

NORTH CAROLINA **DIGITAL** LEARNING PLAN

D L Progress Rubric Development and Findings

*Prepared by the Friday Institute for Educational Innovation for the
North Carolina State Board of Education-Department of Public Instruction*

Development and Findings from the North Carolina Digital Learning Progress Rubric

Introduction

North Carolina's education system is transitioning from providing an industrial age, one-size-fits-all education to providing the personalized digital-age education students need to be successful in college, careers, and civic life. North Carolina already has made significant progress with statewide initiatives such as the K-12 Education Cloud and Home Base. Also, many districts in the State have digital learning initiatives well underway; for example, Mooresville Graded School District has become a national model. Much remains to be done, however, to ensure that all students have equitable access to high-quality digital learning.

Recent legislative actions that address ensuring technology access across all schools, providing digital resources, and preparing educators for digital teaching and learning are important steps in moving forward. The goals of the new State Board of Education strategic plan also are leading the State toward a digital learning future. The Friday Institute for Educational Innovation at North Carolina State University is honored to have been asked to develop the *North Carolina Digital Learning Plan* in collaboration with policymakers, education leaders, practitioners, business leaders, and other partners from throughout the State.

The North Carolina Digital Learning Progress Rubric was created as a part of the *North Carolina Digital Learning Plan*, and it serves as a roadmap to support North Carolina's educators and communities in the transition to digital-age teaching and learning. The purpose of the rubric is twofold: to support district leaders as they reflect on the depth and breadth of their local digital learning program's implementation; and to provide a statewide snapshot of North Carolina's digital learning efforts overall. The rubric aims to articulate a common language for digital learning implementation strategies and to establish a continuum for identifying good to exceptional digital learning programs. The rubric is designed to help district and charter school teams reflect on their current stage of development in digital learning and track their progress moving forward. The rubric also shows promise in aiding state and local education agencies to evaluate proposed digital learning projects and allocate scarce resources to those that demonstrate "readiness."

Organization of the Rubric

The rubric's framework consists of five major areas: *Leadership*, *Professional Learning*, *Technology & Infrastructure*, *Content & Curriculum*, and *Data & Assessment* (Figure 1, following page). These main areas are broken down into 25 key elements of successful digital learning programs, informed by state and national standards and literature on successful digital learning efforts across the country.

