Enhancing Education Through ePortfolios in Career and Technical Education (CTE) Courses:
An Action Research Plan

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Courses: An Action Research Plan

Electronic Portfolios (ePortfolios) have brought attention to being used in educational settings due to their potential for promoting personalized learning experiences. ePortfolios offer a unique opportunity to bridge classroom learning with real-world applications. This action research plan is to explore the implementation, impact, and challenges of integrating ePortfolios within Career and Technical Education (CTE) classrooms. This plan relates to my innovation plan which focuses on "Enhancing Education Through ePortfolios in CTE Courses". This topic centers around the integration of ePortfolios in career ready educational settings. As explained by the ePortfolio Center for Teaching and Learning, "An electronic portfolio (ePortfolio) is a purposeful collection of sample student work, demonstrations, and artifacts that showcase student's learning progression, achievement, and evidence of what students can do" (n.d.). In my research, I would like to explore how using ePortfolios in high school CTE courses allows students to have choice, ownership, voice, and authenticity (Harapnuik, 2018) which in turn helps them become better learners.

In recent years, ePortfolios have gained recognition as a valuable educational assessment and documentation tool. There are many ways ePortfolios can be used in today's educational settings. Barrett (2010) discusses the concept of "two portfolios": the "Working Portfolio", which is the process of building the ePortfolio, and the "Presentation Portfolio" which is the product that results from the building of the ePortfolio. This topic will explore how utilizing either of these types of ePortfolios in CTE classrooms can enhance student learning, promote critical thinking and reflection, and prepare students for real-world professional experiences.

In today's world of technology, students must learn the skills of organizing their thoughts, reflecting, and improving their learning. Offering ePortfolios is a way that students can gather and organize their digital collection of projects, reflections, and achievements. By implementing ePortfolios, students are able to foster a deeper level of learning. They can collaborate with peers and give constructive feedback. This will give students ownership over their own learning and develop deeper critical thinking skills. It will also provide them with a digital showcase of all the brilliant content they have created in their career pathway to utilize in the future.

Fundamental Research Question

This action research plan will answer the question of how ePortfolios impact student learning and engagement in CTE classrooms. This question will address the many effects that occur due to ePortfolio implementation on both students and the educational environment. The research will explore the impact of ePortfolios on student learning and engagement within CTE classrooms, discussing the diverse effects that stem from the integration of ePortfolios into educational settings. It aims to uncover not only the influence that ePortfolios have on students' academic progress and involvement but also the broader implications for instructional strategies and the overall learning environment. Examining the varied ways in which ePortfolios shape learning experiences and student outcomes will provide insights that can inform educational policies and practices, creating more effective approaches to teaching and learning in Career and Technical Education settings.

Summary of the Literature Review

The literature review covers various aspects of using ePortfolios in CTE classrooms. It defines what ePortfolios are, and discusses their purpose and impacts in educational settings. It explores technology integration and emphasizes the importance of proper platform choice and

usability. This review will also explore the impact of ePortfolios on student engagement, learning, and critical thinking skills. It will explore diverse aspects of integrating ePortfolios in Career and Technical Education classrooms. It defines ePortfolios, examines their purpose, impact, and technology integration, and discusses the importance of fostering student engagement, learning, and critical thinking abilities.

Study Information

The primary purpose of this study is to investigate and understand the use of ePortfolios in CTE educational classrooms. This study is to explore the impact of ePortfolios on student learning and engagement, as well as to assess challenges and opportunities related to their implementation. This study focuses on investigating the utilization of ePortfolios in CTE classrooms to enhance student learning, engagement, and preparation for real-world professional experiences. The research seeks to understand how ePortfolios enable students to exercise choice, ownership, voice, and authenticity in showcasing their learning progression and achievements. As educators, we can make a more significant impact on our learners by giving them authentic learning opportunities to prepare them to thrive in the real world (Thibodeaux, 2021).

