

# FORT WAYNE COMMUNITY SCHOOLS



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Transformational Learning  
for Students



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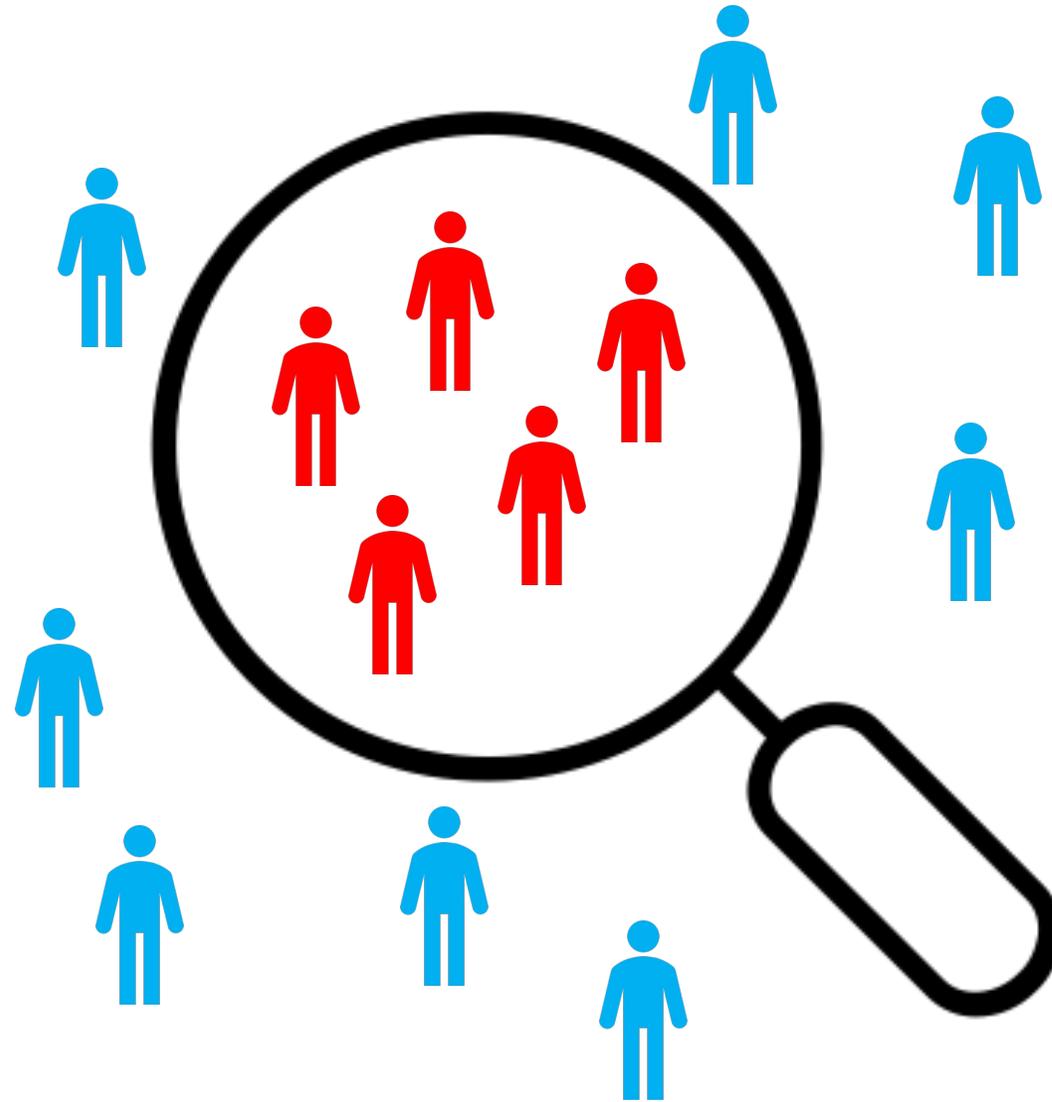
# **Project-Based Learning Impact Research**

Dr. Mike Speziale

Dr. Marie Roke-Thomas

# Sample Selection

- 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> Grade Targeted
- Frequency Data
  - Defined
  - Ft. Wayne Frequency Data
- Qualitative Validation



# Data Source

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- FastBridge Test Data

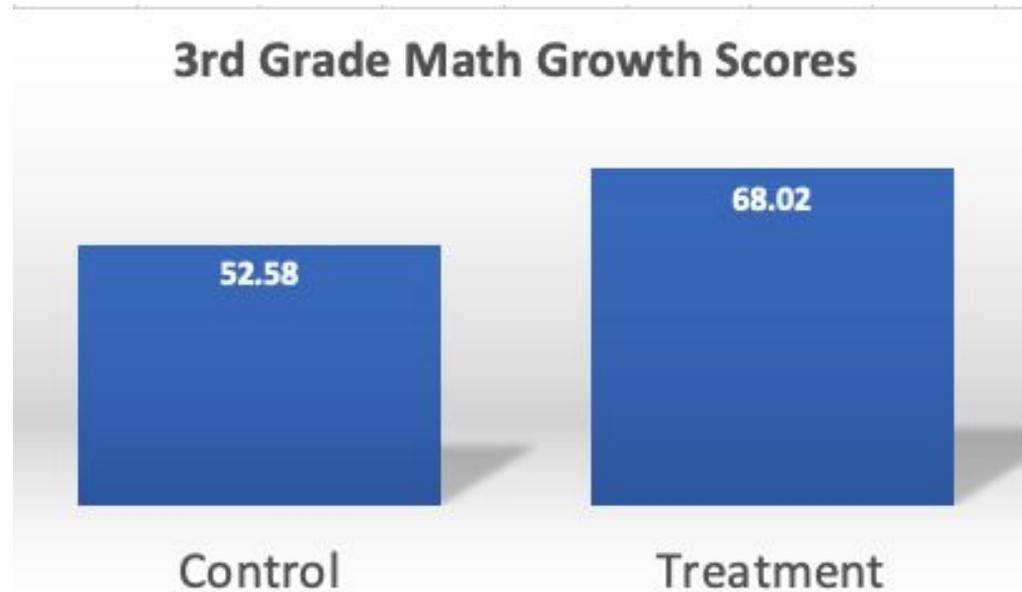
- Reading and Mathematics
- Growth Score – BOY/EOY Data