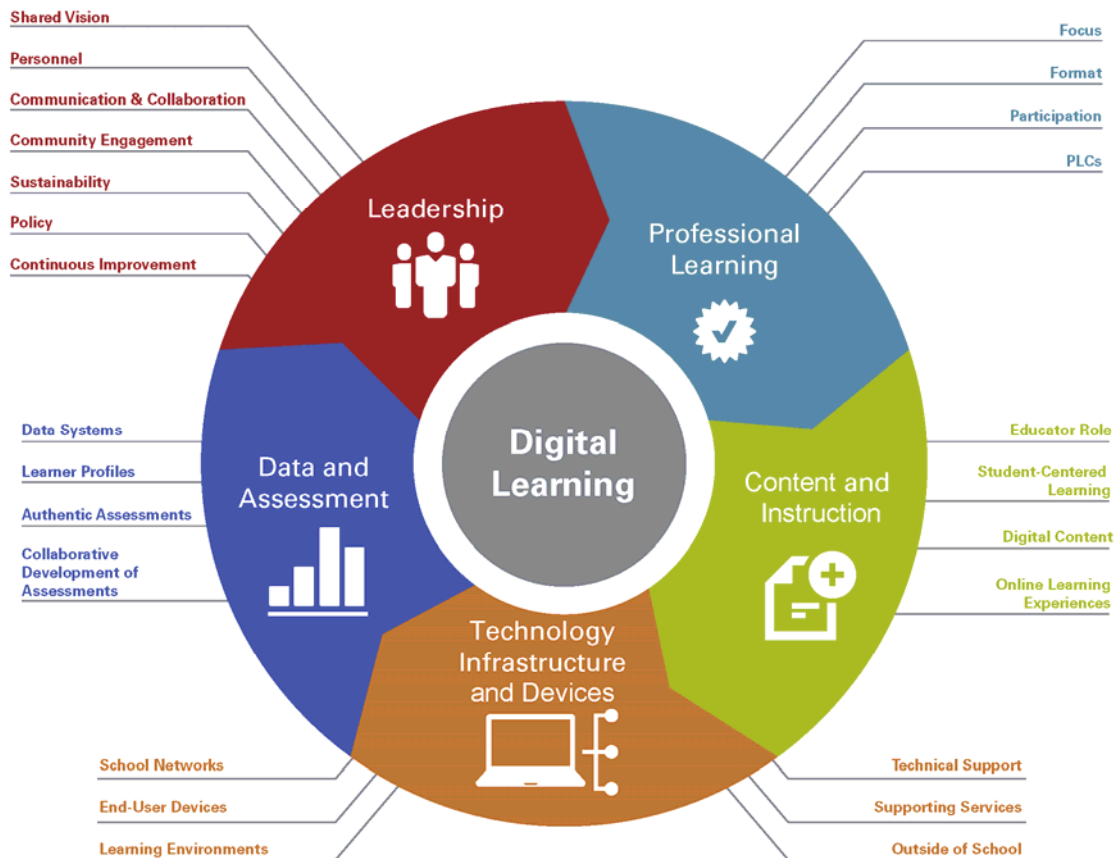


Figure 1. NC Digital Learning Progress Rubric Major Areas and Key Elements

Represented within each key element are two to five “quality indicators,” calibrated along a four-point scale from “early” to “developing” to “advanced” to “target.” Respondents identify where on the continuum they believe their district-wide digital program is operating for each key element.

The following list provides a summary of each of the major areas:

1. **Leadership** – Educators, leaders, and other personnel throughout the district understand the characteristics of digital learning environments and are well-versed in the teaching and learning strategies that support those environments. Leadership has established a shared vision and policy structure to support and sustain digital teaching and learning.

Teamwork and collaboration are essential features of all faculty and staff interactions across the system. District leaders ensure that organizational and technical support for meaningful collaboration are readily available for all district initiatives.

2. Professional Learning – Professional learning experiences for educators and administrators are based on effective, research-based strategies and national standards for implementing digital learning. The professional development program is timely, relevant, and ongoing. Participants have the opportunity to evaluate the professional development activities and the impact of the trainings is assessed using data on classroom practice and student learning. Educators have sufficient time to revise curriculum and instructional materials and to review new curriculum and materials aligned with college- and career-ready standards. Districts facilitate collaboration among educators in reviewing student performance data, adjusting instruction to support deeper student learning, and providing rigorous support for students not yet on track to meet standards.
3. Content & Curriculum – Educators have well-designed, adaptive digital tools for customizing instruction for individual students or groups. This infrastructure increases the efficiency with which larger groups of educators can provide high-quality, personalized learning on complex topics. Educators also have access to multiple sources of high-quality digital, academic content, offering students more opportunities to develop deep understanding of complex topics.
4. Technology & Infrastructure – Digital instructional technology, when strategically deployed, offers opportunities for improving student learning outcomes and significantly expands educators' at-hand tools and resources. Sufficient bandwidth, hardware, software, and other infrastructure enable more efficient and expanded options for various district-level functions, including the power to: administer online assessments; provide digital content; support digital platforms for collaboration; and deliver online educator professional development. Digital technology also plays a critical role in providing data to educators and school leaders, parents and students, and the larger community about student and school performance for guiding educational and policy decisions. The school district maintains a digital learning environment that offers e-communication, resource libraries, file exchanges, and other tools for collaboration that facilitate interactions between educators, parents, and students in school and beyond. This digital infrastructure also includes a learning management system that integrates digital and print-based content, formative and summative student data, and learning standards. Teachers, students, and parents have ongoing access to information and tools in the learning management system. Finally, the district provides a wide variety of digital content that includes primary and supplementary resources offering students a wide selection of content presented through various modalities. In addition to this work, the district tracks the availability of Internet access in student homes and in the community and actively seeks to ensure that all students are digitally connected.
5. Data & Assessment – Student learning assessment results, other forms of student performance data, and data analytics programming are critical aspects of high quality digital learning environments. A personalized, learner-centered environment uses technology to collect, analyze, and organize a variety of student data to improve learning. Data provided by diagnostic, formative, and summative assessments are key elements in personalized, individualized, and differentiated learning environments, and they help to ensure learner success.

