

Golden Maple Middle School

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Questions to Consider:

As you read the information in the case study, consider the following guiding questions:

- What does the student interview data tell you about how these students learn or approach their learning?
- How can you use student interview data to help you address a variety of learning preferences, challenges, and barriers as part of the human-centered design process?
- How can you use subject-area performance data to help identify an instructional problem or an area of need?
- How can you use data about specific skills and concepts within a subject area to identify an existing gap in student knowledge or skills?
- What information about your learners can help guide the design process for your instruction?



Introduction

The School District

The Ridgeland Regional School District (RRSD) is a large school district comprised of three towns, each with its own unique characteristics and demographics. Golden Maple Middle School is one of three middle schools in the district. Golden Maple Middle School includes grades 6, 7, and 8. Golden Maple Middle School has been in existence for 18 years, and student achievement has been steady for the majority of that time, with students generally scoring in the upper 70% of state schools on their standardized tests. In Golden Maple Middle School, each student is assigned a device that can be connected to the internet. 85% of students within the school district have access to the internet at home, according to the most recent survey.

Golden Maple Middle School has recently been awarded a grant targeting **an increase in the use of e-learning to address learners' instructional needs**. Through the implementation of e-learning solutions using innovative instructional design strategies, the school aims to create meaningful learning experiences that improve student achievement.

Your Role

You will use your expertise in designing learning experiences to help the school better understand their learners, identify instructional problems, and design e-learning solutions to help improve student achievement. Your primary responsibility will involve focusing on the specific learning needs in the 6th grade. You will conduct an in-depth learner analysis using the data provided below and design targeted e-learning solutions tailored to meet the unique instructional needs of specific learner types.

School and Student Data

School Demographics

Note: Demographic data is included for the sole purpose of providing context about the school and its students.

Grades Served	6–8
Student Enrollment	428 students 47% Male, 52% Female, 1% Non-Binary/Other
Student: Teacher Ratio	21:1



Full-Time Teachers	22
Eligible for Free/Reduced Lunch	59%
Student Diversity	11% Hispanic or Latino 43% White 35% Black/African American 6% Asian 5% Two or More Races 0% Other
Household Income	4% <\$25,000 11% \$25,000-\$35,000 20% \$35,001-\$45,000 41% \$45,001-\$55,000 24% >\$55,000
Median Household Income	\$53,000

Student Performance on State Standardized Tests - 6th Grade

Test Subject and Proficiency Level	State 6th Grade	School District 6th Grade	Golden Maple Middle School 6th Grade
Below Grade Level			
All Subjects	31%	30%	29%
English Language Arts	34%	42%	41%
Mathematics	33%	28%	26%
Science	29%	28%	26%
Social Studies	30%	30%	29%
At Grade Level			
All Subjects	47%	52%	51%
English Language Arts	45%	40%	39%
Mathematics	50%	51%	47%
Science	52%	50%	53%
Social Studies	48%	49%	49%
Above Grade Level			
All Subjects	22%	18%	20%
English Language Arts	21%	18%	20%
Mathematics	17%	22%	27%
Science	19%	22%	21%
Social Studies	22%	21%	22%



One-Year Change in Student Performance on Standardized State Tests – 6th Grade

	State 6 th Grade	School District 6 th Grade	Golden Maple Middle School 6 th Grade
All Subjects	+2%	0%	+1%
English Language Arts	-4%	-2%	-5%
Mathematics	-2%	+1%	+2%
Science	+6%	+5%	+1%
Social Studies	+0%	+1%	+1%

Student Responses Regarding School Experience

Note: *There are many students in the 6th grade at Golden Maple Middle School. Rather than provide responses from all students, learner responses were compiled and grouped by students who learn similarly. The responses below are from multiple students in each learner group.*

Learner Group A – This group of 6th-grade learners is comprised of twenty students that share similarities in how they learn, their attitudes toward learning, and barriers to learning.

Q: What is the hardest part about the sixth grade?

The learners in this group seem to have difficulty with the increased level of self-efficacy they are required to demonstrate related to some of their learning this year.

One Learner's Response:

"My teacher knows a lot and will help me when I have questions about writing, but I don't know what to ask. So, I write my expository writing assignments, and they come back all marked up. Then I try the next assignment, and it comes back the same way. The marks don't make sense to me, and I just want to be better at writing."

Q: Tell me about a classroom experience that you've enjoyed so far.

The learners in this group reported liking active learning activities that allow them to use technology, manipulatives, art materials, and multimedia resources. They have experience using technology and often teach other students new tools or tips within apps and technologies they use in the classroom.



