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ASPIRING ELEMENTARY TEACHERS ARE UNLIKELY TO GET ESSENTIAL SOCIAL STUDIES AND SCIENCE CONTENT THEY NEED TO TEACH STUDENTS

Gaps in Teacher Preparation Program Requirements for Coursework in World History, Economics, and Engineering Will Leave Students Unprepared for the Future of Work and Engaged Citizenry

Washington, D.C. – New data and analysis released today from the National Council on Teacher Quality (NCTQ) finds significant opportunities for teacher preparation programs to improve their coursework requirements to ensure that aspiring elementary school teachers receive the essential social studies and science content knowledge they need for the classroom.

The new NCTQ report, [Teacher Prep Review: Building Content Knowledge](#), shows that while most teacher preparation programs have sufficient course options available, only 3% require aspiring teachers to complete courses in most of the social studies and science topics an elementary teacher needs to know in order to promote students' literacy and learning. Key topics most often absent in program requirements include world history and economics in social studies (required by fewer than 20% of programs), and engineering design in science (required by only 10% of programs), potentially leaving future teachers unprepared to provide their students with the fundamental knowledge and skills necessary to succeed in the modern world.

Decades of research demonstrates that building students' social studies and science content knowledge in the elementary grades is essential to not only developing an understanding of the world around them, but also for reading comprehension and problem-solving skills. Given that this knowledge is cumulative—meaning the more a student knows, the faster they can learn more—building a strong foundation in social studies and science content is fundamental to a high-quality education. This is especially true for students of color, students learning English, and students living in poverty who are more likely to be denied access to high-quality instruction and curriculum in these content areas.

“A core component of eliminating educational disparities, particularly when it comes to reading comprehension, is to ensure that elementary students are taught essential social studies and science content,” said Dr. Heather Peske, NCTQ President. “Since teachers cannot teach what they don't know, we need to make sure aspiring elementary teachers learn the content knowledge they need for the classroom during their preparation programs.”

The NCTQ analysis includes a review of course options and course requirements in social studies and science for aspiring elementary teachers at 437 teacher preparation programs across the country. NCTQ reviewed courses that meet the preparation program's requirements as well as those that meet the institution's general education requirements. Engaging with experts from the field, teacher preparation program faculty, and measurement experts, NCTQ developed a process to assess whether the courses aspiring elementary teachers are required to take cover the key topics of social studies and science that are reflected in states' elementary education standards and assessments. [Learn more about NCTQ's research and methods.](#)

The findings show a significant gap between the opportunities available for aspiring elementary teachers to build their content knowledge and the specific requirements on which content courses candidates

should take. For example, candidates in over 90% of teacher preparation programs have the option to take courses on topics found in student standards such as civics, the American Revolution, forces, waves, and energy, and the structure and properties of matter, but fewer than half of programs require that candidates select courses in any of these topics. Instead, candidates can choose from a list of courses with varying relevance to the classroom. [See the data on course coverage for all social studies and science topics.](#)

“The good news is that most social studies and science courses that elementary teachers need already exist within current options,” continued Dr. Peske. “What programs must do now is make sure that their elementary teacher candidates choose the right courses. By directing a future elementary teacher to take a world history class instead of, for example, ‘Sports and the American Character,’ programs can help make sure that the future students of these aspiring teachers will have the opportunities to learn the core content they need to be successful readers and citizens.”

As part of the new analysis, NCTQ developed the [Building Content Knowledge: Content Coverage Tool](#) to provide each teacher preparation program with detailed findings and customized recommendations specific to their program. Program administrators and faculty can use the Content Coverage Tool to see which existing courses within their program’s or institution’s options they should recommend or require to ensure their aspiring elementary teachers get the maximum possible content coverage in the essential social studies and science topics.

The only core topic NCTQ analysis did not find available as an existing option in most programs is engineering design. While engineering design is part of elementary education standards in 40 states, it is offered as an option to meet course requirements by only 19% of programs and required by only 10%. Learning about engineering in the elementary years is important for spurring interest in that career field, particularly for groups traditionally underrepresented in STEM, including women and individuals who identify as Black or Latino. With so few programs offering engineering design courses, program and institution leaders need to work to create opportunities for aspiring elementary teachers to gain this knowledge. [See several stand-out institutions that have created engineering design courses for aspiring teachers.](#)

Read the [full report](#) to explore national findings on teacher preparation programs’ coverage of essential social studies and science content knowledge for aspiring elementary teachers, or explore the [Building Content Knowledge: Content Coverage Tool](#) to review the content course requirements and recommendations for a particular teacher preparation program.

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To schedule an interview with NCTQ President Dr. Heather Peske, contact Nicole Gerber at 202-393-0020 ext. 712 or by email at ngerber@nctq.org.

About the National Council on Teacher Quality: *NCTQ is a nonpartisan research and policy group, committed to modernizing the teaching profession and based on the belief that all children deserve a diverse and effective teacher workforce. We recognize that it is not teachers who bear responsibility for their profession's many challenges, but the institutions with the greatest authority and influence over teachers. More information about NCTQ can be found on our website, www.nctq.org.*