

A Gamified Course Visualization, Organization, and Assessment System
(Technical Report)

Childhood Success in the American School System
(STS Research Paper)

An Undergraduate Thesis Portfolio
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Bachelor of Science in Computer Science

by

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Preface

How can we promote student success in the classroom?

Can students learn better at their own pace under the guidance of a teacher? Good teacher-to-student communication can improve education. Under guidance from Mark Floryan, the research team developed a website that students and professors can use to visualize and organize course objectives. It gives students real-time feedback about their course progress. The website will be used to track students' progress in University of Virginia classes that Floryan will teach. If successful, the website may offer an effective alternative to lecture-based classes.

How do teachers, parents, schools, and administrators seek to better serve students? Student engagement is essential to success. Teachers implement exercise breaks, flipped classroom models, peer learning, and gamified lesson plans to engage students. Parents organize to improve learning environments. Administrators implement policies to improve graduation rates and grades. Vendors offer products to all three groups.

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