One Learner's Response:

"I really like it when my teachers create online games to help us prepare for quizzes and tests. On Friday, my science teacher made an interactive vocabulary game that had a lot of cool graphics and sounds. You competed against the other people in class. It didn't even feel like schoolwork because it was so much fun, and I almost got to the top of the leaderboard by the end of class."

Q: Are you able to complete your schoolwork at home?

Many learners in this group reported having too many obligations and interests that dominate their time when they are not in school, so many don't have structured time for homework. Many of these students do not take their books and materials home from school. These students often bear responsibilities outside of school that many people their age do not. They work hard to maintain their homes and families and are dedicated to those close to them.

One Learner Response:

"My older brother and younger sister are always bugging me when I'm at our apartment. I can't read or focus on writing because they are so loud! I wish there was a way for me to drown them out and focus, but we are supposed to stay at the house until my mother gets home from work."

Q: Which subject do you look forward to most and least?

Many learners in this group make astute comments about the classroom experience rather than simply the class subject. These students are strong tactile learners and learn best by doing rather than by simply reading or hearing. They are adept at games, technology, engineering, building, and fixing things.

One Learner Response:

"I don't really like math because we kind of do the same thing every day. We work on problems together, and then we work on problems individually. Then we check our work. I just don't like that schedule and I have trouble focusing on the lesson. I am not very good at math, and I feel like the people around me do the problems twice as fast as I do. In language arts class, we are able to choose how we work. Like if we are working on vocabulary, we can choose from these four different stations where we practice with the words in different ways, like with computer games and an illustration app on the tablet. I don't lose focus doing those things."



Learner Group B – This group of 6th-grade learners is comprised of 17 students that share similarities in how they learn, their attitudes toward learning, and barriers to learning.

Q: What is the hardest part about the 6th grade?

The learners in this group seem to consider the amount of homework difficult because they find their schedules and their study habits are hindrances to their efforts.

One Learner's Response:

"Homework...I'm over it! We do so much work in school that I don't want to turn around and do more at home. Plus, when I get home, I don't remember how we did the work in class. In math class, we do word problems, and they are hard, but the way the teacher explains it, I can find the numbers I am supposed to use and what I am supposed to do with them. Then I get home and I try to think about what the teacher said, but I can't ever remember, and I just cannot do the word problems."

Q: Tell me about a classroom experience that you've enjoyed so far.

The learners in this group reported enjoying structured learning activities with clear instructions and timelines. They need additional time to process verbal information and appreciate opportunities to collaborate with their classmates on projects and assignments.

One Learner's Response:

"My favorite class is definitely science because my teacher lets us work with a partner to do our work. She lets us sit anywhere we want as long as we work hard. We were learning about the structure of atoms, and it made no sense to me. But my partner and I sat in the hallway outside the classroom door away from other students and we illustrated some atoms and labeled the parts, with explanations of what each part did. It turned out our explanations weren't completely right, but it really helps me to talk to someone and see ideas about what I'm learning."

Q: Are you able to complete your schoolwork at home?

Many learners in this group seek structure and feedback when working. They have difficulty replicating the structure from the classroom when they are at home.

One Learner Response:

"I have trouble when I do my reading assignments. At school, we often read short passages and stop and talk about what we just read, and the teacher uses pictures and graphics to help explain the reading. When we do that, I can make sense of our reading. At home, I read to myself and I end up focusing on making sense of the words and the sentences, and I lose track of what I am actually reading about."



Q: Which subject do you look forward to most and least?

Many learners in this group like classes where they have a sense of safety and are not being judged by teachers or peers.

One Learner Response:

"I like my first period science class. The teacher's classroom always smells like coffee, but I don't know where the smell comes from. And she tells us we are going to ease into the day. She always gives us a warm-up assignment that is usually us writing about something that happened in our lives. Then she explains how the writing topic relates to what we are learning, and it makes class feel like science is important to our lives. It's not just work we have to get done. She never makes us share our warm-ups if we don't want because she said personal things can stay personal. My language arts class is not like that. We just start in on working as soon as the bell rings with no time to prepare."

Learner Group C – This group of 6th-grade learners is comprised of 22 students that share similarities in how they learn, their attitudes toward learning, and barriers to learning.

Q: What is the hardest part about the 6th grade?

The learners in this group often focus on the social aspect of learning and seem to tie it closely to their motivation to achieve.

One Learner's Response:

"Sitting in class and listening or watching my teacher explain things makes me lose interest. This is the first year we have had so many real tests and so much homework. I used to like school because all of my friends are here, but now we hardly get to have fun together."

