

IXL Learning

INTRODUCTION

Teachers are always looking for new ways to implement effective education tools in the classroom setting. While in the era of technology and consistent advancements, there have been many new educational platforms created online. Majority of schools have personal computers for every student to have access too. In this case study a third grade class has Chromebooks for every student. This makes it easy to take advantage of the new educational platforms on the web. IXL Learning was launched in 1998. In this case study, the third grade class just started using IXL Learning as a platform in January 2023. Is IXL Learning an effective tool in the classroom for elementary students? This class uses IXL Learning on a daily basis. The students do twenty minutes of math and twenty minutes of English language arts on independent skill plans. These skill plans are based on their MAP scores for math and reading that they received in December 2022. What that means is, their IXL Learning skills are custom to work on what their individual needs are. This could mean they are working on skills below, on, or above the third grade level. In addition to working on individual skill plans the third grade teacher implements IXL Learning with whole group instruction and makes quizzes on it. To measure if IXL Learning is an effective tool this case study will be comparing the students MAP scores from Winter 2022 to Spring 2023. This case study will explain the process and findings.

CONCEPTUAL FRAMEWORK

Stages in the Innovation Process:

“An innovation is an idea, practice, or object that is perceived as new by the individual or other unit of adoption.” (*Rodgers p. 12*). In this case study IXL Learning is being introduced to an elementary school as a “new innovation.” While it is not a new program itself, it is a new practice being brought into place. There are five separate stages when an innovation is introduced, the innovation process. The first two stages are classified under the initiation process, agenda-setting and matching, these two stages are the planning period before a decision/opinion about the innovation is made. The last three stages of the innovation process are redefining/restructuring, clarifying, and routinizing. These stages are classified under the implementation process. The last three stages are not able to happen until the first two stages have happened (*Rodgers p. 420*). The teachers and students involved in this case study were able to undergo all stages of the innovation process.

1. **Agenda-setting** occurs when a problem is identified and creates a need for a change or innovation to be introduced. The students and teachers being discussed used a computer program called Imagine Learning for many years. This program allowed them to work on math and reading skills independently on their grade level. This program was lacking the scaffolding the students needed to be able to thrive independently. Teachers addressed this problem by looking into new programs. The school district for this elementary's school suggested IXL Learning as a new innovation in place of Imagine Learning (*Rodgers p. 422*).
2. The district extended this program to all teachers and explained ways to implement it in the classroom. Teachers were told this program will answer their request for a program

that scaffolds for students due to its ability to have MAP scores plugged in so each individual student has a custom plan on skills they need to grow in. While also providing grade level work for whole group time. **Matching** is the stage of the innovation process in which the problem is solved with an innovation. In this case, IXL Learning was answering the problem that teachers had with Imagine Learning's inability to be beneficial for each and every student (*Rodgers p. 423*). During this time teachers had the option to either stick with Imagine Learning or switch to IXL Learning for the rest of the school year. As a third grade team of teachers they all decided to switch to the new IXL Learning program. This process is called **collective innovation decisions**, the decision to adopt or reject a new innovation (*Rodgers p. 403*).

3. **Redefining/Restructuring** is when the change starts to happen. IXL Learning was introduced to the students in the case study after Winter break, January 2023. They were shown how to navigate the program by their teacher and were directed to their individual skill plan, this is the feature on the program that is based on their MAP scores. Students started using their MAP skill plans everyday, twenty minutes on the reading and twenty minutes on the math skill plan (*Rodgers p. 424*). During this stage some students were confused on why they were not using Imagine Learning anymore, some students enjoyed the change to IXL Learning while others preferred Imagine Learning still.
4. **Clarifying** occurs when the innovation becomes more familiar and used in an organization (*Rodgers p. 427*). Students still continued to use their MAP skill plans daily, but in addition to that the teachers started implementing other features on the program. The class started using IXL Learning during whole group time. They used the Jamboard feature where they could answer and work on skills as a group together and get real time

feedback. This is used as a quick formative assessment in the classroom for the teachers and students. Also, the teachers make quizzes for the students to complete on their account for reading and math skills.

5. **Routinizing**, the last stage of the innovation process, is when the innovation has become fully adapted and incorporated into daily activities. At this time the students and teachers have fully adapted IXL Learning and use it daily throughout the course of the day (*Rodgers p. 428*).