Data Collection

In March 2015, the *North Carolina Digital Learning Plan* team presented the Digital Learning Progress Rubric to the Special Committee on Digital Learning of the North Carolina State Board of Education. The State Board requested that all school districts and charter schools complete the rubric self-assessment by May 2015 to provide a statewide snapshot of digital learning implementation. The Board intended for data from these self-assessments to help the State to prioritize resources and develop a plan for bringing digital teaching and learning environments to every school in North Carolina.

In partnership with the Digital Teaching and Learning Division at the North Carolina Department of Public Instruction, a request to complete the rubric self-assessment was sent to all district technology directors and charter school leaders. The request encouraged districts and charter schools to assemble a leadership team to complete the rubric together and provide the most accurate assessment of the state of their transition to digital learning. Online submissions of rubric responses were collected by The Friday Institute, and by May 2015 all 115 traditional districts and 120 of 146 charter schools submitted their responses.

Data Analysis

In the analysis of the North Carolina Digital Learning Rubric Progress results, each level of the implementation scale was assigned a rating (1 = *early* to 4 = *target*), and data were summarized at the key-element level and main area level (Leadership, Professional Learning, Technology & Infrastructure, Content & Curriculum, and Data & Assessment). School district and charter school data were analyzed separately. Data were analyzed using descriptive statistics and independent comparisons. An average composite rubric score also was calculated.

Findings: Traditional School Districts

Results from the Digital Learning Progress Rubric provide a high-level illustration of the transition to digital teaching and learning environments across the State. Figure 2 shows the number of Local Education Agencies (LEAs, or traditional school districts) that rated themselves at various levels along the implementation continuum, broken down into an “overall” rubric score (an average of the 25 key element ratings across the entire rubric) and into scores for each main area (an average of the key element ratings within only that main area). The scores are grouped into categories based on responses: the “early” category represents districts whose scores averaged from 1.0-1.9; “developing early” represents scores from 2.0-2.4; “developing advanced” represents scores from 2.5-2.9; and “advanced” represents scores from 3.0-4.0.