# Quantitative Results

# 3<sup>rd</sup> Grade Mathematics Growth Scores

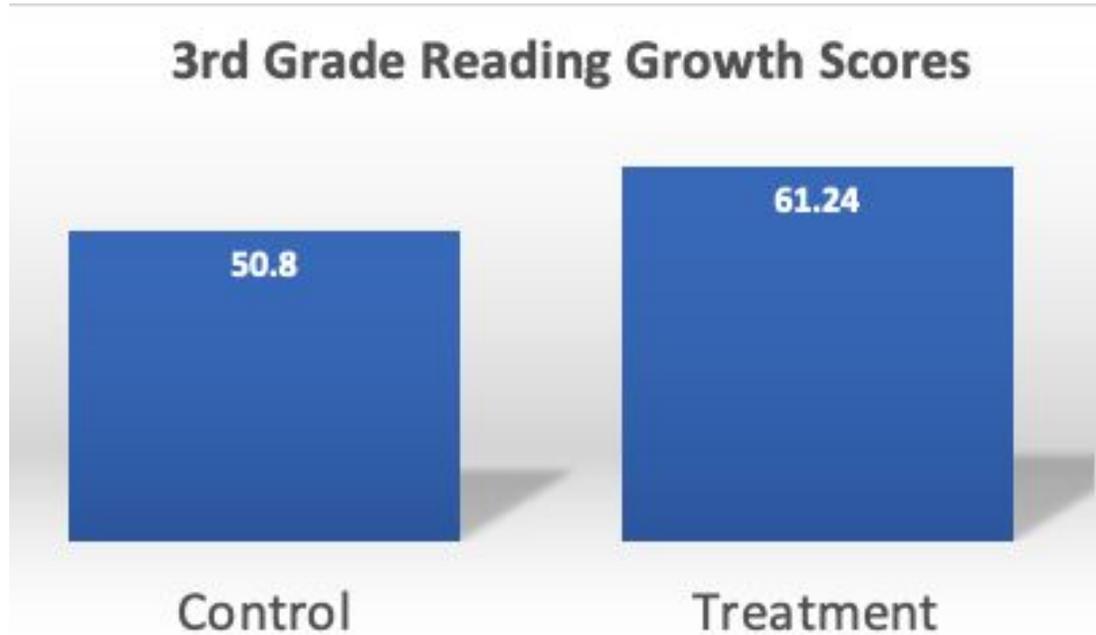
- An independent-samples *t*-test indicated a significant difference between the experimental and control group growth scores for 3<sup>rd</sup> grade mathematics,  $t(481.215) = 5.934, p < .000$ .



<i>N</i>	Growth Score	<i>SD</i>	<i>p Value</i>
Experimental Group - 233	68.02	26.37	$p < .05$
Control Group - 253	52.58	30.92	

# 3<sup>rd</sup> Grade Reading Growth Scores

- An independent-samples *t*-test indicated a significant difference between the experimental and control group growth scores for 3<sup>rd</sup> grade reading  $t(475.752) = 4.008, p <$



<i>N</i>	Growth Score	<i>SD</i>	<i>P Value</i>
Experimental Group - 231	61.24	26.75	$p < .05$
Control Group - 248	50.80	30.24	

# 4<sup>th</sup> Grade Mathematics Growth Scores

- An independent-samples *t*-test indicated a significant difference between the experimental and control group growth scores for 4<sup>th</sup> grade mathematics,  $t(480.387) = 5.815, p < .000$ .



<i>N</i>	Growth Score	<i>SD</i>	<i>p Value</i>
Experimental Group - 223	63.56	27.65	$p < .05$
Control Group - 263	48.36	29.92	

# 4<sup>th</sup> Grade Reading Growth Scores

- An independent-samples *t*-test indicated a significant difference between the experimental and control group growth scores for 4<sup>th</sup> grade reading,  $t(462.866) = 3.205, p < .001$ .



<i>N</i>	Growth Score	<i>SD</i>	<i>p Value</i>
Experimental Group - 218	53.77	27.53	$p < .05$
Control Group - 247	45.12	30.68	

# 5<sup>th</sup> Grade Mathematics Growth Scores

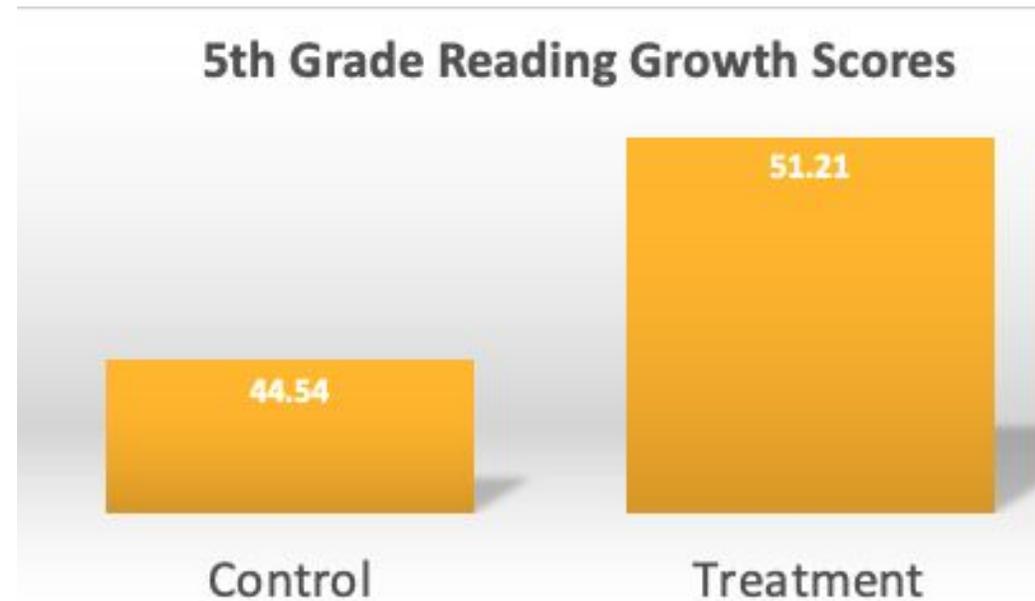
- An independent-samples *t*-test indicated no significant difference between the experimental and control group growth scores for 5<sup>th</sup> grade mathematics,  $t(481) = 1.453, p = .147$ .



<i>N</i>	Growth Score	<i>SD</i>	<i>p Value</i>
Experimental Group - 249	52.80	28.75	$p > .05$
Control Group - 234	49.00	28.77	

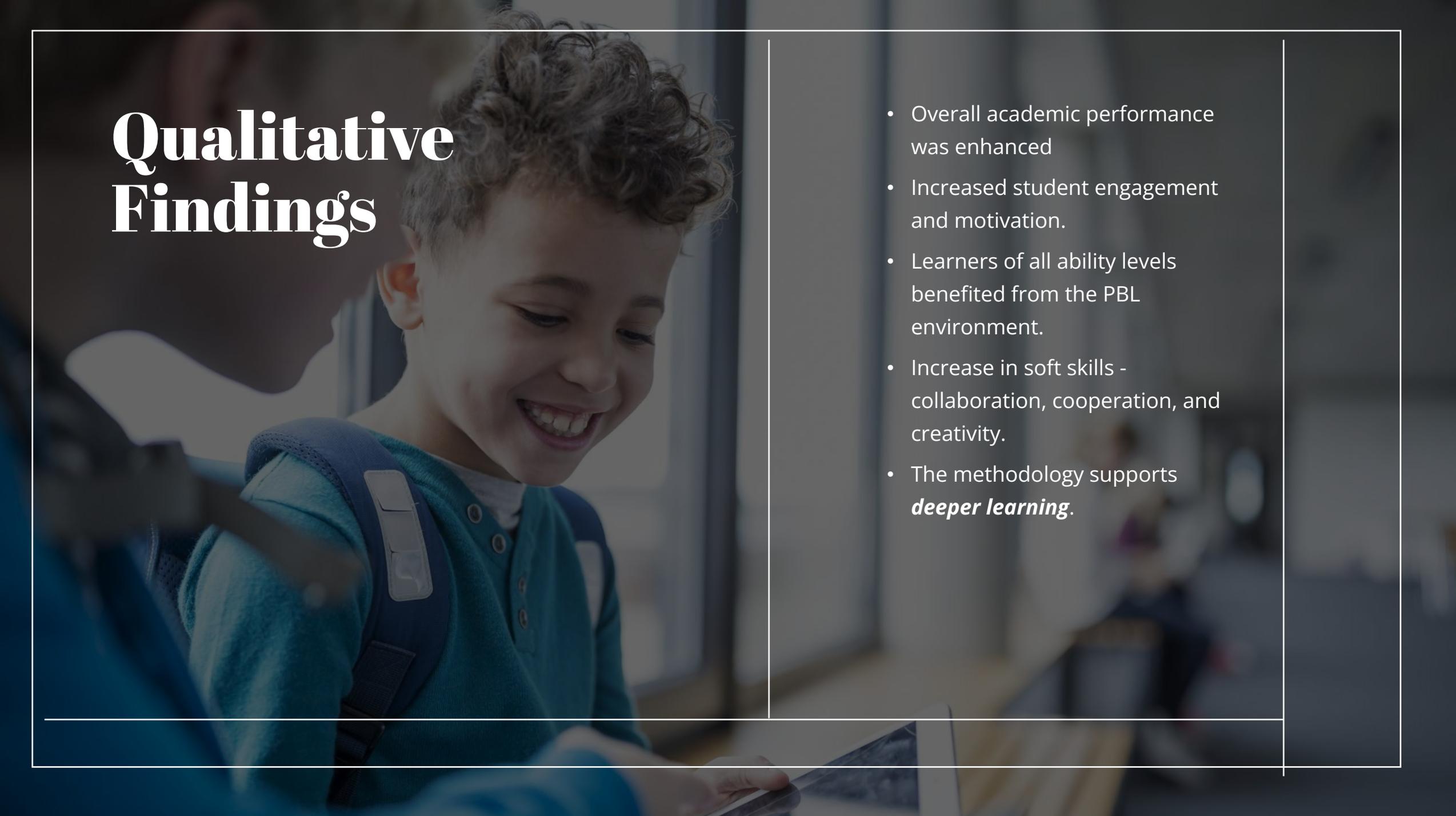
# 5<sup>th</sup> Grade Reading Growth Scores