Incentives:

Teachers and students are able to be accountable for managing time spent on IXL Learning and skills mastered. Students are able to win badges when they master a skill on IXL. This is an incentive that motivates students to try their best on IXL Learning. An **incentive** is an indirect or direct reward to encourage a behavior change (*Rodgers p. 236*). Additionally, the school has a school-wide leaderboard for time spent on IXL Learning. This also is an incentive for students, they are encouraged to be able to receive a certificate for this award from the Principal.

THE INNOVATION

IXL Learning is an interactive tool that over 900,000 teachers utilize and over 14 million students use. IXL Learning is a web program that allows personalized learning. Their curriculum includes grades K-12 with subjects on math, english language arts, science, social studies, and spanish. Students and teachers are able to view real time analytics, this includes a variety of reports to view student data/progress. Providing differentiation through IXL Learning for a

classroom of students with a variety of unique needs is easily attainable (*IXL*). A feature on IXL Learning is being able to input student MAP scores/data. MAP Growth is an assessment created from the company NWEA, a worldwide not-for-profit organization that creates assessments and learning solutions while measuring the growth and proficiency of students. The MAP Growth assessment is an online test that students K-12 can take every Fall, Winter, and Spring. They can assess math, reading, language usage, and science. This case study specifically talks about the data from a math and reading assessment. Teachers are able to use MAP to see student growth in subjects throughout the school year. They are then able to use the data from the test as evidence to help make instructional decisions (*NWEA*).

METHODS

In order to explore if IXL Learning is an effective tool in the classroom there were a variety of surveys, and reports that were created.

Demographic:

The data was collected from a class of nineteen third graders. These students are all in the same homeroom class. Four students are English Language Learners, this means English is their second language. Three of the students are in special education for math, reading, and writing. Five of the students are in the Gifted and Talented program. Two students are on a 504 plan for behavior.

MAP Reports:

In Winter 2022 this class was given MAP reading and math, and then again in Spring 2023. Each student was given a score for math and a score for reading in both Winter and Spring. The data was collected through the NWEA website from the teacher after the test was given to

the students on their individual chromebooks. Each test has forty to forty three questions. Below you will see a table providing on-grade-level scores for third grade.

Table 1: Average MAP Scores

	Winter	Spring
Math	196	201
Reading	193	197

IXL Learning Data:

The IXL Learning data was collected from the teachers portal on the site. The data collected tracks the amount of time each student has spent on IXL Learning since beginning this program, number of questions answered, and number of skills mastered for reading and math. Secondly, a survey was sent out through a Google Form that asked the students “What is your opinion on working on IXL Learning?” They had four choices to choose from that stated: “1- I do not like it, 2- It is whatever, 3- I like it, or 4- I love it!”

After collecting the MAP and IXL Learning data it was put into a Google Sheets to sort, and analyze.

FINDINGS

Is IXL Learning an effective tool in the classroom?

When looking at the results all together we are able to draw on multiple findings.

Table 2: the original data

NAMES:	Winter MAP Reading	Winter MAP Math	Spring MAP Reading	Spring MAP Math	Time on IXL (HR)	Questions Answered IXL	Math Skills Mastered IXL	Reading Skills Mastered IXL	Personal Rating
FA	157	188	166	202	14	2081	32	18	4
JR	174	188	187	193	13	3749	27	20	4
EB	203	202	217	206	24	4539	40	30	2
WC	202	203	207	209	30	4380	55	37	4
LF	185	194	195	205	30	3647	70	29	3
MG	194	191	196	208	37	3238	56	35	4
ZH	195	207	201	211	27	3238	56	35	4
BJ	168	175	188	188	13	3449	17	9	4
BLJ	196	199	213	213	34	4350	76	80	4
LJ	149	182	154	190	26	3672	60	20	4
AK	191	196	208	203	29	4153	57	65	4
DL	154	172	186	185	13	1251	2	18	4
SL	152	162	169	180	21	2521	79	24	4
RL	161	173	170	186	14	3473	33	39	4
JL	153	163	156	184	28	2983	37	38	1
LM	171	179	206	206	27	4460	36	95	4
RR	201	208	213	218	23	3352	51	15	3
TS	193	187	199	203	18	2159	26	11	3
DT	194	192	197	208	34	5887	115	38	4