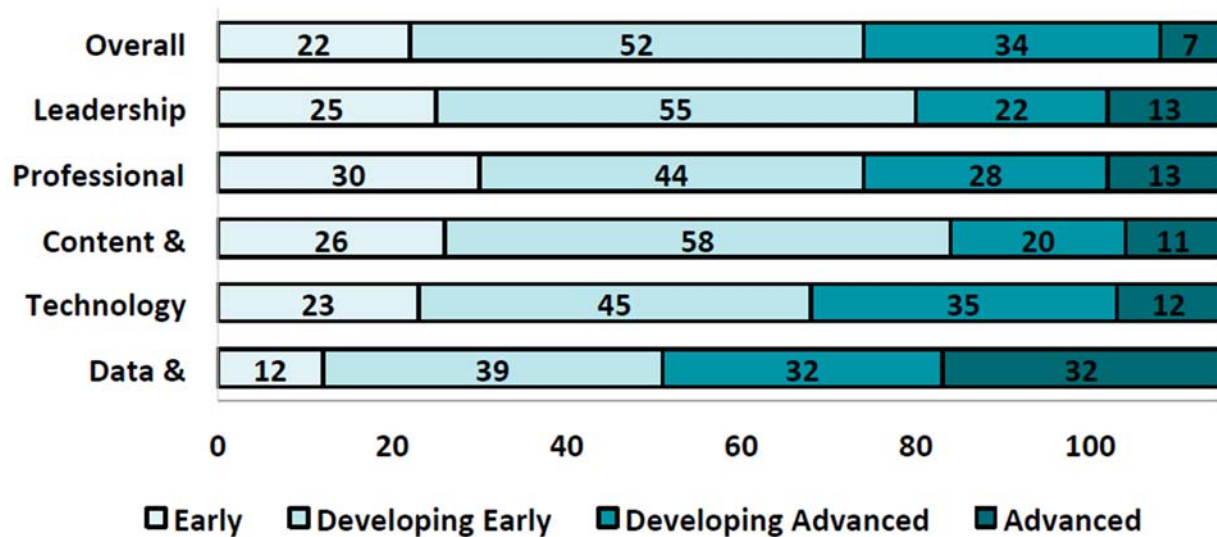


Figure 2. Number of LEAs Self-Assessing at Each Implementation-Level

Figure 3 shows the overall rubric score each school district assigned itself, with additional geographic boundaries delineating the state’s eight education districts.

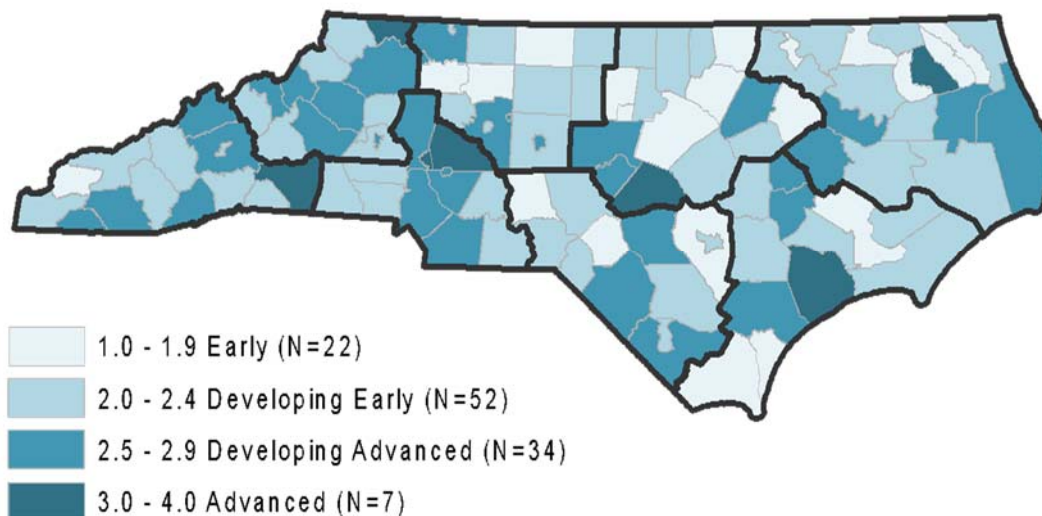


Figure 3. Overall Rubric Scores by LEA and Education District

Results show that the majority of LEAs (86 of 115) reported that they are either in the “early developing” or “advanced developing” phases of their digital learning initiatives. These districts have begun to prepare educators for the changes, have put some of the required technology in place, have incorporated some digital content and instructional technology in classrooms, and have employed data to inform some decisions. Some districts indicated that the transition to digital learning environments has begun in only a sub-set of schools, grades, or content areas. These results suggest that large opportunities and challenges remain for these districts to reach an “advanced” level, which will require systemic reforms to take place first.

Leadership

Figure 4 shows the digital learning “leadership” score each LEA assigned itself. Findings show that 25 districts rated themselves as early and 13 rated themselves as advanced.