Research Design

I plan on using both qualitative and quantitative research methods. This mixed-methods approach will allow me to leverage the strengths of both qualitative and quantitative data, providing a deeper understanding of the impact of ePortfolios. By using both qualitative and quantitative research I will be able to provide a more complete understanding of the impact of ePortfolios being used in educational settings. This can create a well-informed assessment strategy that considers the subjective experiences of students and educators along with objective,

measurable outcomes. This approach enhances the validity and reliability of the assessment process, which will contribute to the improvement of educational technology practices (Mertler, 2020).

Data Collection and Analysis

My data collection will involve researching and analyzing relevant articles, literature, and incorporating surveys/interview data from educators and students. The focus will be on gathering information related to the impact of ePortfolios on student learning, engagement, and the challenges associated with their use.

Measurements will include qualitative data such as student reflections and engagement levels. These levels will be measured by observation and interviews (see Appendix A). Another qualitative measurement would be from the educator's view. Feedback from educators provides a glimpse into the effectiveness of teaching methods, curriculum, and overall educational strategies. This would be conducted in the form of an educator interview (see Appendix B). Educator feedback can be crucial for continued improvement. Identifying strengths and areas for improvement through qualitative data enables educators to refine their approach, bettering their experience.

Quantitative measurements will involve assessing the frequency of ePortfolio usage and technology integration success, along with a survey that students will complete. The survey at the end of the course will be given to measure the impact and effectiveness from the student's view (see Appendix C). A survey for educators will also be conducted to gain insight into the usage of ePorfolios in their classrooms (see Appendix D). Quantitative data provides measurable outcomes, making it easier to track and compare performance over time. This data type is more

objective and can provide a clearer picture of student achievement and the success of the

ePortfolio integration.

Timeline for Action Research

Timeline	Activities
August 2024	- Introduce plan to teachers and department members during in-service days - Discuss possible changes and determine leaders for implementation - Show ePortfolio examples and assist teachers in setting up ePortfolios - Divide teachers into groups with at least one experienced ePortfolio creator
September 2024	- Introduce ePortfolios to students during the first week of school - Familiarize students with ePortfolio layout and accessibility - Post lessons and materials on ePortfolios - Students design their ePortfolios for three weeks - First weekly post after ePortfolio is created - Lead mini-lesson on digital footprints and online etiquette - Meet with departments about student ePortfolio submissions - Department heads distribute Google Forms survey to educators for feedback - Data used for discussion in department meeting regarding what worked and needs improvement
October 2024	- Students complete their first Blog Post - Peer review through ePortfolios - Students write a reflection blog post after receiving feedback - Department meeting to discuss grading procedures and reflection process
November - December 2024	- Students submit all writing assignments through Google Classroom and post to ePortfolios - Students reflect on their writing through ePortfolio blog post - Students review the ePortfolios of their peers and respond - Students grades (quantatative) - Students survey about experience of ePortfolio (qualitative) - Survey responses from both educators and students reviewed at department meeting (qualitative) - Opportunities of opinions through surveys (qualitative)

January - May 2025	• Students will continue to document assignments and reflect • Students will again review the work of their peers and respond • Student grades (quantative) • Document grade increase/decrease • Interviews, blog post and surveys will be completed through out the semester (qualitative
May 2025	• Students reflect on the year's assignments ePortfolio process • Qualitative and Quantitative data will be presented to show implementation benefits and what needs to be improved on.
June-July 2025	• Review and make changes to the curriculum as needed • Reflect on the year's implementation
August 2025	• Share and discuss changes to ePortfolio implementation with staff during in-service days

Sharing and Communicating Results

Results will be communicated and shared with Instructional Coaches as well as the principal, assistant principal, and leadership team on our campus. Results will also be documented online. Results will be utilized regarding the implementation of ePortfolios in CTE classrooms across the district and will be explored because of this action research and future studies. The results of this research can be effectively communicated through various channels. Sharing and communicating the results of this research within the district can be achieved through various approaches. Firstly, organizing district-wide professional development sessions or workshops would allow educators to explore the research findings. These sessions can include presentations, discussions, and hands-on activities to demonstrate the practical applications of ePortfolios in CTE classrooms as well as other content areas. Additionally, creating opportunities for educators to collaborate and share their experiences with ePortfolio implementation can create a culture of innovation and continuous improvement within the district. Utilizing district-wide communication channels such as newsletters, email updates, and staff meetings can

help give insights and resources derived from the research. Moreover, establishing a dedicated online platform or resource hub where educators can access research summaries, case studies, and implementation guides can facilitate ongoing learning and support. By customizing communication strategies to align with the district's needs and priorities, the research can create meaningful change and enhance student learning experiences in CTE classrooms.