Table 2 layout the original data. The first column is each individual student. Column two and three states the students MAP score from Winter 2022 for reading and math. Column four and five state their MAP scores for Spring 2023. Table 1 states the score they should have in Spring 2023. Some students are higher, some are on level, and some are lower than the average score. Column six states the time each student has spent on IXL Learning from Winter to Spring, in hours. Column seven states how many questions the student has answered on IXL Learning from Winter to Spring. Column eight and nine state the number of skills mastered on IXL Learning for reading and math from Winter to Spring. Lastly, column ten is a personal rating on their feelings for IXL Learning.

The next few tables will break apart this data and explain what was found.

Table 3: IXL Learning Findings

NAMES:	Personal Rating	Time on IXL (HR)	Questions Answered IXL	Math Skills Mastered IXL	Reading Skills Mastered IXL
JL	1	28	2983	37	38
EB	2	24	4539	40	30
LF	3	30	3647	70	29
RR	3	23	3352	51	15
TS	3	18	2159	26	11
AK	4	29	4153	57	65
BJ	4	13	3449	17	9
BLJ	4	34	4350	76	80
DL	4	13	1251	2	18
DT	4	34	5887	115	38
FA	4	14	2081	32	18
JR	4	13	3749	27	20
LJ	4	26	3672	60	20
LM	4	27	4460	36	95
MG	4	37	3238	56	35
RL	4	14	3473	33	39
SL	4	21	2521	79	24
WC	4	30	4380	55	37
ZH	4	27	3238	56	35
Grand Total	68	455	66582	925	656

The first thing that was done was to look at just the IXL Learning data sorted by personal rating. Table 3 represents this data. A survey was sent out to ask each student to rate their enjoyment with IXL Learning. 1 is the lowest rating, stating they do not enjoy it, and 4 is the highest rating, stating they enjoy IXL Learning very much. The hope was to see a correlation between enjoyment and usage or skills mastered. This was not the case. The data shows no correlation between their personal ratings and their time spent, questions answered, and/or skills mastered. Since there were no findings within this information, the next step was to analyze the MAP data.

Table 4: Math MAP Data

NAMES:	Winter MAP Math	Spring MAP Math	Math Skills Mastered IXL
DL	172	185	2
BJ	175	188	17
TS	187	203	26
JR	188	193	27
FA	188	202	32
RL	173	186	33
LM	179	206	36
JL	163	184	37
EB	202	206	40
RR	208	218	51
WC	203	209	55
MG	191	208	56
ZH	207	211	56
AK	196	203	57
LJ	182	190	60
LF	194	205	70
BLJ	199	213	76
SL	162	180	79
DT	192	208	115
Grand Total	3561	3798	925

