March 6, 2023

Elizabeth Albro
Commissioner, National Center for Education Research
Institute of Education Sciences
U.S. Department of Education
400 Maryland Avenue SW
Washington, DC 20202-7240

> *In re:* **Request for Information on Topics to Address via the National Center for Education Research's R&D Centers (ED-2023-IES-0011-0001)**

Dear Elizabeth Albro,

On behalf of the Association for Career and Technical Education (ACTE), the nation's largest not-for-profit association committed to the advancement of education that prepares youth and adults for career success, I'm writing in response to this request for information about topics to address via the National Center for Education Research (NCER) Research and Development (R&D) Centers.

NCER plays an important role in sponsoring research to improve education quality and learner outcomes, and the R&D Centers are a vital vehicle for organizing and directing NCER's research agenda. The following suggestions describe pressing questions that an R&D Center would be well suited to address related to CTE program implementation, CTE teacher recruitment and retention, and CTE learner outcomes.

Most pressing topics
Of the 11 topics, ACTE recommends investing in these three topics as the most pressing: teacher quality, postsecondary education and training, and state and local policy.

Teacher quality research questions
 1. What are effective recruitment and retention messages and strategies for CTE teachers transitioning from careers in industry?
 2. What are effective preparation and induction strategies for CTE teachers transitioning from careers in industry?
 3. What are effective ways to provide professional development and supports to industry professionals teaching in part-time positions?
 4. What recruitment and retention strategies lead to greater racial/ethnic diversity in the CTE teacher workforce?
 5. Which requirements of alternative certification programs for CTE teachers are the most critical to student success?

The priority research questions proposed under the topic area of teacher quality seek to address issues in the preparation, certification, recruitment and retention of CTE teachers. School districts and community colleges across the country are increasingly facing difficulties recruiting and retaining CTE instructors. For instance, 28% of public schools reported being understaffed in CTE programs in August 2022.[1] In addition, challenges recruiting CTE instructors in newer and emerging program areas like cybersecurity, drone technology or data science can prevent districts and institutions from developing these programs and therefore may not be reflected in teacher shortage data.
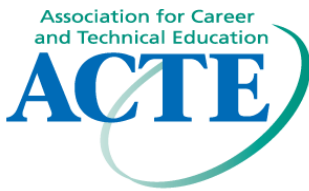
Prospective CTE instructors face multiple hurdles to transitioning into a teaching career with obstacles like low pay, certification barriers and limited access to high-quality professional development. Additionally, the national CTE teacher workforce lacks diversity; according to the 2017-18 National Teacher and Principal Survey, of all public school full-time CTE teachers, only 6% identified as Hispanic, 9.3% identified as Black and 1.3% identify as Asian or Native Hawaiian/Pacific Islander.[2] As the United States becomes a more diverse nation, its teacher-to-student populations should reflect that in CTE as in other program areas: Evidence indicates that students of all races and ethnicities, but particularly students of color, are positively impacted by interacting with teachers of color.[3]

The research generated by these questions would address every part of NCER's program of research. A lack of CTE instructors with industry and teaching qualifications and experience impact students' access to quality CTE programs, secondary outcomes and postsecondary transition. These prospective research questions would identify concrete, evidence-based strategies that practitioners and policymakers could directly apply in their states and localities to better support the CTE teaching field.

Postsecondary education and training

1. What are effective strategies for vertically aligning courses and content in a CTE program of study across secondary and postsecondary education? How does completing a vertically aligned CTE program of study across secondary and postsecondary education impact learners' employment and earnings?
2. What are effective strategies for incorporating stackable credentials within a postsecondary CTE program? How does earning stacked credentials in a postsecondary CTE program impact students' employment, earnings and further education?
3. How are bachelor's degree completion rates impacted by the prior attainment of an associate degree or postsecondary certificate in a CTE program area?
4. What are effective strategies for providing access to work-based learning in postsecondary CTE programs, particularly for underserved learners? How does participating in work-based learning in postsecondary CTE programs impact students' employment, earnings and further education?
5. How does expanding Pell Grants to students in education and training programs under 600 clock hours impact those students' employment, earnings and further education, particularly for underserved learners?

The priority research questions proposed under this topic seek to explore strategies and outcomes related to vertical course alignment, credential stacking, accessible work-based learning and Pell grant expansion.

Recent causal research finds that stackable credentials have led to improved employment and wage outcomes.[4] However, more research is needed on this topic, as a number of states have allocated funding to and/or required community colleges to provide credential stacking. Similarly, vertically aligned programs of study across secondary and postsecondary CTE are promoted by Perkins V federal CTE legislation, but difficulties in connecting data across different systems has limited research on learner outcomes from programs of study and the most effective methods of vertical alignment.

Postsecondary work-based learning has demonstrated positive outcomes for learners. For instance, bachelor's degree recipients who participated in work-based learning had better academic performance, career satisfaction, confidence in career-planning decisions and starting salaries compared to those who did not have this experience.[5] However, it can be difficult for researchers to isolate the effect of work-based learning from other CTE program elements. In addition, access to work-based learning opportunities is uneven as Black, Latinx, women, low-income and first-generation
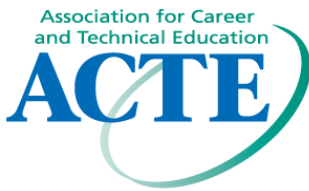
students have been found to participate in work-based learning at lower rates.[6] Further research on these topics will grow the knowledge base about work-based learning outcomes and effective strategies for expanding access.

