



Authentic Learning's Impact on Engagement and Employability

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Overview

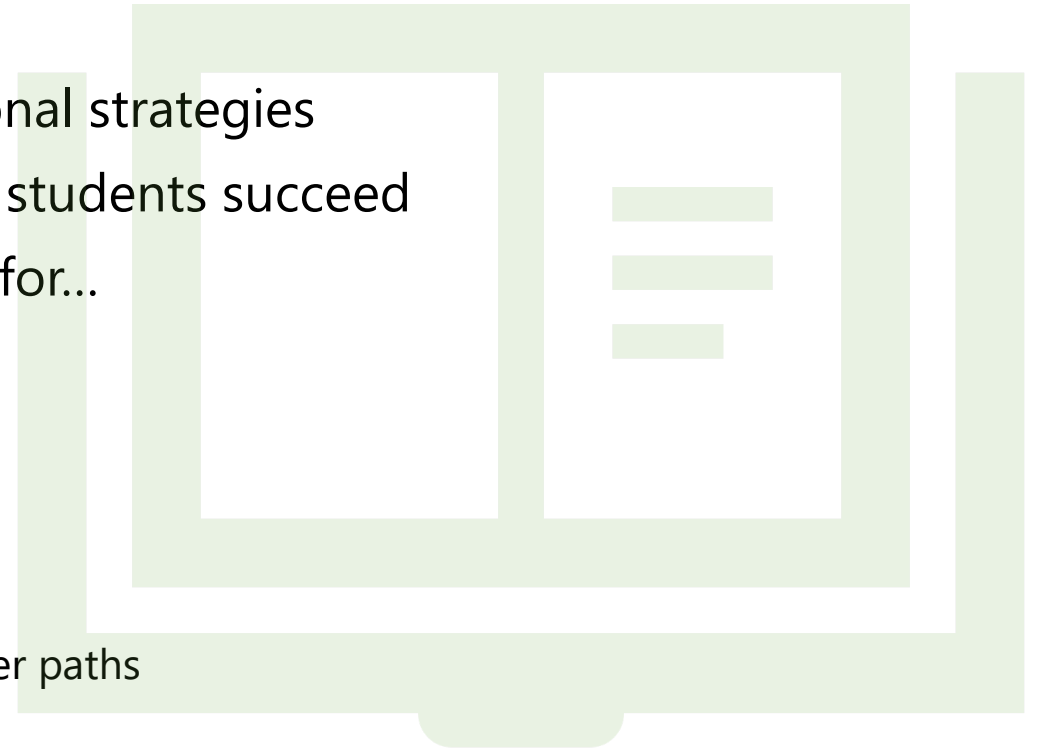
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Introduction

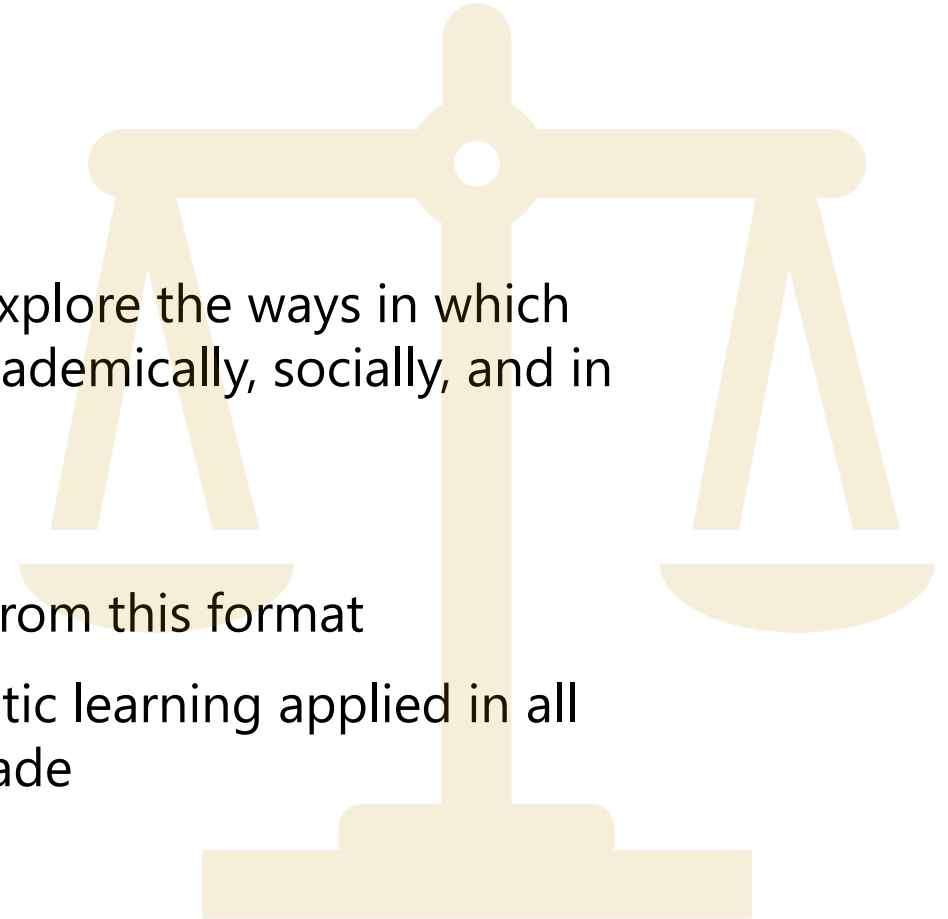
- Teachers make decisions about instructional strategies
- Seek research-based strategies that help students succeed
- Project-based/authentic learning known for...
 - Being highly engaging
 - Helping students succeed academically
 - Providing students soft skills
- Particularly benefits adolescents
 - High-stakes testing to graduate
 - Soft skills training applied to college and career paths