- An independent-samples *t*-test indicated a significant difference between the experimental and control group growth scores for 5<sup>th</sup> grade reading,  $t(485) = 2.542, p = .011$



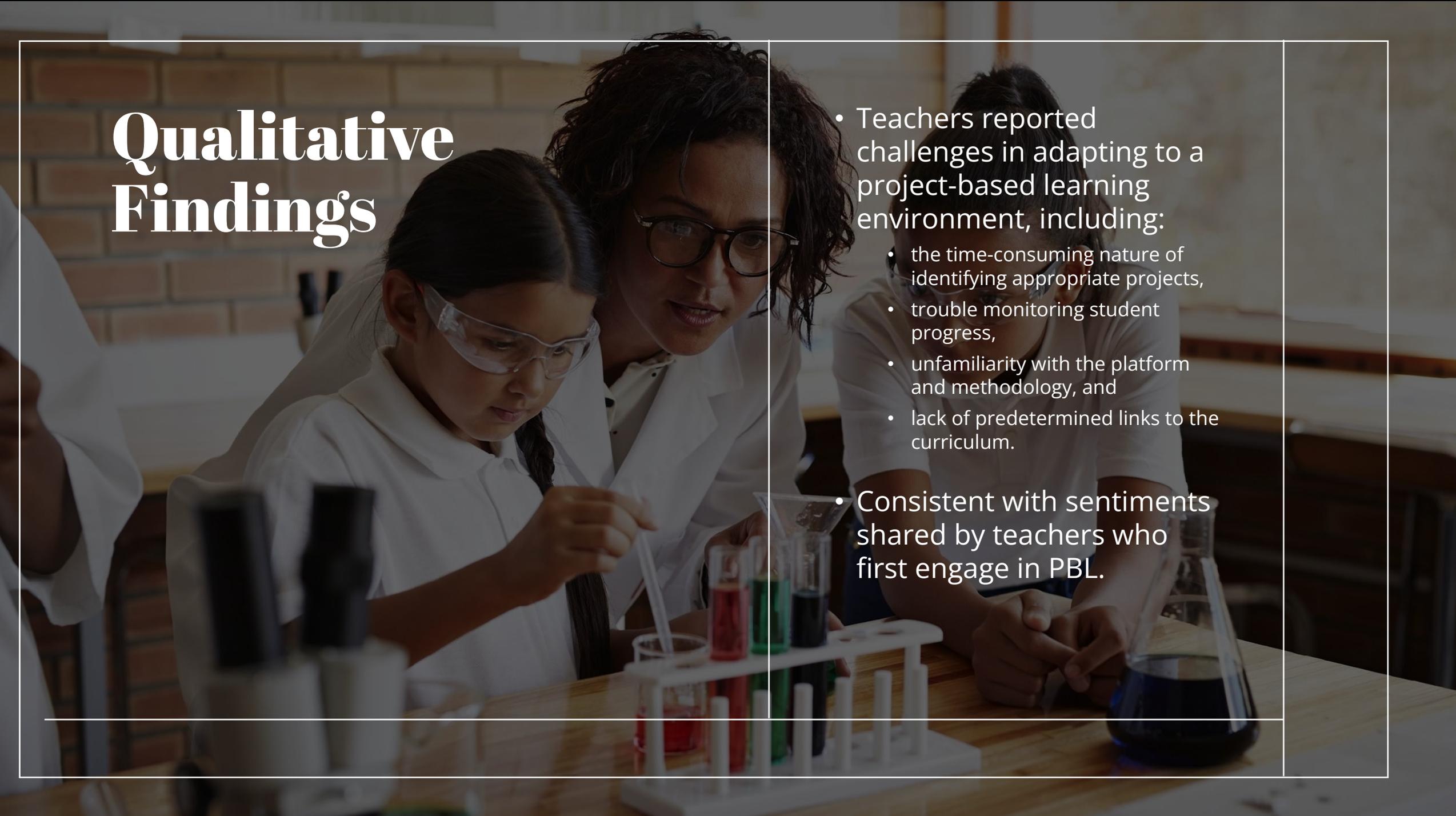
<i>N</i>	Growth Score	<i>SD</i>	<i>p Value</i>
Experimental Group - 247	51.21	27.69	$p < .05$
Control Group - 240	44.54	30.24	

# Qualitative Findings



- Overall academic performance was enhanced
- Increased student engagement and motivation.
- Learners of all ability levels benefited from the PBL environment.
- Increase in soft skills - collaboration, cooperation, and creativity.
- The methodology supports *deeper learning*.

# Qualitative Findings

A photograph of a teacher and a young student in a laboratory setting. The teacher, wearing glasses and a white lab coat, is leaning over the student, who is also wearing a white lab coat and safety goggles. They are both focused on a task involving test tubes and a rack. The background shows a brick wall and other lab equipment.