Graph 5: Math Map Growth

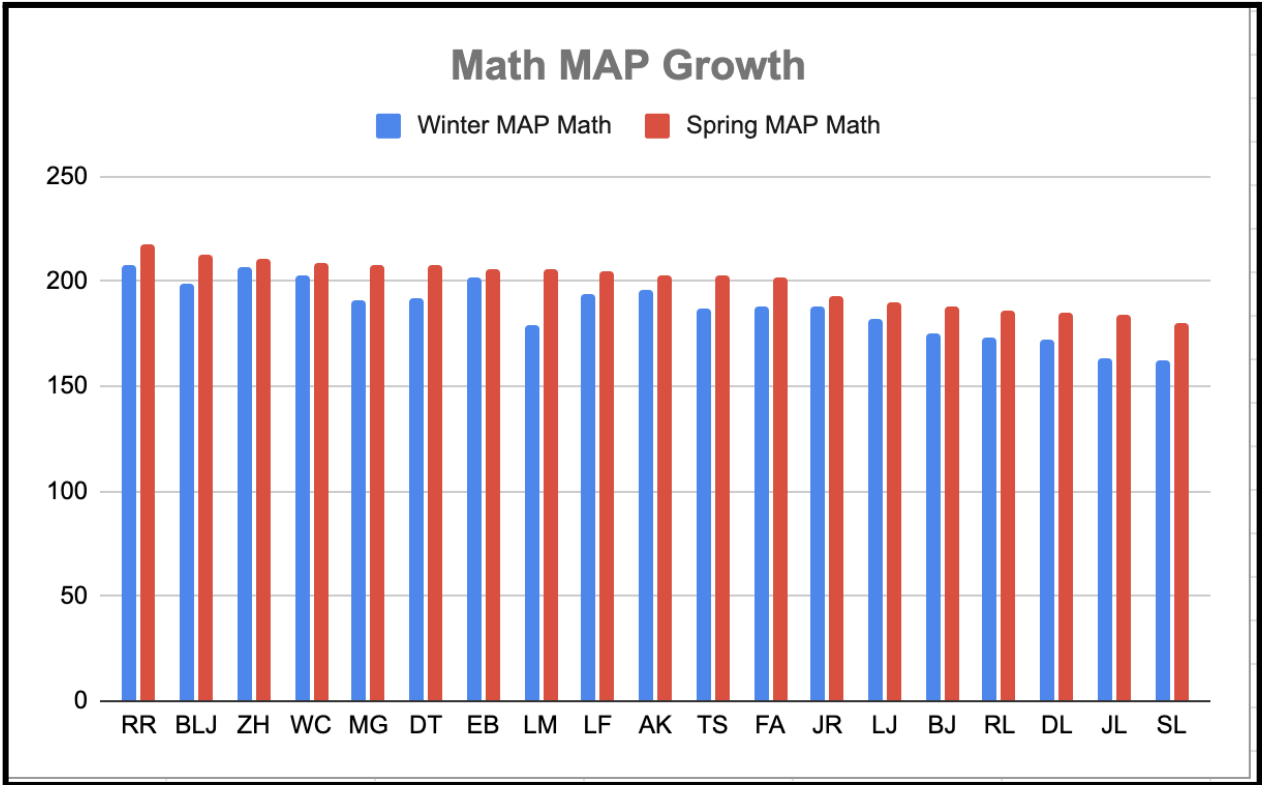


Table 4 shows the students MAP scores for math from Winter to Spring. It also includes their math skills mastered on IXL Learning. The table is sorted by the number of math skills mastered. Graph 5 shows the students MAP scores from winter to Spring. The average growth made from Winter to Spring was twelve points. Every student went up in math. The prediction was to see a correlation with the amount of growth and the amount of skills mastered. There was no correlation between the two. For example student DL made ten points of growth and has only mastered two skills on IXL Learning. While student RR also made ten points of growth but has mastered fifty one skills on IXL Learning.

Table 6: Reading MAP Data

NAMES:	Winter MAP Reading	Spring MAP Reading	Reading Skills Mastered IXL
BJ	168	188	9
TS	193	199	11
RR	201	213	15
DL	154	186	18
FA	157	166	18
JR	174	187	20
LJ	149	154	20
SL	152	169	24
LF	185	195	29
EB	203	217	30
MG	194	196	35
ZH	195	201	35
WC	202	207	37
DT	194	197	38
JL	153	156	38
RL	161	170	39
AK	191	208	65
BLJ	196	213	80
LM	171	206	95
Grand Total	3393	3628	656