Purpose Statement

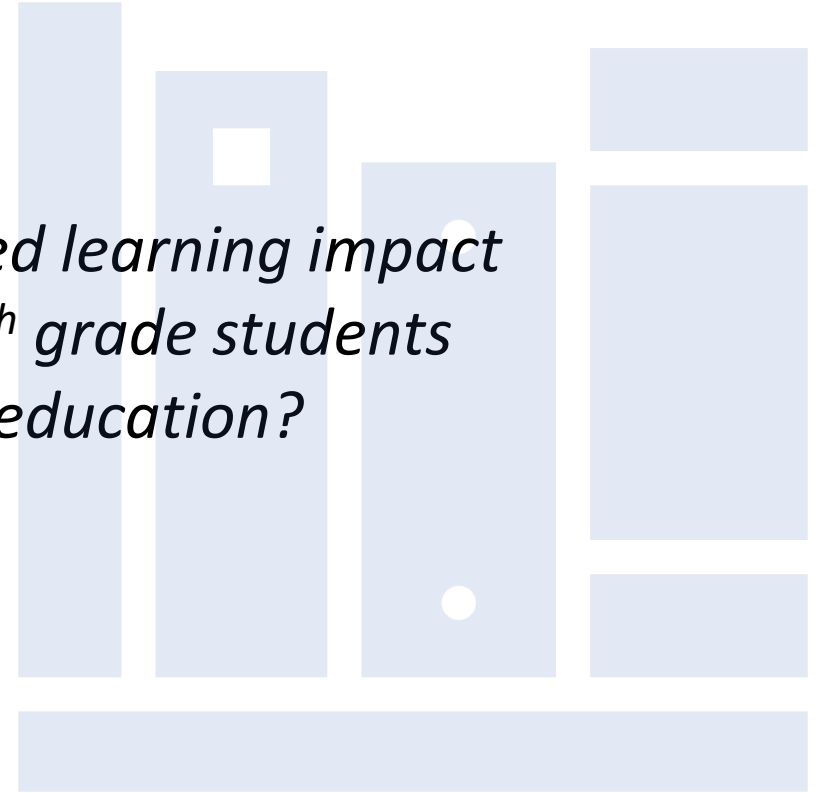
- The purpose of this action research is to explore the ways in which authentic learning benefits adolescents academically, socially, and in regard to career readiness
- Authentic learning often practiced in CTE
- Important to know how students benefit from this format
- Transferrable skills gained through authentic learning applied in all fields, even if students don't enter their trade





