

SC ePortfolio System: Improving Technology Proficiency in South Carolina Schools

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ABSTRACT: *In this paper, we have introduced and described the ePortfolio system developed and implemented at the South Carolina's university. We have presented the basis system details with sound architecture. The requirements, components and the system as a whole are subjected to experimental studies and the results are given in the paper.*

Keywords: Technology Education, E-learning, Technology Proficiency

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1. Introduction

The United States Congress enacted the No Child Left Behind Act (NCLB) of 2001 that had as its goal “*every student be technologically literate by the time the student finishes the eighth grade, regardless of the student's race, ethnicity, gender, family income, geographic location, or disability*”¹. The State of South Carolina's Department of Education, located in the southeastern region of the United States of America (USA), has developed and used a web-based, comprehensive, and evidence-based technology proficiency system—**The SC ePortfolio System**—that forms the bedrock of South Carolina's plan for improving teaching and learning in the United States and ensuring that every South Carolina student is technologically proficient by the time the student finishes the eighth grade, regardless of the student's race, ethnicity, gender, family income, geographic location, or disability².

2. The System

The SC ePortfolioSystem was originally designed to address the technology needs of students, teachers and administrators through a series of easy to use tools for assessing and improving their technology proficiency. **FOR STUDENTS**, The SC ePortfolio system provides simple integrated tools for determining each student's current technology knowledge, providing targeted learning opportunities, and integrating technology knowledge into other class work.

- **Take a Skills Assessment:** The grade-aligned skills assessment forms the basis for the reporting and targeted learning recommendations. The question bank for each grade is updated each year to new technologies and educational priorities. All of the assessments questions are aligned to current International Society for Technology in Education (ISTE) standards.
- **Get Targeted Learning Tools:** We have partnered with Atomic Learning to provide very targeted quick overviews of a wide

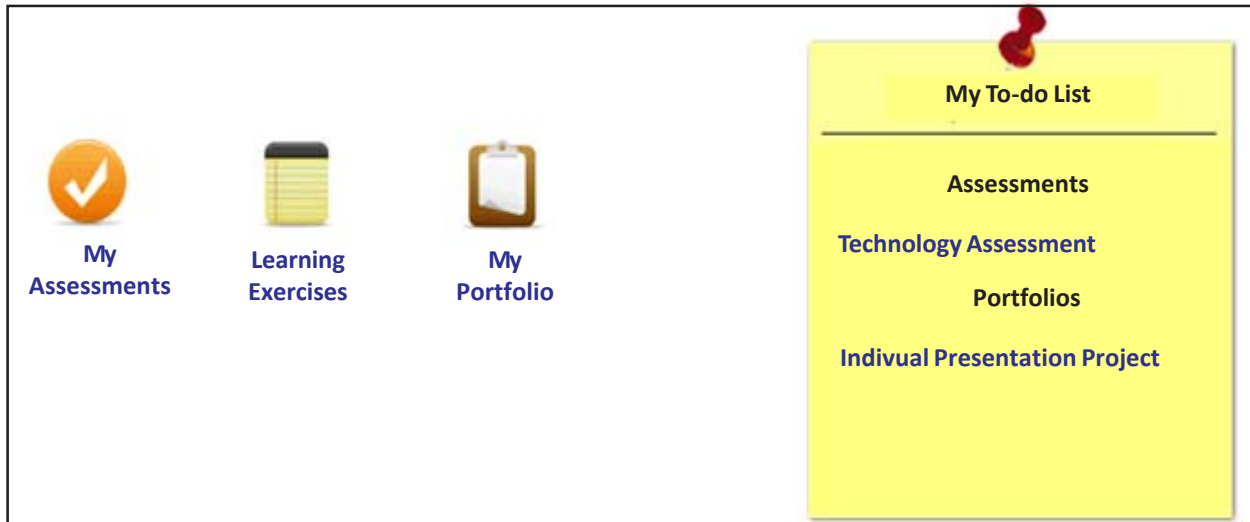


Figure 1. Users' tasks

variety of technology topics. Once the student has completed the assessment, these tutorials become available. Completion and progress through these tutorials can be tracked and reported.

• **Demonstrate Knowledge:** Teachers can work with Technology coaches in their schools to subject matter relevant assignments that integrate with the target technology goals for each grade level. Teachers can align these assignments with the portfolio requirements for each grade. With a few clicks, the students can view their assignments and upload their completed work. This portfolio will stay with them from year to year to give them a history of work completed over time.



Figure 2. Users' path to proficiency

2.1 For Teachers

The SC e-Portfolio System provides a process and system that (1) measures the technology proficiency of teachers using online assessments aligned to ISTE standards, (2) prescribes individualized professional development and other resources, and (3) requires teachers to demonstrate technology skills and performance through the creation of electronic portfolios.

Teachers can manage their students in 3 easy steps:

- Set up student classes
- Make assignments and align them to the appropriate technology goals for that grade
- Review assignments and view student records.

2.2 For School Administrators

In addition to managing the process of improving technology proficiency of students and staff, The SC ePortfolio System has assessment questions aligned to standards established by the International Society of Teacher Educators (ISTE) for school administrators to ensure technology proficiency for all school administrators.

The ePortfolio system has a flexible security hierarchy allowing each user to see exactly the information they need to be able to see. These access rights are generally split up along state, district, or school lines, but custom settings can also be created. Administrators, from principals to district and state administrators, have the following options available to them for all of the districts or schools to which they have access:



Figure 3. e-Portfolio Management System

- **View Assessments:** View both the grade and the details of any assessment taken by student or staff.
- **View reports:** Ability to run a variety of reports as described in the reporting section on the next page.
- **Technology Counts:** As part of the reporting options, district and school administrators can use the ePortfolio system to record their school computer counts as required for the federal NO28 report.
- **View Requirements and Resources:** Review the technology proficiency requirements for students and staff. Add local professional development opportunities to be suggested for teachers and staff.
- **Review Portfolios:** Administrators can review the portfolios of all of their staff and work with them on those to ensure understanding of the requirements and rubrics.

3. Results

The preliminary results of The SC e-Portfolio System are nothing short of astounding. The technology expertise of South Carolina's teachers has improved dramatically—increasing from 20% of all teachers evaluated as *“technology proficient”* in 2007 to 79% in 2009. This improvement in teacher skills, combined with The SC ePortfolioSystem's student tools, has led to a measurable improvement in student technology proficiency results. For example, 29 percent of all 8th grade students assessed

during the 2009-2010 school year were found to be “*proficient*” compared with 34 percent in the 2010-2011 school year; a 17% increase in the percentage of 8th grade students found to be technology proficient!

References

[1] Pub, L. (2002). 107-110, 115 Stat. 1425, enacted January 8. The Elementary and Secondary Education Act (The No Child Left Behind Act of 2001).

[2] South Carolina Department of Education, Office of e-Learning. (2010). South Carolina’s e-Portfolio System: Improving Technology Proficiency. Columbia, SC: SCDE.