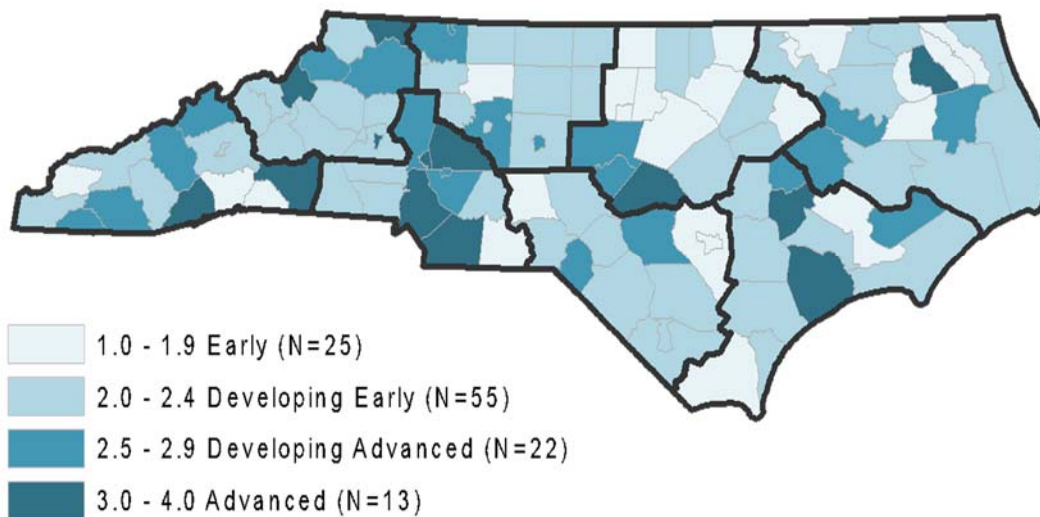


Figure 4. Leadership Scores by LEA and Education District

Professional Learning

Figure 5 shows the digital learning “professional learning” score each LEA assigned itself. Findings show that 30 districts rated themselves as early and 13 rated themselves as advanced. More districts rated themselves early on implementing professional learning for digital education than for any other main area in the rubric.

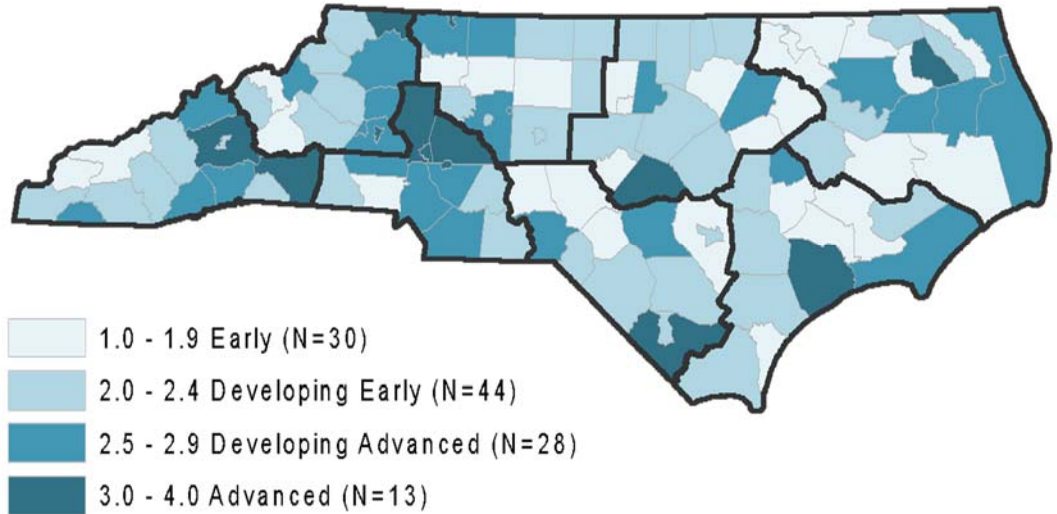


Figure 5. Professional Learning Self-Assessment Ratings by LEA

Content & Instruction

Figure 6 shows the digital learning “content and instruction” score each LEA assigned itself. Findings show that 26 districts rated themselves as early and 11 rated themselves as advanced.