Q: Tell me about a classroom experience that you've enjoyed so far.

Many learners in this group identify exploratory learning, problem-based learning, or experiential learning as engaging them in the learning process.

One Learner's Response:

"I am not the best at language arts, but our teacher makes it so fun. One time we went to look at this old, empty house across the street from the back entrance of the school property. It looked haunted. We then got in pairs and wrote a fictional story about the people who used to live there and we had to use figurative language in several places. My friend and I wrote the best story about an old man who built this big house so his missing daughter would be able to



find him after she mysteriously disappeared. We typed it and used a design app to illustrate it. My teacher included it on the class website for other students and parents to read.”

Q: Are you able to complete your schoolwork at home?

Many learners in this group have difficulty motivating themselves outside of the classroom and it affects the work they do (or don't do) at home.

One Learner Response:

“Half the time, I forget to take the right book home or I leave my notebook that has my assignments in it in my desk. I sometimes ask my mom to look online to see what homework the teacher posted, but then she gets mad if I don't have the right stuff at home to do it. My bus gets to school early, so I usually scramble to get my work done in the morning before class starts.”

Q: Which subject do you look forward to most and least?

Many learners in this group mention liking classes where a variety of instructional approaches are used, especially those that relate to their lived experiences.

One Learner Response:

“I look forward to social studies because the teacher acts like we are all in this learning thing together. He will ask us a big question like, ‘How have the mountains and the rivers that surround our school district affected the ways people have lived here in the past?’ And then he will say, ‘How do you think we should go about finding the answer?’ Some of us say one thing and some of us say another, and he lets us go try our ideas for finding answers. Then we come back together and explain what we learned. That's fun. I don't look forward to science because we learn about all of these invisible things like erosion and body systems...I can't understand things I just can't see or touch...they don't seem real.”



Mid-Year Benchmark Performance Analysis Summary

These benchmark scores represent a **sample** of the topics assessed in the benchmark testing at the mid-year point. This list does not include all topics that were assessed.

Statement	Emerging	Developing	Proficient
6 th Grade students can do the following at grade level (English Language Arts)...			
• Use context clues to determine the meaning of new words	61%	13%	26%
• Compose poetry that includes elements, such as imagery, rhythm, and sound devices	40%	31%	29%
• Summarize texts, identifying main ideas and supporting details	70%	20%	10%
• Compare and contrast texts in different structures or genres	52%	23%	25%
• Use persuasive language in context in original writing	45%	43%	12%
• Write in both formal and informal tones, depending upon purpose of writing	50%	41%	9%
• Write clear arguments with support for claims	42%	47%	11%
6 th Grade students can do the following at grade level (Mathematics)...			
• Evaluate algebraic expressions with one variable	23%	34%	43%
• Solve multistep word problems with rational numbers	64%	24%	12%
• Convert fractions, decimals, and percents	57%	30%	13%
• Plot positive and negative points on a coordinate plane	58%	9%	33%
• Create mirror images using lines of symmetry	14%	47%	39%
• Classify types of triangles based on their sides and angles	22%	52%	26%
• Calculate the probability of an event	51%	29%	20%
6 th Grade students can do the following at grade level (Science)...			
• Diagram plant and animal cells	60%	24%	16%
• Describe the cyclic patterns of lunar phases	54%	37%	9%
• Discuss the impact of environmental issues, such as pollution, deforestation, and climate change	70%	14%	16%
• Describe the properties of different states of matter	58%	17%	25%



Statement	Emerging	Developing	Proficient
<ul style="list-style-type: none"> Explain how muscles and bones work together to create movement 	63%	21%	16%
<ul style="list-style-type: none"> Create a working prototype of a simple machine 	41%	28%	31%
<ul style="list-style-type: none"> Explain the steps of photosynthesis 	50%	35%	15%
6 th Grade students can do the following at grade level (Social Studies)...			
<ul style="list-style-type: none"> Analyze how geography has affected people and cultures 	19%	48%	33%
<ul style="list-style-type: none"> Describe how supply and demand have affected trade in the past or present 	57%	32%	11%
<ul style="list-style-type: none"> Compare a variety of forms of government from the past or present 	11%	39%	50%
<ul style="list-style-type: none"> Classify renewable and non-renewable natural resources found in the United States 	24%	60%	16%
<ul style="list-style-type: none"> Explain the separation of powers among the 3 branches of government 	38%	40%	22%
<ul style="list-style-type: none"> Explain that a market exists when buyers and sellers exchange goods and services 	33%	38%	29%
<ul style="list-style-type: none"> Explain how cultural diversity contributes to a dynamic society 	20%	29%	51%