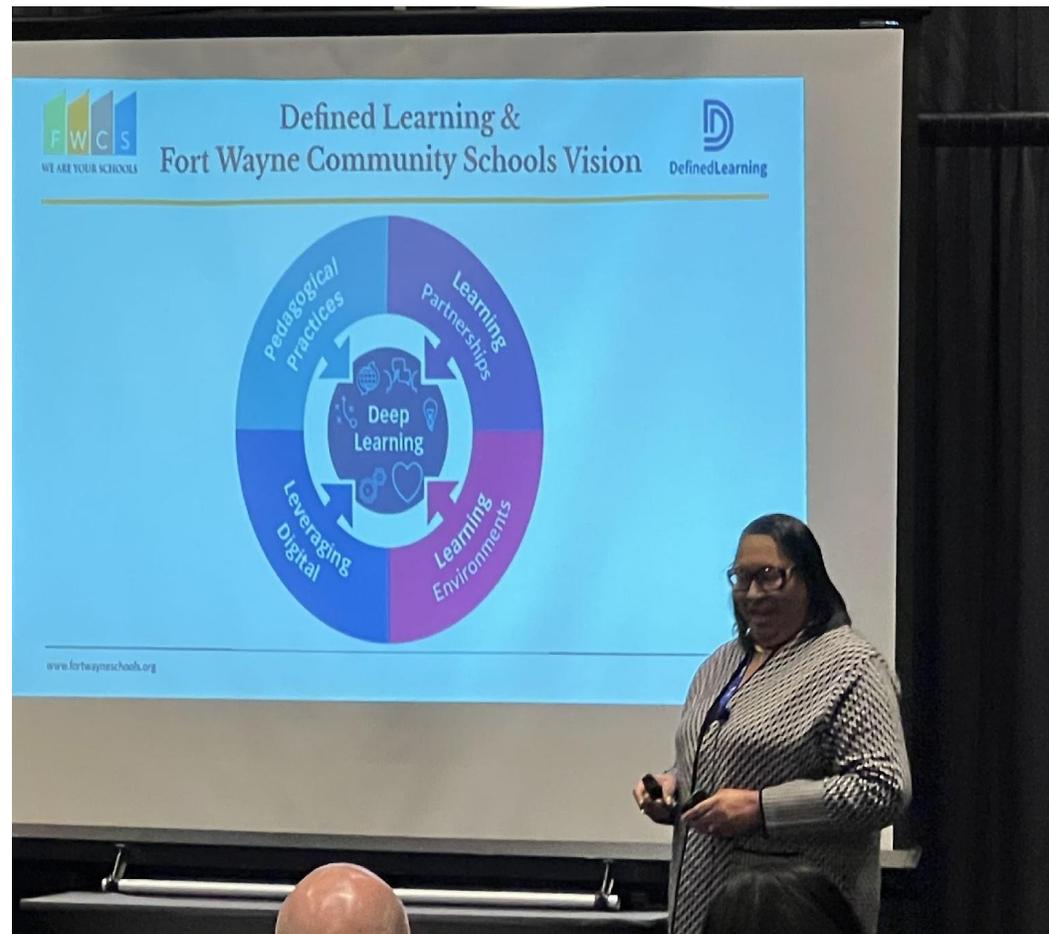
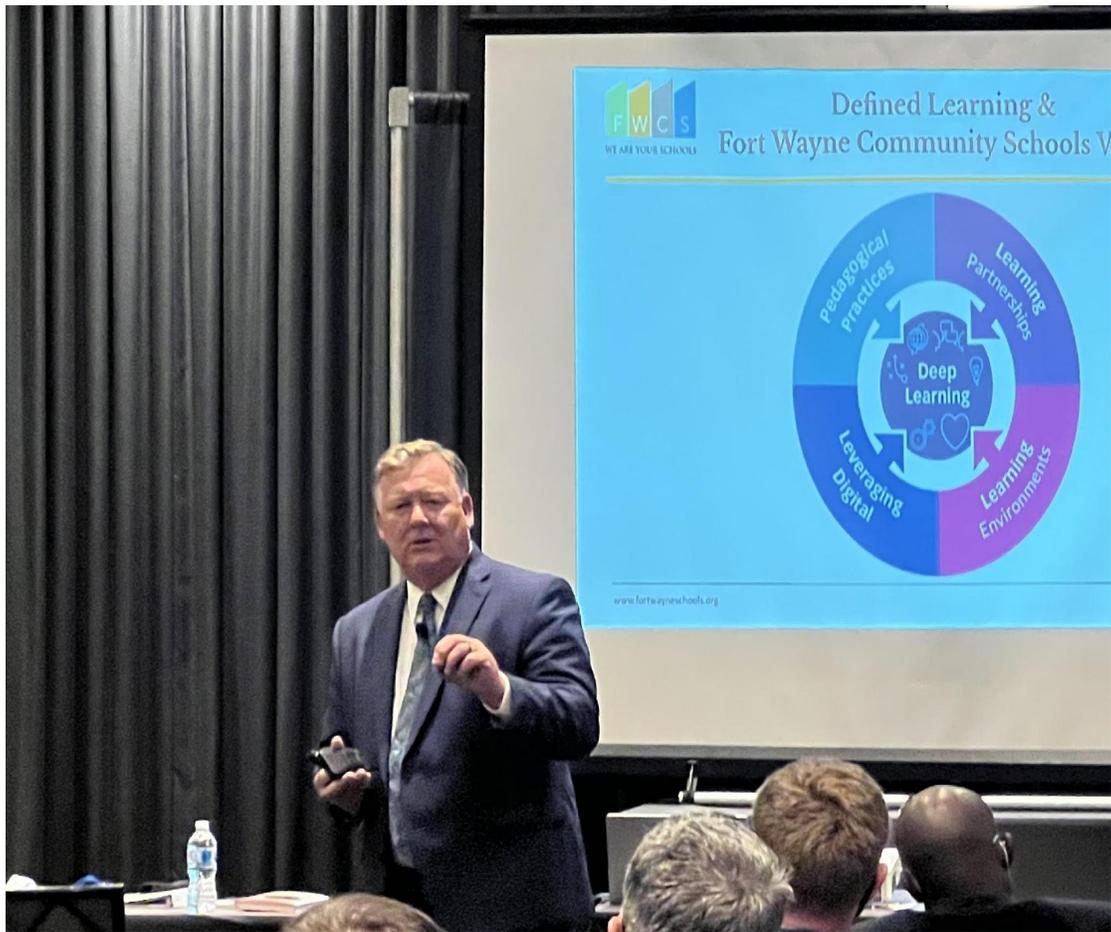
- Teachers reported challenges in adapting to a project-based learning environment, including:
  - the time-consuming nature of identifying appropriate projects,
  - trouble monitoring student progress,
  - unfamiliarity with the platform and methodology, and
  - lack of predetermined links to the curriculum.
- Consistent with sentiments shared by teachers who first engage in PBL.



- The benefits and challenges identified in the study are consistent with existing literature.
- Effective project-based learning requires
  - an overt link to curriculum
  - firm understanding of the methodology that can only be gained through professional development and hands-on experience in the classroom.