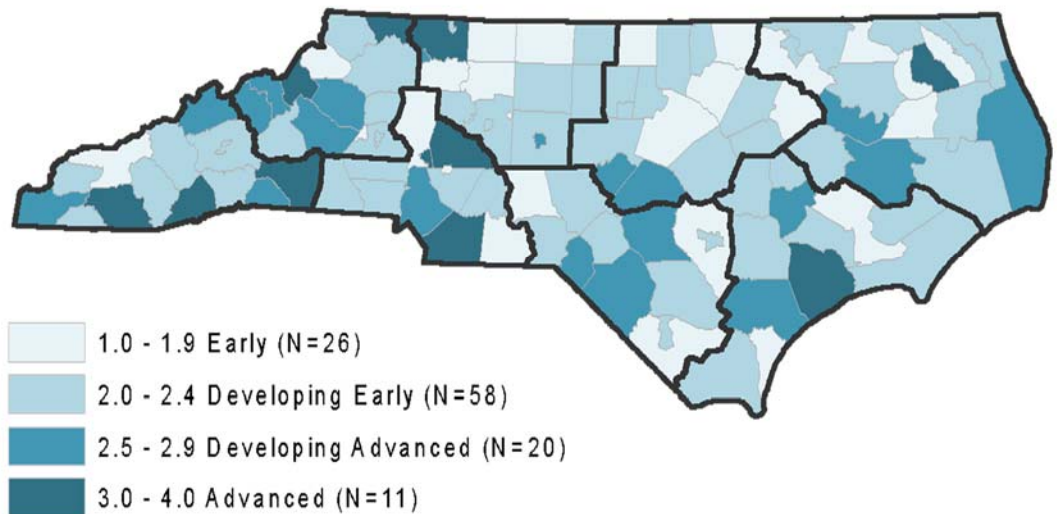


Figure 6. Content and Instruction Self-Assessment Ratings by LEA

Technology Infrastructure & Devices

Figure 7 shows the digital learning “technology infrastructure and devices” score each LEA assigned itself. Findings show that 23 districts rated themselves as early and 12 rated themselves as advanced.

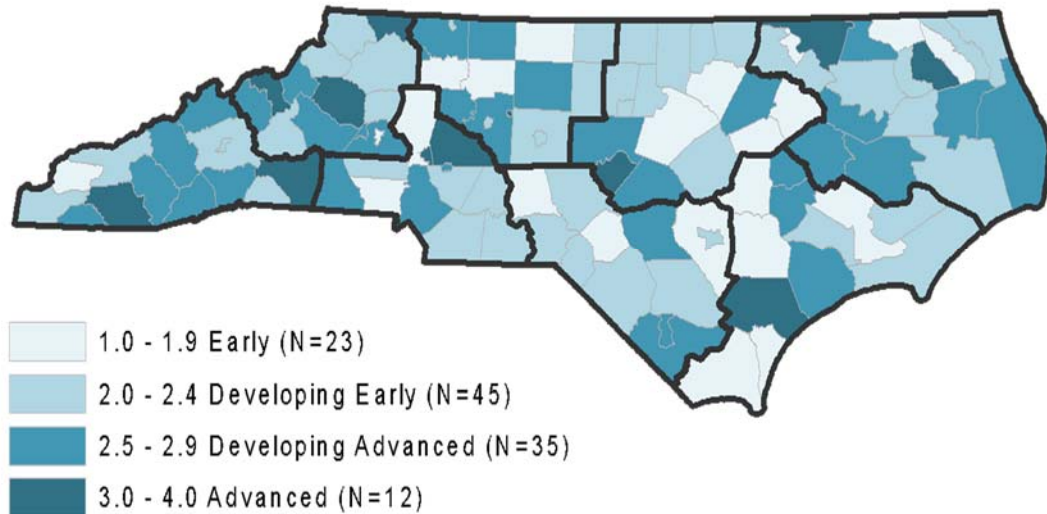


Figure 7. Technology Infrastructure and Devices Self-Assessments by LEA

Data & Assessment

Figure 8 shows the digital learning “data and assessment” score each LEA assigned itself. Findings show that 12 districts rated themselves as early and 32 rated themselves as advanced. More LEAs rated themselves advanced in this main area than in any other.