Essential Question

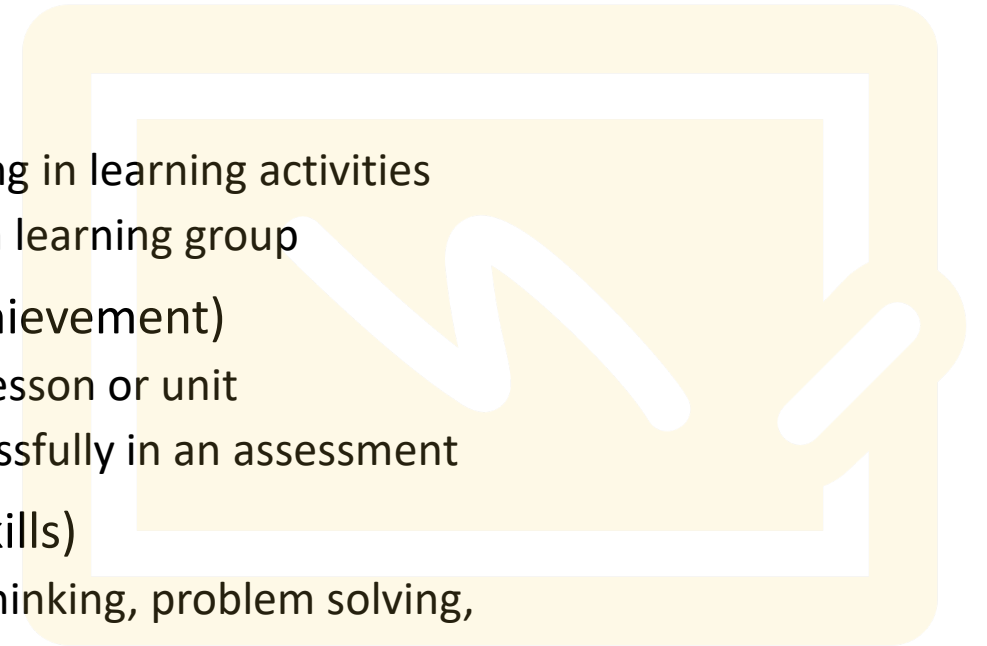
How does authentic and project-based learning impact the engagement and soft skills of 10th grade students participating in career and technical education?





Definitions

- **Engagement**
 - Students on task and actively participating in learning activities
 - Pays attention to instructor and others in learning group
- **Retention** (also known as academic achievement)
 - Students can recall the concepts of the lesson or unit
 - Students can apply the knowledge successfully in an assessment
- **Soft Skills** (also known as transferrable skills)
 - Skills gained through training in critical thinking, problem solving, teamwork, and self-regulation
- Other names for PBL/Authentic Learning: Constructive Learning

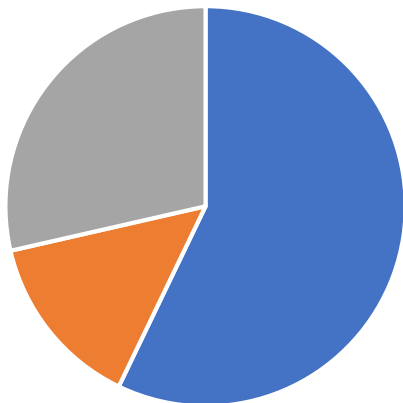




Contextual Factors



Gr 10 Shop Ranking



■ 1st Choice ■ 2nd Choice ■ Not Chosen

- Students from Old Colony Regional Vocational Technical HS
 - Rural community; 6 sending districts
 - 93% white; 36.3% high needs; 23.6% students with disabilities, 18% economically disadvantaged, no ELL students
 - 556 student population
- 13 vocational programs offered
- Students alternate between 10 days of shop and academics
- Students involved in research in the Business Technology Program
 - Slightly more than half chose to be in the shop first
 - Shop is 86% white and 71.4% have an IEP
 - Sophomore curriculum focuses on building a solid foundation of technical and soft skills



Literature Review

- Collected research from the past ten years, 2010-2020
- Eleven studies selected for literature review
- Three categories that emerged from research
 - Academic Achievement and Student Engagement
 - Social Impact and Personal Development
 - Barriers and Contradictions in the research