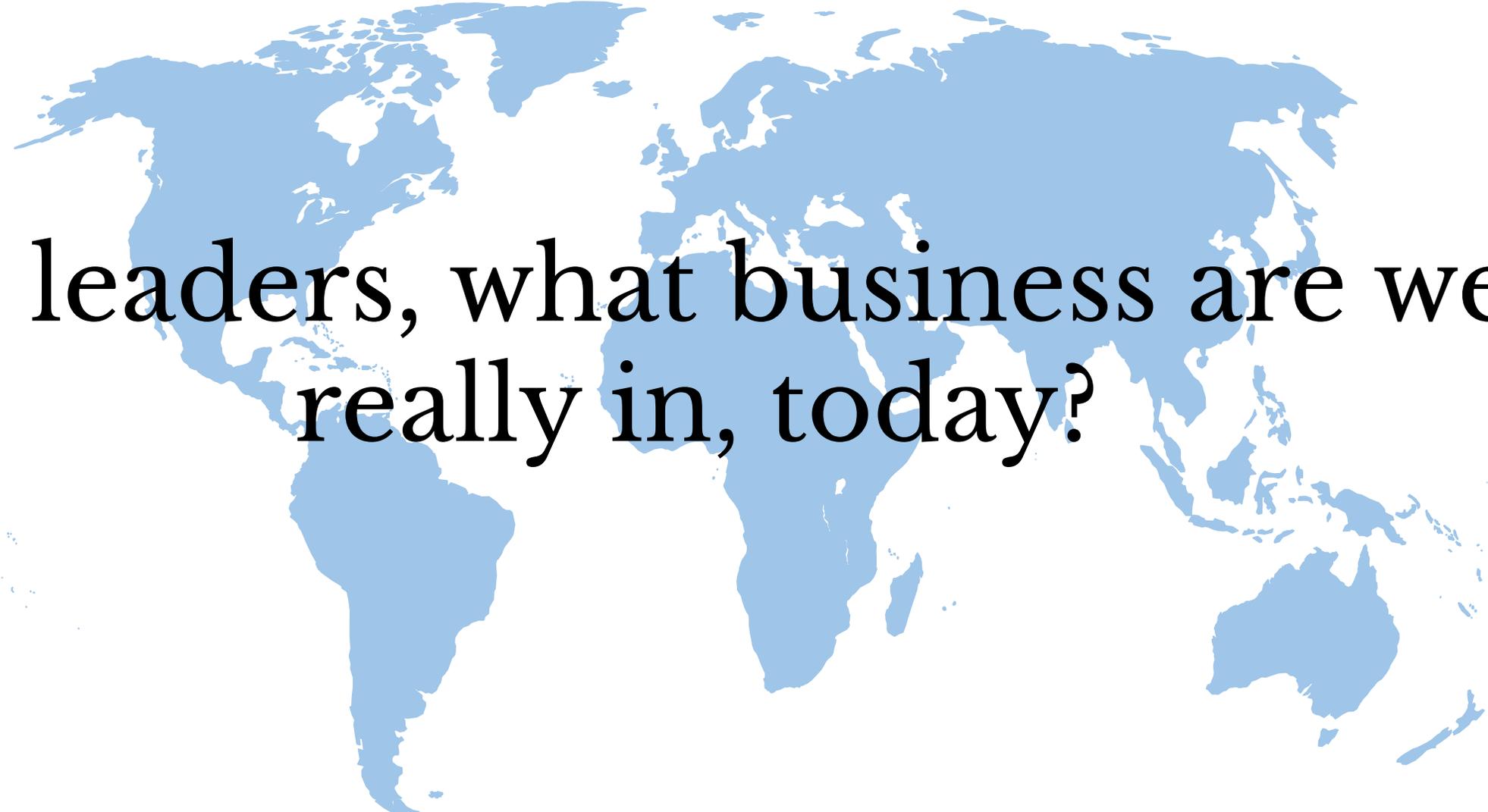
# Takeaways





# Fort Wayne Community Schools Vision: *Utilizing Project-Based Learning to Transform Deep Learning*

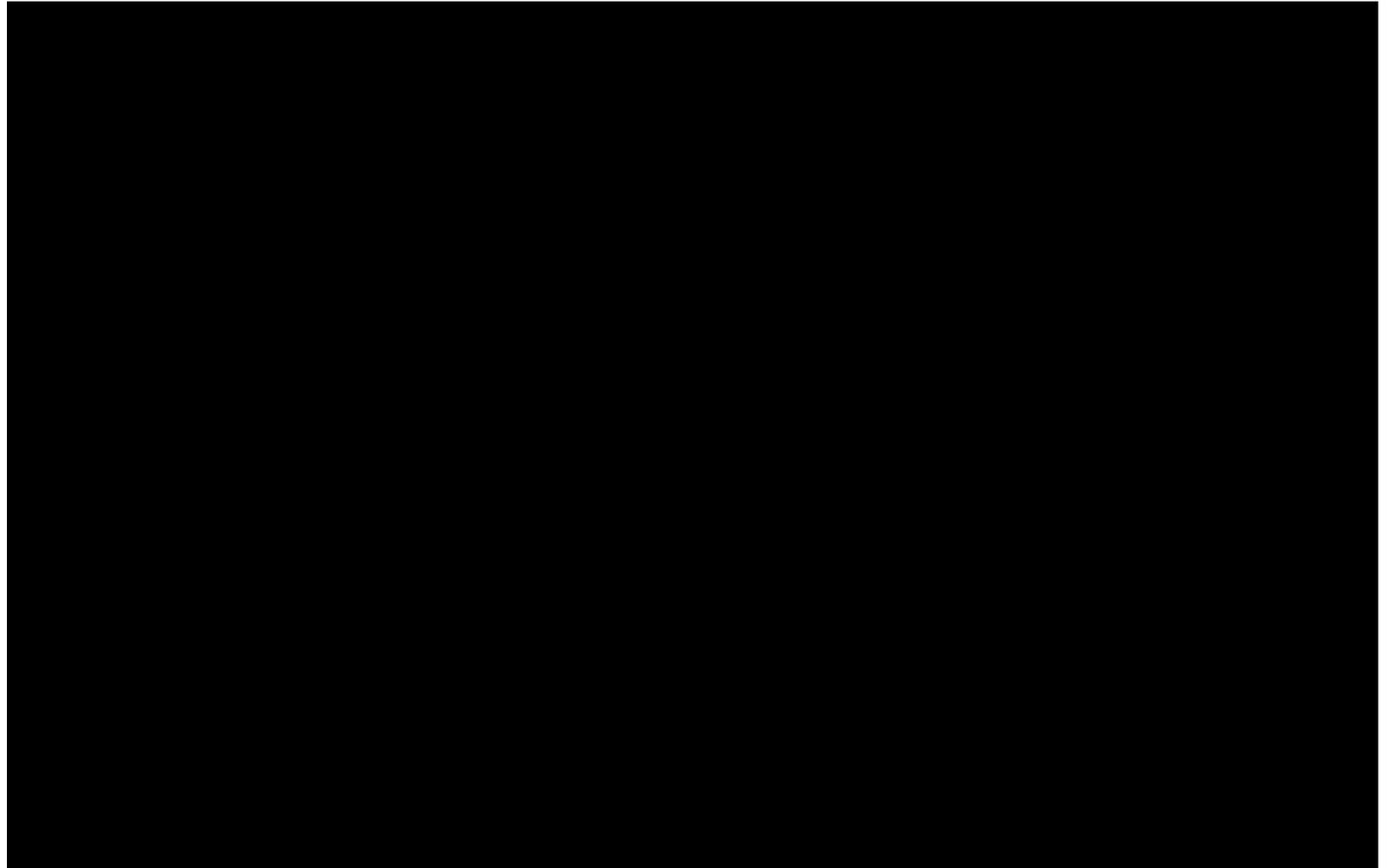
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As leaders, what business are we  
really in, today?