Final Reflection

The integration of ePortfolios in CTE classrooms has the potential to enhance student learning and engagement. Through the exploration of ePortfolio's impact, this study not only shows effective instructional strategies but also discusses the importance of technology integration in modern education. By embracing both qualitative and quantitative research methods, the study aims to provide a comprehensive understanding of ePortfolio implementation in educational settings, ultimately contributing to the improvement of teaching practices and student outcomes in Career and Technical Education.

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Appendix A
ePortfolio Interview Questions for Students

These questions are designed to encourage students to reflect on their experiences with ePortfolios and provide valuable insights into the effectiveness of using ePortfolios as assessment, reflective, and showcase tools in their coursework.

1. Reflecting on your experience using ePortfolios throughout the course, how did the process of creating and maintaining your portfolio contribute to your understanding of the course material?

2. In what ways did the ePortfolio assignments help you showcase your skills and accomplishments related to the course content to potential employers or educational institutions?

3. Can you identify any specific challenges you encountered while working on your ePortfolio, and how did you overcome them?

4. How did the process of reflecting on your learning experiences through the ePortfolio assignments influence your approach to future learning and professional development?

5. Looking back, what aspects of the ePortfolio assignments do you feel were most beneficial in helping you demonstrate your growth and development over the course of the term?

6. Did the use of ePortfolios encourage you to engage more deeply with the course content and assignments? If so, can you provide examples of how this engagement manifested?

7. Considering the feedback you received on your ePortfolio from instructors or peers, how did this feedback impact your understanding of your strengths and areas for improvement?

8. In what ways do you believe the ePortfolio assignments prepared you for future academic or professional endeavors within your field of study?

9. How did the process of selecting and organizing artifacts for your ePortfolio help you gain a better understanding of your personal and professional goals within your chosen career path?

10. If you were to offer advice to future students who will be using ePortfolios in similar courses, what recommendations or tips would you share to help them maximize the benefits of this assessment and reflective tool?

Appendix B
ePortfolio Interview Questions for Educators

These questions aim to elicit insights from educators regarding their experiences with using ePortfolios as assessment, reflective, and showcase tools in their courses and to provide valuable feedback on the effectiveness of this approach in supporting student learning and achievement.

1. Reflecting on your experience integrating ePortfolios into your course, how did the use of ePortfolios impact your teaching approach and the overall learning environment?

2. In what ways did the ePortfolios serve as effective assessment tools for evaluating student progress and understanding of course concepts?

3. Can you identify any specific challenges you encountered while implementing ePortfolios in your course, and how did you address these challenges?

4. How did the ePortfolio assignments facilitate student reflection on their learning experiences and achievements throughout the course?

5. Looking back, what aspects of the ePortfolio assessment process do you feel were most successful in helping students showcase their skills and accomplishments?

6. Did the use of ePortfolios encourage deeper engagement and participation from students in the course activities and discussions? If so, can you provide examples of this?

7. Considering the feedback you provided to students on their ePortfolios, how did this feedback support their growth and development as learners within your course?

8. In what ways do you believe the ePortfolio assignments aligned with the learning objectives and outcomes of your course curriculum?

9. How did the process of implementing ePortfolios enhance your understanding of your students' individual strengths, challenges, and learning preferences?

10. Based on your experience with ePortfolios, what recommendations or best practices would you offer to other educators who are considering using ePortfolios as assessment, reflective, and showcase tools in their courses?

Student Survey: Use of ePortfolios in Career and Technical Education Classes

Introduction:
Thank you for participating in this survey regarding using ePortfolios in Career and Technical Education (CTE) classes. Your feedback is invaluable in helping us understand the impact and effectiveness of ePortfolios in your educational experience. Please answer the following questions honestly and to the best of your ability. Your responses will remain confidential and will only be used for research purposes.