Students from underprivileged backgrounds are also differentially impacted by access to Pell Grants. Financial aid is already a major stepping stone to postsecondary opportunities for minority students.[7] While an experimental pilot was conducted about Pell Grant expansion to short-term programs, showing increased program enrollment and completion for recipients, the pilot evaluation did not consider employment and earnings data.[8] More research on this topic is needed.

The studies generated by these questions would address NCER's program of research related to postsecondary education access and completion, particularly for underrepresented students, generating recommendations that policymakers and practitioners could use to improve policy and practice in their state and local contexts.

State and local policy research questions

1. What is the effect of admissions requirements and scheduling policies on the participation of underrepresented learners in CTE programs?
2. How do student outcomes differ in states/localities where CTE coursetaking or experiences, such as work-based learning or earning an industry credential, are required; states/localities where CTE coursetaking or experiences are incentivized; and states/localities where CTE coursetaking or experiences are elective?
3. How do student outcomes differ in states/localities where career exploration courses or activities are required in middle grades as compared to states/localities where career exploration courses or activities are not required in middle grades?
4. How do student outcomes differ among different models of CTE course delivery such as comprehensive high schools, area technical centers, career academies and CTE-dedicated high schools?

The priority research questions proposed under this topic area seek to address how CTE policies across the country impact student CTE participation and outcomes, including the varied effects of different admission requirements and scheduling decisions, different requirements and incentives for CTE coursetaking and experiences, and diverse CTE program models that exist throughout the nation.

Little research has been conducted comparing different CTE delivery models. In recent years, researchers affiliated with the CTE Research Network have been analyzing outcomes of students attending CTE-dedicated high schools. Meanwhile, many states use area technical centers (ATCs), which provide CTE programs to learners from across multiple service areas. There are more ATCs than community colleges in the United States,[9] but little causal research has been conducted about these institutions and their outcomes. Other models like career academies have been the subject of research,[10] but systematic comparisons across different modes of CTE delivery has been lacking.

Middle grades career exploration requirements are an emerging trend. In 2022-23, West Virginia launched the Discover Your Future middle grades CTE course, joining other states like Utah, Indiana and Nebraska that require middle grades career exploration or provide curriculum for middle grades exploration. In another sign of increased attention to this topic, Perkins V legislation recently lowered the floor for spending Perkins funds down to grade 5. Researching the outcomes of different requirements for and approaches to middle grades exploration is important because middle school is an ideal time to expose students to career opportunities, as their vocational identities are still forming.[11]
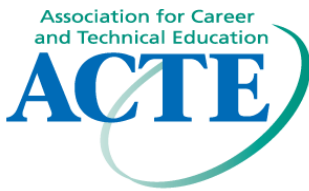
CTE-related graduation requirements and diplomas are another emerging trend, as in Tennessee, which in 2022 became the latest state to enact legislation requiring the development of a CTE pathway diploma.[12] The same year, Hawaii joined the growing number of states providing incentives to schools for industry credential attainment.[13] Again, comparative research on these topics has been thin.

We encourage researchers to consider differential impacts of these policies not only among states and localities but also among learner groups. In particular, learner groups may be differentially impacted by local decisions that set prerequisites, GPA thresholds and other requirements for CTE programs and that schedule CTE courses at times that conflict with other courses or activities.

The research produced from these questions would address all parts of NCER's research program and produce insights and data that could be used by policymakers to affirm, modify or change state and local policies related to CTE to better serve learners based on the evidence.

We appreciate your time and consideration of our comments and recommendations. Should you have any questions or would like to discuss the issues raised in this letter further, please do not hesitate to contact ACTE's Research Director Catherine Imperatore at cimperatore@acteonline.org.

Sincerely,

LeAnn Curry
Executive Director
ACTE

[1] https://ies.ed.gov/schoolsurvey/spp
[2] DataLab analysis of NTPS data
[3] https://learningpolicyinstitute.org/sites/default/files/product-files/Diversifying_Teaching_Profession_REPORT_0.pdf
[4] https://www.brookings.edu/blog/brown-center-chalkboard/2021/02/02/stackable-credentials-can-open-doors-to-new-career-opportunities/
[5] https://cci.stradaeducation.org/pv-release-march-16-2022/
[6] Ibid.
[7] https://nces.ed.gov/pubs2019/2019038.pdf
[8] https://ies.ed.gov/ncee/pubs/2021001/pdf/2021001.pdf
[9] http://areatechnicalcenters.org/wp-content/uploads/2021/02/ATC-50StateReport.pdf
[10] https://www.mdrc.org/publication/career-academies-impacts-student-engagement-and-performance-high-school
[11] https://www.amle.org/developmental-characteristics-of-young-adolescents/
[12] https://docs.google.com/spreadsheets/d/1amcFAVE2ibXxjEQmfUkFxgFHIYWa1daO1kbsnggBelQ/edit#gid=718169542
[13] Ibid.