# Industry Partner Call to Action & Return on Investment

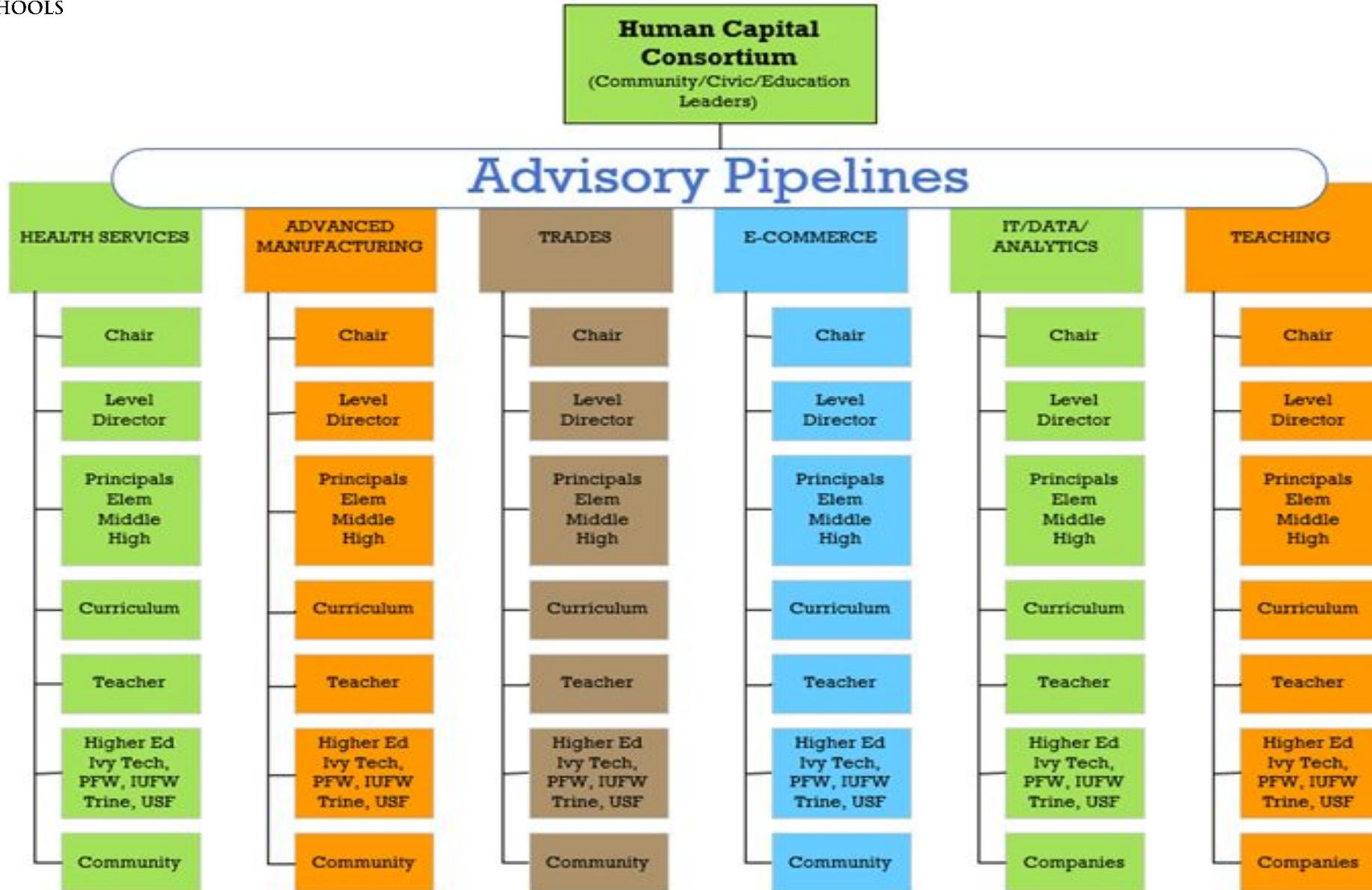
Preparing students for an ever-changing world is at the forefront of Fort Wayne Community Schools. By creating new avenues to strengthen FWCS partnerships with local industry leaders, we can together provide human capital and new opportunities for Allen County and Northeast Indiana.