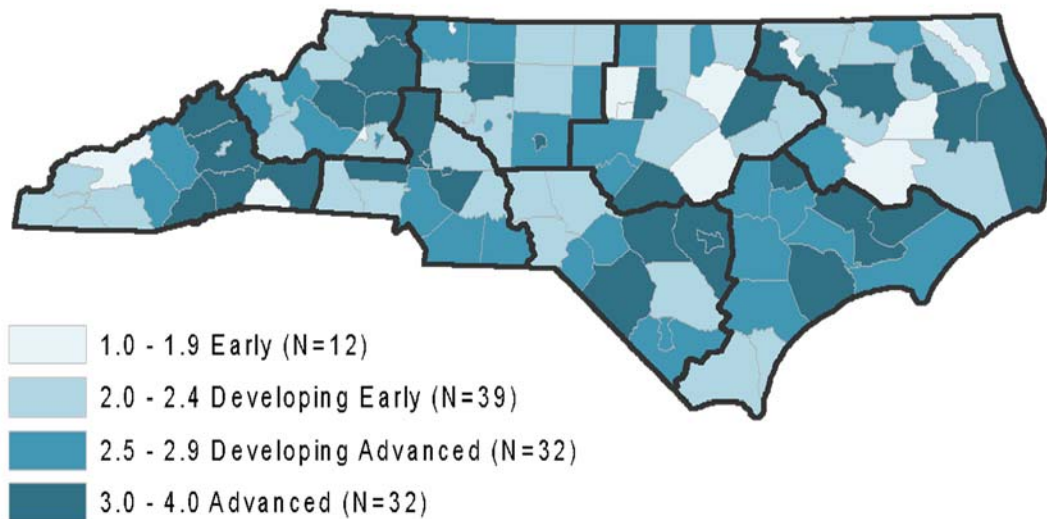


Figure 8. Average Data and Assessment Self-Assessment Ratings by LEA

In summary, 19 percent of districts rated themselves at the early stage of the transition to digital learning environments and 6 percent rated themselves at the advanced stage. About 75 percent of districts consider themselves to be in the developing stage, having incorporated digital teaching and learning in some schools, but not comprehensively throughout the entire system.

Findings: Charter Schools

In May 2015, 120 out of 146 charter schools completed the Digital Learning Progress Rubric, providing a similar high-level picture of the transition to digital learning that these schools are undertaking. Figure 9 shows the number of individual charter schools that rated themselves at various levels along the implementation continuum, broken down into an “overall” rubric score (averaging the ratings across the entire rubric) and into scores for each main area (averaging ratings within just that main area). The scores are further grouped into categories based on responses: “early” (districts whose 25 key element scores averaged to 1.0-1.9); “developing early” (2.0-2.4); “developing advanced” (2.5-2.9); and “advanced” (3.0-4.0).