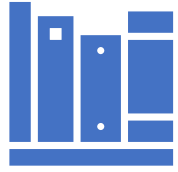
Literature Review - Conclusions

- Academic Achievement and Student Engagement
 - PBL enhances academic achievement and student engagement by allowing students to connect what they're learning with the real world
- Social Impact and Personal Development
 - PBL helps students gain confidence by interacting with others
 - Immersed in learning environment, motivation to learn content and gain soft skills
- Barriers and Contradictions in the research
 - Not always an enriching experience for introverted students
 - One study found that PBL not necessarily more engaging than other strategies
- In order to successfully implement PBL, we must:
 - Present lessons in an authentic context with supports for class dynamics
 - Understand that PBL isn't intrinsically more engaging than other teaching strategies; should choose the style to enhance a unit



Scope of Project

- Intervention part of the grade 10 related curriculum: soft skills
- Research design modelled after mixed methods studies from literature review:
 - Wurdinger et al.'s study that measured life skills developed in PBL units (2019)
 - Beckett et al.'s study of the CincySTEM iTest Projects (2016)
 - Howe & Rueberg's study of the Digipen curriculum (2020)
 - Sivia et al.'s study of engagement with authentic and non-authentic units (2019)
- Students would participate in two modes of instruction
 - Traditional instruction: lecture, notes, discussion, test assessment
 - Authentic instruction: application of skills, performance-based assessment
- Comparison of traditional and authentic learning serves to:
 - Understand benefits of authentic learning
 - Understand how the learning styles impact student attitudes and success



Data Collection and Assessments

- Data collected from the following:
 - Pre-unit and post-unit survey about learning preferences
 - Traditional lecture, notes, assessment instructional approach
 - Authentic, hands-on application of soft skills and performance-based assessment
 - Informal observations (formative assessment) during hands-on portion of unit
 - Targeted student surveys after the unit about their experience
- Quantitative data: student surveys and assessments
- Qualitative data: informal observations, interviews
- Collectively, data used to understand impact of PBL on student attitudes, engagement, academic achievement, and development of soft skills



Analysis of TED Talks

- Ken Robinson: Do Schools Kill Creativity?
 - Our education system removes students' ability to be creative
 - Students lose creativity and become good only at academic skills
 - We should take advantage of children's' creativity from a young age
 - Preserving creativity will make students better equipped for careers
- Ken Robinson: Bring on the Learning Revolution!
 - Current school systems force a narrow path toward college
 - Many students think the things they're talented at aren't worth their time
 - Student learning should be an organic and non-linear process
 - We should teach students how to turn their natural talents into a career



Analysis of TED Talks

- Christopher Emdin: Teach Teachers How To Create Magic
 - Teacher training is lacking practice in lesson delivery
 - Some of the most engaging presenters are outside of the classroom
 - Successful teachers must find a way to engage students with their lesson delivery; that will drive student involvement in all topics
- Gabe Zichermann: How Games Make Kids Smarter
 - Students practice vital skills when playing games
 - Meeting objectives, problem-solving, communication, and multitasking
 - Gamification can help students learn because it transforms content into a format they are familiar with
 - Teachers should strive to add games and reward systems to instruction
 - Group projects should result in group assessment to capture the nature of collaborative video games



Reflection

- Ken Robinson's Education Revolution and Project-Based Learning
 - Project based learning allows us to move away from traditional teaching methods
 - Collaborative and role-based format allows students to discover natural talents
 - Students are able to connect their talents to career paths
 - Development of soft skills prepares students for all post-school paths
- Teacher Enthusiasm, Gamification, and Student Engagement
 - Lesson delivery vital to increasing student buy-in; curriculum style can't do it alone
 - Teacher involvement plays a large role in the learning process
 - Lesson introduction, passion/enthusiasm, motivation, one-on-one support and guidance
 - Gamification can be achieved with clear goals and extrinsic rewards to motivate students to be more involved in their learning



Personal and Professional Growth

- Self Assessment strengths and areas for growth
 - Strength – Focus on creating meaningful learning experiences
 - Strength – Flexibility in lesson development and delivery
 - Growth – The assessment process and student motivation
- Teaching Goals: authentic instruction and student engagement
 - Create and deliver 3 authentic units to grades 9 and 10
 - Use the research study designed for this thesis to analyze data and improve practice
- Work for this action research has allowed me to understand the state of current research and find ways to meet my goal of creating more meaningful and engaging, and worthwhile learning experiences for my students

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