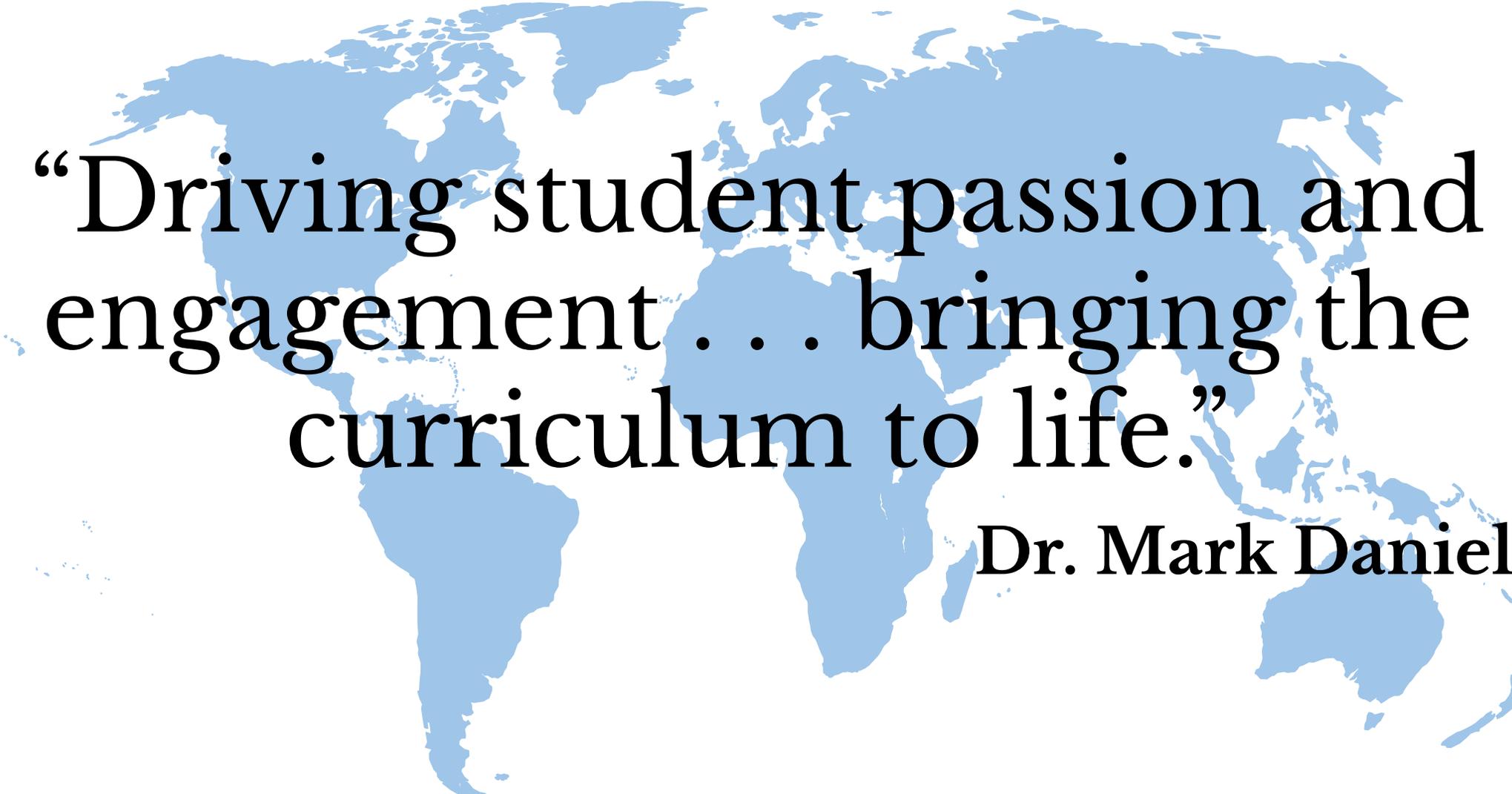


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# Human Capital Pipelines



# Fort Wayne Community Schools Vision: *Utilizing Project-Based Learning to Transform Deep Learning*

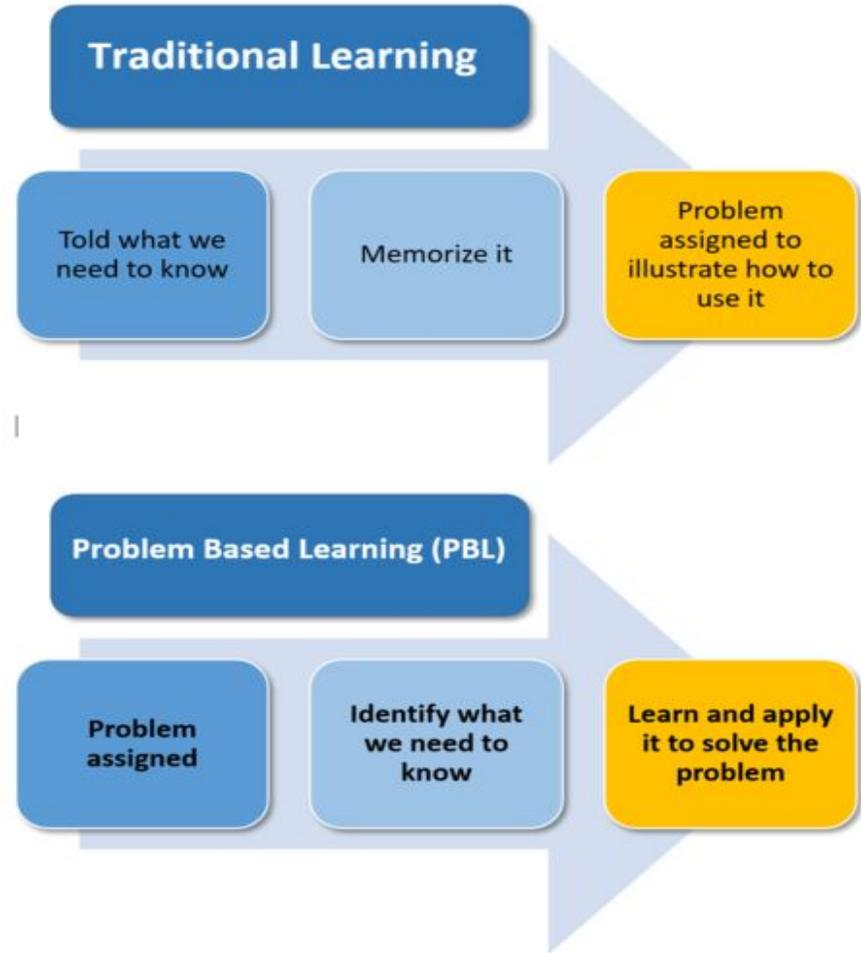


“Driving student passion and engagement . . . bringing the curriculum to life.”

**Dr. Mark Daniel**

# What is Project-based Learning?

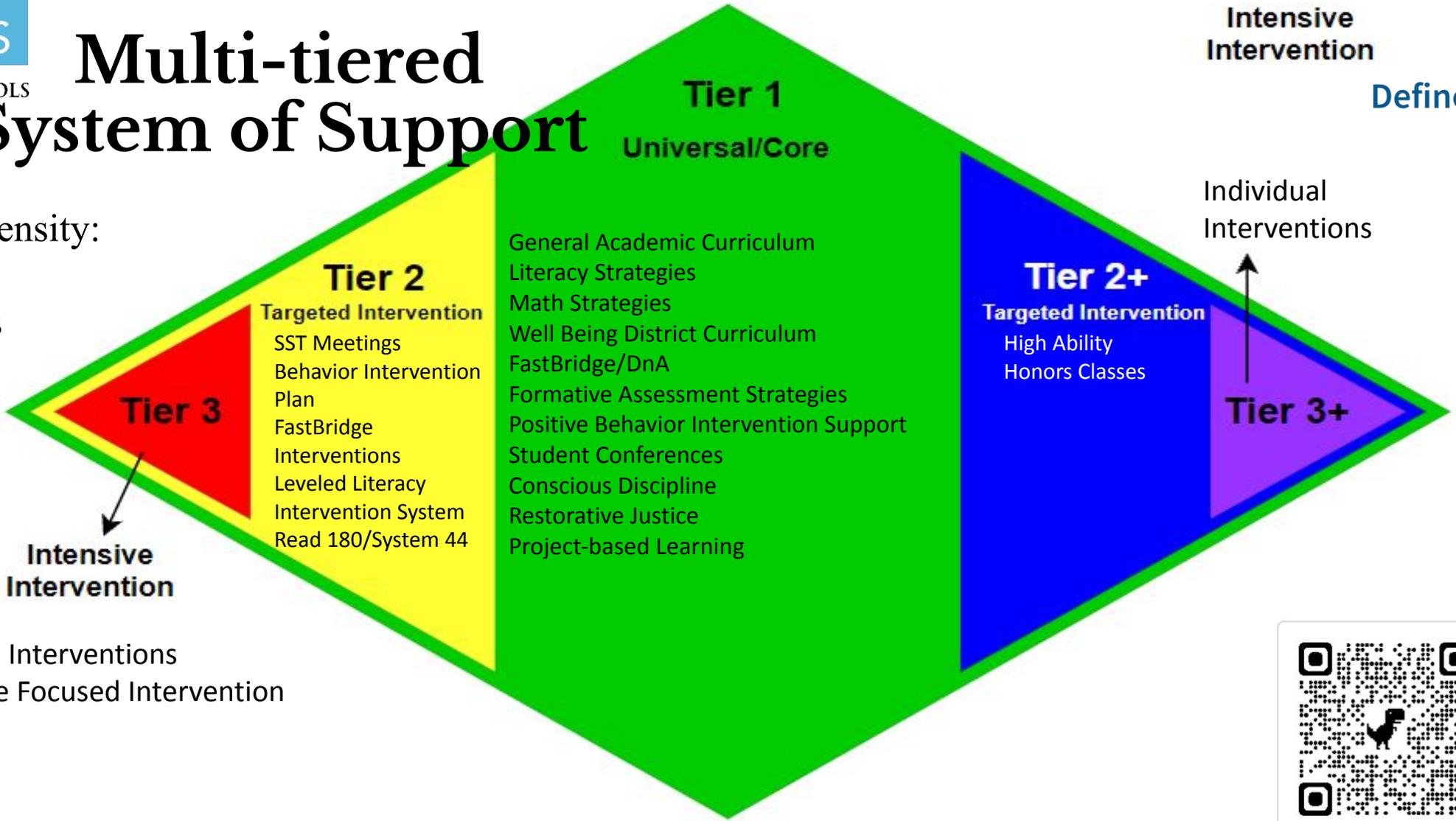
**Project-Based Learning (PBL)** is an instructional methodology that encourages students to learn and apply knowledge and skills through an engaging experience. PBL presents opportunities for deeper learning in-context and for the development of important skills tied to college and career readiness.



