

Technology Implementation Plan: Microlearning

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The Need for Microlearning:

The incoming students' standardized test scores have indicated a need for targeted English language arts (ELA) intervention. Microlearning, a strategy that delivers content in small, easily digestible chunks, offers a promising solution to address this need. By implementing microlearning, the scores and data can be broken down and analyzed to help teachers tailor instruction to meet individual academic skills and students' learning styles, ensuring better comprehension and engagement (Neal, 2023b). This adaptive approach can help students acquire knowledge and skills efficiently, especially for diverse learners including English Language Learners (ELLs) and students with special needs. This proposed microlearning technology can be seamlessly integrated with traditional classroom learning settings and when integrated, creates a more dynamic learning experience for all learners.

Proposed Microlearning Implementation:

Technology Selection:

- **Adaptive Learning Platform:** The microlearning technology will be delivered on an adaptive learning platform and will be the primary technology tool to deliver academic content. This platform can tailor instruction to individual student needs, providing personalized learning experiences that adapt to each students' answers, interactions, and overall style.
- **Mobile Learning Apps:** Mobile learning apps can be used to supplement instruction and provide on-the-go learning opportunities for students to take advantage of at home in non-traditional school settings.

Implementation Plan:

- Needs assessment can be determined by conducting a comprehensive assessment to identify specific areas of need within the ELA curriculum. Next, an analysis of standardized test data can help school administration pinpoint skill gaps that need to be addressed. To further enhance the data analysis, a survey of teachers can help gather insights into their instructional challenges and preferences regarding academic delivery.
- Curriculum development of microlearning modules aligned with the ELA standards can be created using engaging content including, but not limited to short videos, interactive quizzes, and practice exercises. The curriculum will ensure that the content is accessible to diverse learners, with options for varying reading levels and language support.
- Teachers will be provided with comprehensive training on the use of the adaptive learning platform and mobile learning apps. In addition, workshops on instructional design principles for microlearning will be offered for ongoing support and professional development opportunities.
- Student implementation can be achieved by integrating microlearning into the ELA curriculum and using the adaptive learning platform to assign learning that is personalized to each student. Furthermore, the use of mobile learning apps for independent practice and enrichment will be available and encouraged.

Cost Considerations:

- Time: Initial setup and teacher training will require significant time investment and patience as all stakeholders learn to use the platform.

- **People:** A dedicated team of instructional designers, technology specialists, and teachers will be needed to develop and implement the microlearning program. In addition, professionals with expertise will be needed to deliver training and workshops for teachers and staff.
- **Money:** The benefits of this adaptive microlearning program outweigh the cost. It is true that the number of students, technology tools and platforms, professional development time, extra help, electronic devices, Internet connections etc. are factors to consider when calculating the cost of a new program. It is also true that they are expensive. However, they are all calculated and factored into our annual school budget. Our job now entails us to disperse the allocated funds in a meaningful and effective way to help implement this plan that can benefit students' academically and improve our scores as a district.

Supporting Research and Theory:

Although the term microlearning is fairly modern and new, the concept itself is not. Historians argue that microlearning has existed since as far back as the Stone Ages and the times of CaveMen when drawings and carvings were created to pass on basic survival techniques (Corbeil & Corbeil, n.d.). Based on the idea that our attention spans are limited, microlearning can help reduce cognitive load by providing smaller chunks of information that are easier to absorb and retain for students of all ages. Behavioral psychology, particularly B.F. Skinner's concept of programmed instruction significantly influenced the theory of microlearning. Skinner's ideas emphasized self-paced learning through small, incremental steps (The Editors of Encyclopaedia Britannica, 1998). Microlearning is unique in that it provides specific knowledge exactly when needed, making it perfect for performance support or on-demand skill development. It caters to diverse learning styles and allows for personalized learning paths by

focusing on the learner. Microlearning modules are adaptive and can be seamlessly integrated with traditional classroom learning settings and when integrated, creates a more dynamic and personalized learning experience for all learners.

Assessment and Evaluation:

The theory of microlearning can be both a promising and effective teaching method in education (Javorcik et al., 2023). Regardless of the assessment method and data analysis, the items listed below can help track student performance on assessments to help teachers, schools, and districts make informed instructional decisions and improve future content and delivery of lessons.

- **Formative Assessment:** Student progress can be monitored through quizzes, assignments, and project based assessments. The data collected can be used to identify areas of strength and weakness in students' progress.
- **Summative Assessment:** Standardized tests can be administered to measure overall student achievement. Students' performance on state assessments can be analyzed to help teachers identify trends in learning and target specific skills that students need to master.
- **Qualitative Data:** Feedback from teachers and students through surveys and interviews can be collected, coded, and analyzed to help build a better understanding of where we are and where we need to be regarding student growth. Classroom instruction can be monitored and observed to assess the effectiveness of microlearning implementation.
- **Evaluate Unit Effectiveness:** Data and feedback can be analyzed to determine the impact of microlearning on student learning. By implementing a well-designed microlearning

program and analyzing its data, we can significantly improve English achievement for all students, especially those who are diverse learners and need an adaptive teaching style.

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