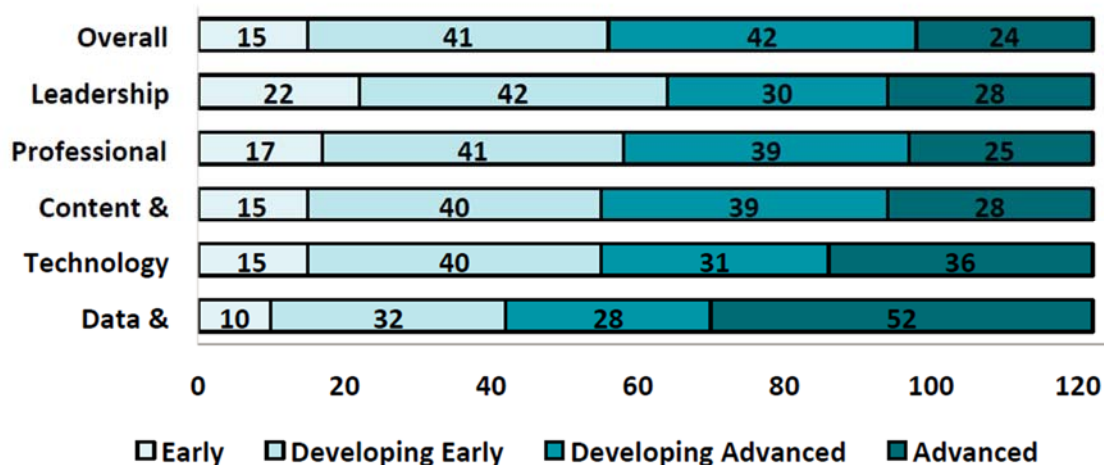


Figure 9. Number of Charter Schools Self-Assessing at Each Implementation-Level

The charter schools’ self-assessments show that 83 schools consider themselves to be “developing early” or “developing advanced” with regard to their progress toward comprehensive, high-quality digital learning environments in their schools. Results suggest that the charter schools, on average, rated themselves most strongly on their data and assessment for digital learning (52 schools self-assessed at the “advanced” level). They rated themselves lowest in leadership for digital learning, with 22 schools indicating that they were “early” in this area.

Limitations

These findings and interpretations must be considered within the limitations of the data. First, while many district and school leaders reported that they worked in teams to provide the most accurate reflection of their status in the transition to digital learning, not all did so; in some districts, individual staff completed the rubric. Second, these data are self-assessments, based on individual perceptions and recollections, instead of other more objective measures. Several factors could have influenced the ways in which schools and districts reflected on and then reported their scores on the North Carolina Digital Learning Progress Rubric, including concerns about confidentiality, knowledge of district-wide efforts, and expectations that the data would be used to prioritize state resources. Finally, districts and schools had a limited time to complete the rubric.

Next Steps

Revising the Rubric

Researchers at The Friday Institute are exploring additional analyses to further examine the quality of the instrument and to inform future revisions. Selected follow-up analyses include exploratory and confirmatory factor analyses, reliability analysis at the item- and scale-level, structural regressions, and latent profile analyses. In addition, the self-reported rubric data will be compared to other non-self-reported statewide data sources about district and school digital learning efforts, including items from the [Teacher Working Conditions Survey](#), [Annual Media and Technology Report](#), and [NCREN Utilization Maps](#).

In partnership with the Digital Teaching and Learning Division at the North Carolina Department of Public Instruction, researchers at The Friday Institute are collecting constructive feedback from digital learning leaders on the format, components, and descriptions in the rubric. Superintendents, curriculum directors, technology directors, assistant superintendents, lead teachers, policy makers, researchers, and others have provided feedback on the rubric. The responses from these stakeholders will be taken together with analyses of results from the first administration of the rubric and used to improve the rubric into a second version by January 2016. These important revisions will increase the instrument's validity and reliability prior to its administration in subsequent years.

Providing Data Summaries Back to Districts and Charter Schools

Rubric data summary reports were developed to provide relevant and customized information as districts and schools develop local digital learning plans and strategic goals aligned to the state digital learning plan.

Every district that completed the rubric was provided with a data summary organized by the rubric's five main areas. The three-page document included graphs and tables to allow local educators to review their district's standing compared to others. The bar graphs and tables showed reported progress against: all 115 LEAs; districts in their region; districts of a similar size; and districts with similar proportions of needy students.

Similarly, every charter school that completed the rubric will be provided a data summary organized by the rubric's five main areas. The three-page document will include tables of the school's self-assessment, as well as tables showing rubric scores of all other charter schools.

The data summary also will show all charter schools' rubric scores by various categories of charter school: size; age; grade span; and geographic location.

Strategic Planning Tools and Resources

The Friday Institute will develop an online toolkit of resources to support districts' and charter schools' ongoing transition into successful digital teaching and learning environments. In line with the Digital Learning Progress Rubric, the toolkit will be organized by the five main rubric areas. It will include examples of successful strategies being used in North Carolina, as well as a collection of videos, guides, and resources from national leaders.

Finally, The Friday Institute also is working in partnership with the North Carolina Association of School Administrators, Regional Education Service Agencies, and others to facilitate several professional learning opportunities for education leaders at every level to use the North Carolina Digital Learning Progress rubric data for strategic planning. These events bring together leadership teams to develop comprehensive plans for using rubric data, communicating expectations, and collaborating with others locally to support a digital transformation.