# Multi-tiered System of Support

Increase intensity:

- Time
- Focus
- Type



Individual Interventions  
FastBridge Focused Intervention





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# Research Study



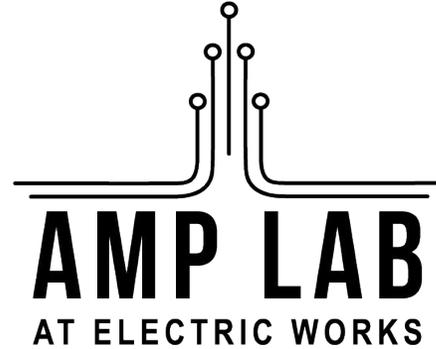
DefinedLearning

## Initial Data Review - 2021

- Based on Beginning of Year to Middle of Year growth data, there is a .50 positive correlation between the use of Defined Learning and growth.
- The average standardized growth percentile for the top five schools based on Defined Learning participation was 58.27.
- One of the top five users of Defined Learning, Bloomingdale Elementary, a complex Title I school with 79% of students participating in the National School Lunch Program, had a standardized growth percentile of 64.20.
- The middle school with the highest participation of Defined Learning, the new Virtual Academy, had a 58.63 standardized growth percentile.

## Research Study Data Review - 2022

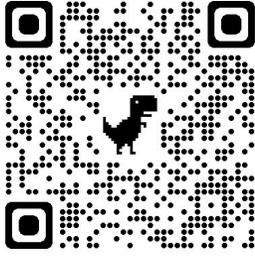
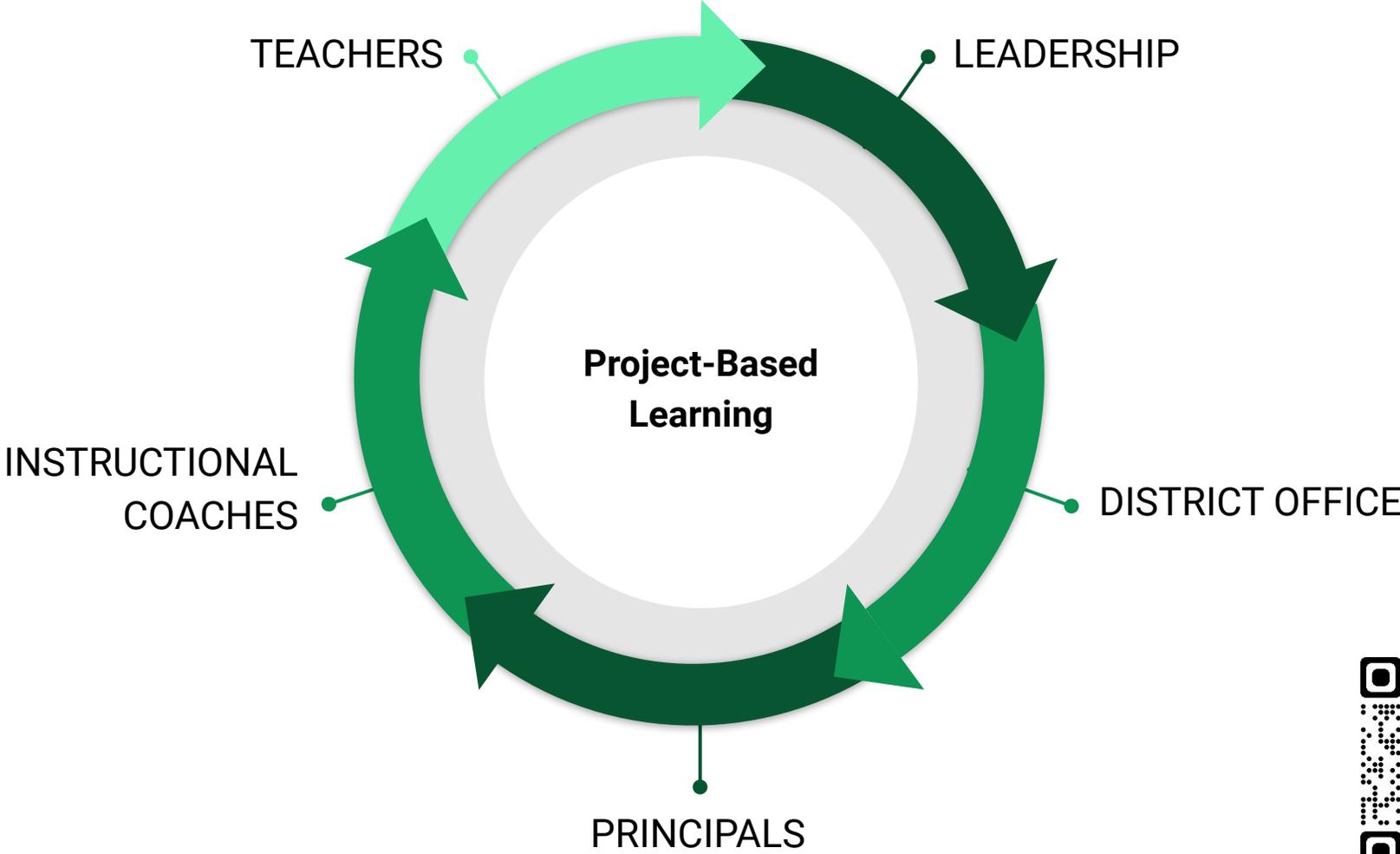
- Findings from the current study are consistent with existing research in that overall academic performance is enhanced in a project-based learning environment.
- In all cases, students in the PBL classes outperformed their peers in non-PBL classes.
- Scores were significantly higher in reading in third, fourth and fifth grade levels. Mathematics in third and fourth grade levels.
- Interviews revealed themes of increased student engagement and soft skills, such as collaboration, cooperation, and creativity.



## FWCS Literacy Curriculum

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- Exemplars are created
  - Teacher autonomy
  - Teacher voice
  - Integration of Project-Based Learning
  - Scope and sequence (numeracy, social studies, and science)
  - Common assessments

# Refocus Theory of Action Circle

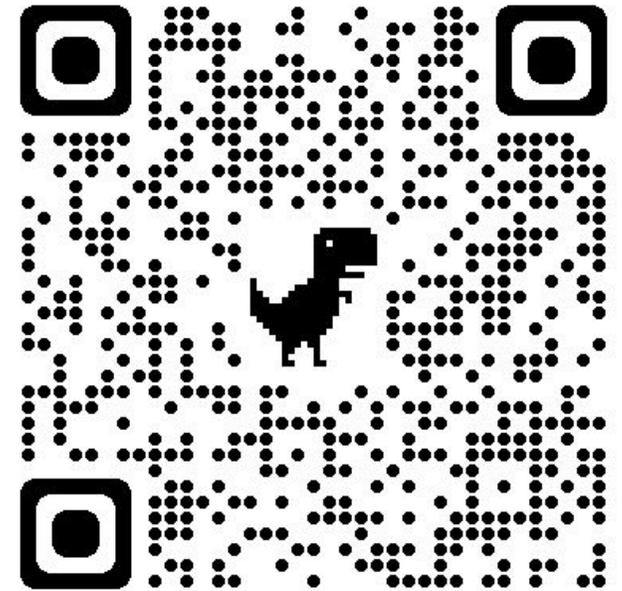




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# Q & A



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**Thank you**



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[www.fortwayneschools.org](http://www.fortwayneschools.org)

