an evaluation of the first year of the program to gather information about how the schools implemented the early intervention software programs and to document initial outcomes on student achievement where data were available. The evaluation included a range of data collection activities including statewide school and district surveys, an analysis of the usage data provided by vendors, and analyses of student learning outcomes using data provided by the vendors and the USOE.

The evaluation provides an initial snapshot of:

- The implementation of the HB513 early intervention program,
- Benefits of the program as reported by schools and districts, and
- Preliminary student learning outcomes, where data were available.

Based on these findings, the report presents a set of considerations for ongoing improvements to support implementation and effectiveness of the program and specific recommendations to improve the ways in which data are collected and analyzed for future evaluation efforts.



Key Findings

Below is an overview of key findings from the evaluation of the HB513 early intervention software program implementation. More in-depth discussion and analyses of all data collected for this evaluation, with comparisons, where possible, across vendors and content programs, is provided in the full evaluation report.

In which schools was the program implemented?

Below are the numbers of licenses, schools, and students (for whom data were provided) involved in the H.B. 513 Early Intervention Program across the state during 2012-13 school year.

Vendor	Licenses	Schools	Students
Imagine Learning	20,365	230	17,492
Curriculum Associates (reading & math)	5,216	34	3,019
Waterford (reading & math)	4,687	81	2,681
Voyager Ticket to Read	1,601	37	1,431

Schools that participated in the H.B. 513 Early Intervention Program generally enrolled:

- More English language learners (10.4%) than non-participating schools (6.1%).
- More low income students (eligible for the Free and Reduced Price Lunch program) (41%) than non-participating schools (29%).
- More school-wide Title 1 schools (38%) than non-participating schools (20%).

What resources were needed and used to implement the program?

Surveys of district IT specialists and school administrators indicated that the purchasing of computers was the most commonly reported acquisition for the early intervention program. Additional resources included computer equipment and paraprofessionals, as reported by administrators. IT Specialists reported the acquisition of server capacity, wireless capacity, and other computer equipment.

Space and Location. Teachers reported that students generally used the software programs in computer labs followed by the classrooms. Fourteen percent of teachers reported that students used the software at home. Teachers largely agreed (72%) that there were sufficient computers to implement the program. However, over half of administrators and teachers noted that scheduling time in the lab or classrooms was a challenge.

Support. When students were on the computers, teachers (78%) reported adequate support for students, but there were still a few problems with the functioning of the computers in many schools. Functionality of the computers was reported by 56% of teachers as a problem. IT specialists (60%) reported that implementing the program impacted their workload as they needed to provide ongoing support to the schools throughout the year.

What training and technical assistance was provided and was it helpful?

There was considerable prior experience using Computer Assisted Instruction (CAI) software among teachers who responded to the survey (e.g., 50% of teachers reported they used CAI software in their classes prior to H.B. 513).

Vendors offered training sessions for teachers and administrators, although they were not reported as highly attended.

- Just over half of the teachers and administrators participated in initial face-to-face training, while 26% of IT specialists reported attending.
- Fewer than 25% of teachers, administrators, and IT Specialists participated in additional face-to-face training.
- Fewer than 20% of teachers, administrators, and IT Specialists utilized online training resources or live online trainings.

Teachers who participated in training had mixed reports on its usefulness and adequacy.

- Slightly over half of teachers reported the training was useful or somewhat useful.
- 38% of teachers reported the resources were adequate for demonstrating how the software could be used to enhance learning.
- 47% of administrators agreed or strongly agreed teachers received adequate training from the software vendors.

“The students that used the program effectively and regularly made more significant progress than those that did it intermittently.”

(Administrator Survey)

In addition to the training sessions, teachers had support from district IT specialists and software vendors. In general, most teachers and administrators reported satisfaction with district IT support. District IT specialists noted that they were largely satisfied with the vendor support. Moreover, a majority of administrators and IT Specialists reported that the vendors answered questions in a timely manner.

Did schools adhere to the vendor recommendations for program usage?

Vendors recommended the amount of time students should spend working with the software. The following table shows the extent to which students met vendor recommendations.