Graph 7: Reading MAP Growth

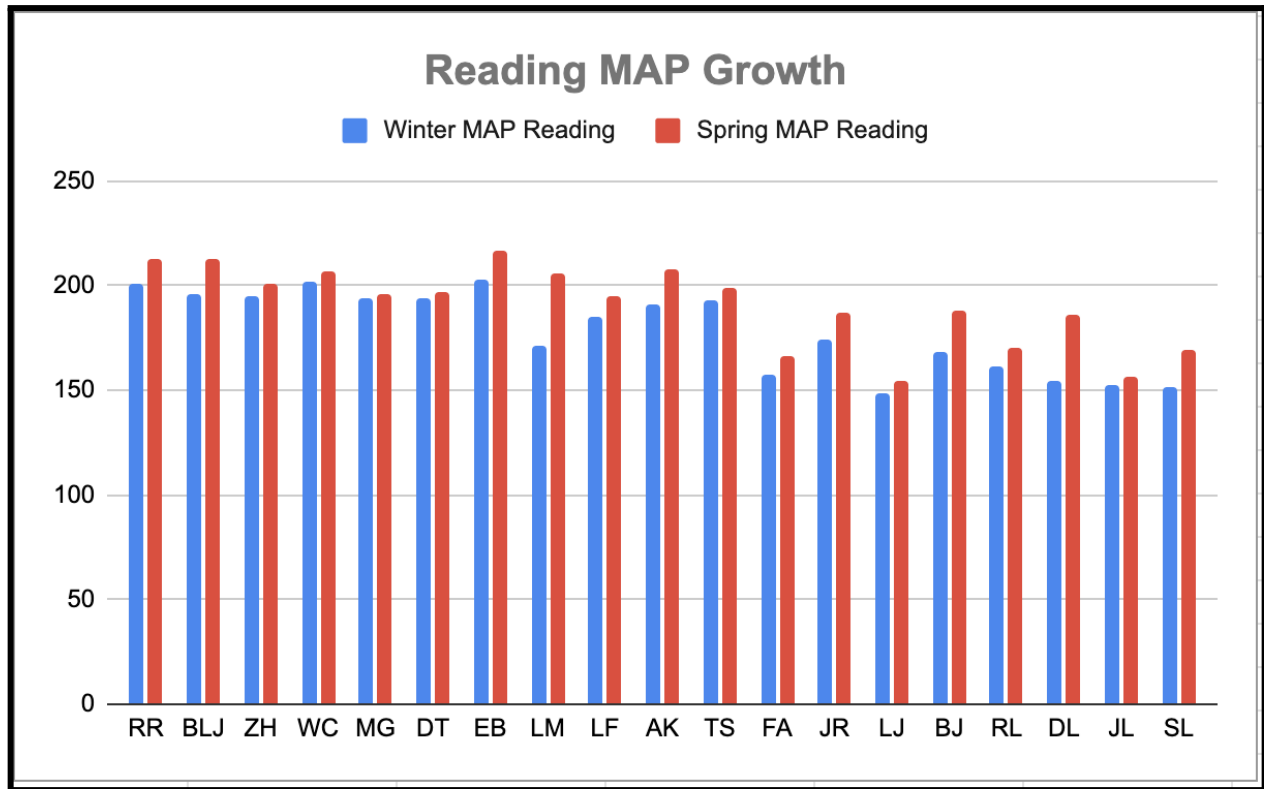


Table 6 is similar to Table 4 but is using the reading data. It shows the MAP scores from Winter to Spring and the number of skills mastered on IXL Learning. Graph 7 shows the growth for each student for reading MAP scores from winter to Spring. The average growth was twelve points from Winter to Spring. Again, the hope was to see a correlation between growth and skills mastered. There was no correlation between the two. For example student LJ made five points of growth and have mastered twenty reading skills on IXL Learning. While, student BJ made ten points of growth and have only mastered nine reading skills on IXL Learning.

After analyzing all the data collected it can be assumed and denied that IXL Learning is an effective tool in the classroom. While every student did make growth on their MAP scores from Winter to Spring in both reading and math, it can not be assumed this is due to IXL

Learning. It is apparent that the students do indeed enjoy the use of IXL Learning and are able to use this program to grow educationally. Due to the data there is no obvious correlation between their MAP growth and their usage on IXL Learning skill plans. In the classroom students are utilizing a variety of learning instruction, furthermore are learning four more months of content. It is common to see much growth from Winter to Spring due to the fact that by Spring they have learned the majority of their educational standards for the school year. This is not to say IXL Learning did not contribute to the growth in the students but it can not confidently be determined how effective it truly is based on the information in this case study. Next steps would be to track IXL Learning effectiveness deeper than just based on MAP scores.

CONCLUSION

IXL Learning is sticking around in this third grade class. They will continue to use their individualized MAP skill plans, Jamboard for whole group instruction, quizzes and more. As of now this is the better option for the students and their needs based on the teachers opinions. Students will continue to grow while using IXL Learning and other forms of instruction in the classroom. Soon enough a new and even better program for students to work on their independent skills will come about and they will then complete the stages of innovation over again. As stated before while we are in the era of technology people will be taking advantage and trialing new innovations very frequently. The teacher and student in this case do believe that IXL Learning is an effective tool in the classroom when it is paired with a variety of other forms of instruction.

REFERENCES

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