

## **Digital Learning & Media: A University-School-Public Library Partnership**

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### ***Introduction***

The University School (pseudonym) is a teacher training lab which provides real world learning experiences with research-based instruction for K-5 (ages 5-12) students. Faculty and staff address students' academic needs and enhance students' physical, social, and emotional development. The researcher partnered with the school principal to address gaps evidenced by the Digital Learning & Media Inventory (DL&MI). Results of a survey informed activities to improve access to digital resources and develop digital literacies.

The University School does not have a school library, leading to a lack of digital literacy skills in an evolving global information landscape. This creates a serendipitous environment for research in the field to study how access to digital literacies and media may influence teaching and learning. To address this need for technology-enabled learning, the researcher set out to build an innovative partnership between the university library science program, the University School, and the public library. The project also included a service-learning element for undergraduates and a graduate assistant at the university.

### ***Statement of the Research Problem***

The DL&MI survey revealed the need to address gaps in the provision of digital learning and media resources for the students, faculty, and staff at the University School.

## ***Literature Review***

The Department of Public Instruction DL&MI provides data on school media and technology programs to school, district, and state level stakeholders. Public schools in this state, including the University School, use the Digital Learning Progress Rubric to reflect on the school's stage of transition, plan next steps, and track their progress moving forward. Rubric and inventory items are aligned with the Digital Learning Competencies for Educators (NC DPI, n.d.).

Access to library services has been shown to increase student success. Gaver (1963) performed a groundbreaking research study to show that a centralized library collection with a librarian positively correlates to higher student achievement. Her study looked at three levels of libraries: a classroom collection only, a centralized collection managed by a teacher or volunteer, or a school library managed by a full-time, certified school librarian. Two additional levels of libraries may also be considered. Families may have a home library collection, and students in public schools may access public library children's services and programming (ALSC, 2022).

Lance has consistently demonstrated a positive correlation between high-quality school library programs and student achievement through statewide studies, many of which account for variables such as student demographics, school funding levels, teacher-pupil ratios, and teacher qualifications. Results of these studies show that minorities, students from low socioeconomic families, and students with disabilities benefit most from strong library programs (Lance and Kachel, 2018). Wine (2020) found that students with a full-time certified school librarian scored significantly higher on math and reading tests. Quality school libraries boost student achievement and contribute to closing the achievement gap for marginalized learners (Pribesh, Gavigan, and Dickinson, 2011). Recent initiatives in the field of school librarianship (ALA and AASL, 2014; Mardis, Kimmel, and Pasquini, 2018; Soulen, 2016) have instituted new mechanisms for research at strong and moderate levels of evidence required by the 2016 Every Student Succeeds Act (ESSA) (Herman, et al., 2017).

Digital resources provided by North Carolina are available to public school students in the state. These include educational resources provided by the Department of Public Instruction, such as NCWiseOwl and resources provided through the public library such as the NC Kids Digital Library. Additional free resources which can be used for teaching essential digital literacy skills can be found online on websites such as PBS Kids, Common Sense Media, Dance Mat Typing, and Brainpop.

Discussions with the leadership team at the University School brought forth the opportunity to develop a research-practice partnership (Penuel and Gallagher, 2017) between the school, university, and local public library. These efforts were supported by efforts at the university level to promote publicly engaged scholarship (Post, Ward, Longo, and Saltmarsh, 2026).

RQ1: In what ways does professional development centered on the NC Digital Learning Competencies for Educators influence teacher/staff/student knowledge of NCWiseOwl?

RQ2: In what ways does professional development centered on the NC Digital Learning Competencies for Educators influence essential digital literacy skills?

### ***Methodology***

The researcher conducted a survey in April 2021 of University School faculty and staff to define current levels of knowledge as a first step. The survey was designed by the researcher based on the DL&MI and input from the School Leadership Team. Results of this first survey were used to determine next steps for improving access to and use of digital literacy and media resources. During the interim SY 2021-2022, the researcher provided interventions based on a three-year plan for professional development and activities with students in the classrooms. The researcher conducted the same survey a second time one year later to describe change over time. In addition, focus group interviews of faculty in their professional learning communities provide further insight into the knowledge base and integration of digital content and student essential digital literacy skills.

Results of the April 2021 and 2022 survey were uploaded to SPSS and analyzed using descriptive statistics. Change over time was determined by comparing responses on the two surveys. Results of the focus group interviews were uploaded to nVivo and analyzed to uncover patterns and themes.

### ***Interventions***

Working with the school leadership team, the researcher developed a 3-year plan to increase knowledge and use of digital literacies and media in the school. During the summer of 2021, the researcher gained access to NCWiseOwl digital content for the school and developed a digital library of free e-resources. During SY 2021-2022, the interventions focused on professional development about the NC Digital Learning Competencies, and use of digital content including NC Wise Owl, school digital library resources, and public library resources

(ebooks). The faculty also participated in a field trip to the Teacher Resource Center on campus to learn about accessing the university library's digital materials.

Working with the undergraduates and graduate assistant, the researcher pushed out into the classrooms, working with small groups of 4<sup>th</sup> and 5<sup>th</sup> grade students (ages 9-11) to develop student essential digital literacy skills, including keyboarding, digital citizenship, and online safety. Students in grades 2-5 (ages 7-11) participated in a virtual author visit discussing how digital literacies can be used in the writing process. All students in the school participated in a virtual library field trip which combined use of school and public library resources. The researcher and assistants were also present at parent nights, and digital literacy posters were displayed in classrooms and hallways.