Demographic Information:
a. Age:
b. Gender:
c. Grade Level:
d. CTE Program/Area of Study:

Survey Questions:
How familiar are you with the concept of ePortfolios?
a. Very familiar
b. Somewhat familiar
c. Not familiar at all

Have you ever used an ePortfolio as part of your coursework before?
a. Yes
b. No

If you have used ePortfolios before, please briefly describe your experience with them.

What did you like or dislike about using ePortfolios?

In which of the following ways have you used ePortfolios in your CTE classes?
(Select all that apply)
a. Documenting project work
b. Showcasing skills and achievements
c. Reflecting on learning experiences
d. Presenting to potential employers or clients
e. Other (please specify):

How do you believe ePortfolios have enhanced your learning experience in CTE classes?

On a scale of 1 to 5, please rate the effectiveness of ePortfolios in helping you demonstrate your skills and knowledge to potential employers or educational institutions.
1 - Not effective at all
2 - Somewhat effective
3 - Neutral

4 - Effective
5 - Very effective

Do you believe that using ePortfolios has helped you better understand your strengths and areas for improvement in your CTE field of study?
a. Yes
b. No
c. Not sure

How would you rate the level of support and guidance you have received in creating and maintaining your ePortfolio?
a. Excellent
b. Good
c. Fair
d. Poor

What suggestions do you have for improving the use of ePortfolios in CTE classes?

Overall, how satisfied are you with the use of ePortfolios in your CTE classes?
a. Very satisfied
b. Satisfied
c. Neutral
d. Dissatisfied
e. Very dissatisfied

Thank you for taking the time to complete this survey. Your feedback is greatly appreciated and will help us improve the use of ePortfolios in Career and Technical Education classes.

Appendix D
Educator Feedback Survey: Use of ePortfolios in Career and Technical Education Classes

Introduction:
Thank you for participating in this survey regarding using ePortfolios in Career and Technical Education (CTE) classes. Your insights and feedback are crucial in helping us understand the process and effectiveness of integrating ePortfolios into the educational experience. Please take a few moments to complete the following questions honestly and to the best of your ability. Your responses will remain confidential and will only be used for research purposes.

Demographic Information:
a. Name:
b. School/Organization:
c. Position/Role:
d. Years of Experience in Education:

Survey Questions:
How familiar are you with the concept and use of ePortfolios in educational settings?
a. Very familiar
b. Somewhat familiar
c. Not familiar at all

Have you implemented ePortfolios in your Career and Technical Education classes before?
a. Yes
b. No

If you have used ePortfolios before, please briefly describe your experience with them. What challenges did you encounter, and what benefits did you observe?

In which ways have you integrated ePortfolios into your CTE classes? (Select all that apply)
a. Documenting student projects and assignments
b. Assessing student learning and progress
c. Encouraging reflection on learning experiences
d. Facilitating communication with students and parents
e. Other (please specify):

What strategies or methods have you found most effective in guiding students through the process of creating and maintaining their ePortfolios?

On a scale of 1 to 5, please rate the level of technical support and resources available to you for implementing ePortfolios in your CTE classes.
1 - Very low
2 - Low
3 - Moderate
4 - High
5 - Very high

How do you believe ePortfolios have impacted student engagement and motivation in your CTE classes?

What challenges, if any, have you encountered in the use of ePortfolios, and how have you addressed them?

In your opinion, what are the key benefits of using ePortfolios in Career and Technical Education?

How would you rate the overall effectiveness of ePortfolios in helping students showcase their skills and accomplishments to potential employers or educational institutions?
a. Very effective
b. Effective
c. Neutral
d. Ineffective
e. Very ineffective

What additional support or training would you find helpful in optimizing the use of ePortfolios in your CTE classes?

Overall, how satisfied are you with the process and use of ePortfolios in your Career and Technical Education classes?
a. Very satisfied
b. Satisfied
c. Neutral
d. Dissatisfied
e. Very dissatisfied

Thank you for taking the time to complete this survey. Your feedback is greatly appreciated and will help us enhance the implementation of ePortfolios in Career and Technical Education classes.