Vendor	Kindergarten	First grade
Imagine Learning	76%	55%
Voyager Ticket to Read	96%	92%
Waterford reading	>100%	85%
Waterford math	95%	75%
Curriculum Associates reading	100%	>100%
Curriculum Associates math	67%	76%

In open-ended survey comments, several teachers and administrators suggested that the students who used the software more showed more learning gains than students with less frequent use (e.g., reading ability in comprehension and fluency).

There is also evidence that students with lower baseline DIBELS scores used the software more frequently. This suggests that students who needed the program most received additional access to the software.

How was the program perceived to help student learning?

Survey results indicated there were a number of perceived learning benefits for students. These included student growth in reading and math skills, additional support for English language learners, high levels of student engagement with the program (e.g., they enjoyed the activities), increased differentiation and individualized learning opportunities.

“The program allowed the bright student as well as the new learner to *work at their own pace and progress* at their level.”

(Teacher Survey)

Additionally, 76% of teachers reported that using the software was time well spent for students. 42% of teachers felt that using the software never took the place of teaching. Others noted that the software was not as effective as they had hoped.

Teachers and administrators also reported several obstacles to student learning. 30% of teachers believed that the transitions between class time and software use took time away from other instructional time. Nearly half of the teachers who responded agreed that using the software came at the expense of other

classroom activities, learning opportunities, and instruction in other areas.

One way teachers can gauge learning progress and integrate the program into their teaching is through vendor provided reports. When asked how frequently student performance reports were accessed, almost half the teachers reported rarely or never accessing the reports. About one quarter reported they often or always accessed the reports. Of those who accessed the reports:

- 58% often or always found reports easy to access
- 33% often or always found reports helpful

Alignment to Classroom Instruction. A majority of teachers reported:

- The content of the software was well-aligned with the content they taught
- Content of the software was well-aligned with the Utah Core Standards
- The software was a good complement to classroom instruction

Was the program accessible and user friendly?

Teachers generally indicated that the software was accessible and user friendly. Teachers reported that:

- Students understood how to use the software,
- Students enjoyed using the software,
- Students understood the content,
- The software programs were easy for students to use, and
- The software programs were easy for the students to access independently.



Overall, how satisfied were schools with the program?

Administrators and teachers reported high levels of satisfaction¹ with the use of the software and the influence on student learning, including:

- Ease of use for the teachers
- Ease of use for students
- Curriculum content
- Complements instruction
- Individualized instruction
- Contribution to student learning

What were the student learning gains as measured by vendor assessments?

Due to poor match rates between vendor data and Student Information System (SIS) data, exploration of relationships among software

¹ Satisfaction ratings were considered high if two thirds or more of survey respondents were satisfied or very satisfied with the software programs on various dimensions of software use and student learning outcomes.

use, demographic characteristics, and vendor-reported growth was limited. Curriculum Associates was the only vendor to offer test scores for the beginning and ending of software use. Student learning gains appeared largely consistent with the vendor's recommendations.

For Imagine Learning and Waterford, the time students spent using the software had a small and positive relationship with student growth on vendor assessments.

Controlling for demographics, English language learners, low income, and special education students had more growth on vendor assessments than other students on several parts of the Imagine Learning program.

Voyager Ticket to Read did not provide a student learning outcome measure.

What were the student learning gains as measured by DIBELS?

There was insufficient data to conduct meaningful analyses on the relationship between time spent working with the software program, demographics, and learning outcomes as measured by DIBELS primarily due to the very small and potentially unrepresentative sample of students with valid IDs to match vendor data with DIBELS scores.

Student gains on DIBELS **could not be measured** due to insufficient data from vendors.

Conclusions

The findings in this report indicate that there were a number of successes during the first year:

- Satisfaction with software accessibility and user-friendliness,
- Perceived student growth in reading and math skills,
- Perceived increased support for English language learners,
- Positive reports of students' engagement with the program (i.e., they enjoyed the activities, easy to use), and
- Software programs were used as one of the strategies to support differentiation and individualized learning.

Given the very early stage of the program—some schools began as late as mid-school year—these positive perceptions and satisfaction ratings are encouraging.