### ***Faculty/Staff Demographics***

Demographics for the Community School faculty and staff are based on data reported by the school principal. Demographics were not collected within the survey due to the small size of the faculty/staff which would allow for easy identification of the survey respondents. For SY 2020-2021 there were 22 faculty and staff. Of these, one was male, and 15 were Black/African American while 7 were white/Caucasian. For SY 2021-2022 there were 24 faculty and staff. Of these, one was male, and 17 were Black/African American while 7 were White/Caucasian.

### ***Preliminary Findings—Survey Results***

Descriptive statistics indicate a positive change in the mean over time for familiarity with NCWiseOwl digital content from  $T_1$  ( $M = 2.14$   $SD = 1.014$ ) to  $T_2$  ( $M = 2.27$   $SD = .704$ ) and for frequency of use of NCWiseOwl digital content from  $T_1$  ( $M = 1.19$   $SD = .680$ ) to  $T_2$  ( $M = 1.73$   $SD = 1.033$ ). Descriptive statistics also indicate a positive change in the mean over time for faculty/staff familiarity with the NC Digital Learning Competencies for Educators from  $T_1$  ( $M = 1.81$   $SD = .750$ ) to  $T_2$  ( $M = 2.20$   $SD = .862$ ).

For student familiarity with digital literacy skills, descriptive statistics indicate no change in the mean over time for keyboarding, a positive change from  $T_1$  ( $M = 1.50$  ,  $SD = .889$ ) to  $T_2$  ( $M = 2.13$ ,  $SD = .915$ ) for digital citizenship, and a positive change from  $T_1$  ( $M = 1.80$ ,  $SD = .834$ ) to  $T_2$  ( $M = 2.00$ ,  $SD = .926$ ) over time for online safety.

For frequency of teaching digital literacy skills, descriptive statistics indicate a negative change over time for digital citizenship and a positive change from over time for keyboarding from T1 ( $M = 1.75$ ,  $SD = .910$ ) to T2 ( $M = 1.80$ ,  $SD = .775$ ) for keyboarding, and online safety T1 ( $M = 1.85$ ,  $SD = .875$ ) to T2 ( $M = 1.93$ ,  $SD = .704$ ).

### ***Preliminary Findings—Focus Group Results***

Several themes immediately arose from the results of the focus group interviews which were conducted within the professional learning communities. These themes include intentional professional development, awareness of digital content offerings, adding to teacher toolkit, use of credible resources, self-reliance/weaning off support from non-classroom educators, and the after effects of COVID-19 pandemic/resistance to online learning. These patterns are supported by statements from interview transcripts as demonstrated in the presentation. Further analysis of the transcripts may bring to light more defined patterns and themes.

### ***Discussion***

Initial survey responses demonstrated the need to provide professional development for the faculty and staff at the University School. Working with the leadership team, the researcher developed a 3-year plan to address digital learning and media through a several avenues.

- Professional development
- Development of a digital school library
- Connecting faculty, staff, and students to NCWiseOwl resources
- Connecting faculty, staff, and students to public library resources
- Small group instruction for digital literacies by honors college undergraduate students and graduate assistant
- Virtual field trip with library instruction, reading promotion, and independent reading
- Virtual author visit

In the beginning, this project was “all potential” since faculty, staff, and students had no access to library resources at all. A supportive administration was and will continue to be key to pulling teachers and students onboard. The researchers will need to continue to work on encouraging teachers to be more self-reliant when using digital content and continue to work on embedding library resources and programming into the school environment. As a result, we expect to see more application of digital media and essential digital literacy skills in classrooms over the next two years. This will include emphasizing the importance of using

credible resources, even for our youngest students. In the U.S., K-12 teachers have access to credible resources. The researchers continue to ponder how this project would play out in other countries?

### ***Implications and Conclusions***

Overcoming the inertia of the status quo takes dedication in the long term. While some positive change has taken place over the first year of this collaboration, more change is expected over the next two years. Once we get this ball rolling, we hope to pick up speed as faculty, staff, and students become more familiar with using digital literacies and media.

### ***Future Directions***

The survey will be conducted again at the ends of SYs 2022-2023 and 2023-2024 to track further change over time. Results will be compared to the SP 2021 and SP 2022 results to determine continued growth over time. Focus groups will also be repeated in the following years.

The researchers are also developing a library of purchased curriculum-related digital and print resources which will be used for Project-Based Learning which is the focus for SY 2022-2023. Essential digital literacy skills will continue to be taught for keyboarding, digital citizenship and online safety while adding email and presentation skills.

Efforts will also be made to survey faculty and staff at university lab schools throughout the state to compare using independent samples *t*-test. Additionally, content analysis of documents such as the NC Digital Learning and Media Inventory (completed by the principal), and the NC Digital Learning Plan Rubric (completed by the leadership team) may provide further evidence of progress. Grant opportunities to provide a school library and librarian are under investigation. Further study will consider comparison of student scores on end-of-grade tests over time.

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## ***Biographies***

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**Rita Reinsel Soulen** is an Assistant Professor of Library Science at East Carolina University in Greenville, NC where she teaches in the School Library program. Her research focuses on collaboration between school - university - public libraries using engaged outreach scholarship. Currently she is working with the university lab school to develop a digital library.

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