However, there were also a number of limitations and challenges discovered during the evaluation:

- The slow start-up time for some schools was a challenge because they had to make mid-year adjustments to schedules and routines and find adequate technology and computer lab time.
- Survey respondents reported challenges with finding time for students to use the program during the instructional day.
- There were concerns that students' time for group instruction was being replaced with potentially less effective time with the software programs.
- Survey respondents reported having inadequate training on the content of the software, how to use the software in

connection with their regular curriculum, and how to use the reports or reporting features.

There were also reports of technology issues and log-in problems. Some problems were due to lack of sufficient bandwidth, updated computers, equipment, inadequate internet, headphones, and too few computers. Other problems were related to software malfunctions.

While there were generally positive perceptions of the software programs, there were also survey respondents who reported limited or no program effectiveness in influencing student learning.

Given the **limited data** and information available from vendors, it is **not possible to draw conclusions** about effectiveness of the computer assisted software and achievement in reading/literacy and or math skills at this time.

Finally, there were a number of limitations to evaluating the program's impact on student learning due to the lack of uniformity among vendor data and sufficient coherence between vendor-expected outcomes and the actual data on student achievement. The lack of valid student IDs limited the ability to account for

student demographics and to utilize an external measure (DIBELS) to assess student learning gains based on software use. *Given the limited data available, it is not possible to draw conclusions about effectiveness of the computer assisted software and achievement in reading/literacy and or math skills at this time.* (See Recommendations for resolution for more detail.)

Recommendations

Based on the findings presented in this report, we offer the following considerations for ongoing improvement. These considerations are intended for the USOE, participating school districts, or vendors.

Access

Continue to develop strategies for matching or targeting the number of licenses with the number of students who will most likely use or benefit from using the software programs (e.g., using DIBELS or other assessments to target interventions).

Resources and Infrastructure

Support schools and districts to ensure that they have adequate computers, equipment, server capacity, and wireless capacity (e.g., adequate bandwidth, and IT support at the school level) to implement the software programs.

Vendors are encouraged to continue updating their software programs to minimize software malfunctions and increase the efficiency and effectiveness of the software programs.

Identify strategies to ensure that students use the software according to vendor recommendations (e.g., the recommended number of days and minutes per week).

Provide guidelines for how schools can use the software within the school day to complement and enhance regular classroom instruction.

Alignment

Vendors could identify the ways in which the various components of the early intervention software programs align with the Utah Core Standards. A crosswalk of the software program features and content with the Core Standards would provide a useful tool for teachers and paraprofessionals as they plan to integrate the early intervention programs into overall instructional strategies. Also consider developing crosswalks of software content with strategies that would support special populations (e.g., ELL, special education, struggling readers, afterschool programs, etc.).

Schools and districts might identify the ways in which the software programs align with and/or support school or district initiatives and school improvement plans to support early reading and math learning. This would provide additional guidance for schools and teachers as they continue to implement the programs.

Training and Professional Development

Provide start-up and ongoing training and professional development opportunities for teachers, paraprofessionals, and administrators to learn about:

- The software content and how the content and instructional strategies complement the Core Standards and instruction (e.g., what are students experiencing when they are on the software programs).
- How to use and maximize reporting features and information to assess student learning progress and adjust

instructional strategies in regular classroom lessons.

- How to incorporate the software programs into the instructional lessons and the afterschool or summer programs, including how the reports of student progress could be used by classroom teachers and afterschool instructors to coordinate their support for students. (See alignment recommendations.)

Data and Information

Not all vendors provide pre- and post- use and summative assessments. This information would be useful to document student learning gains and progress related to software use.

A means of matching data from vendors to other external data sources so that outcomes can be measured in relation to program use is necessary to evaluate the effectiveness of CAI programs on impacting student learning. The ability to document student outcomes (e.g., on DIBELS) was extremely limited because identifiers could not be matched between vendor data and other data sources. The ultimate success of this program hinges on the ability to evaluate student learning gains initially and over time. Collecting accurate and consistent vendor and student data should be a top priority moving forward.



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