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# The Future of College and Career Pathways

A national survey of pathways practitioners

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Career and Technical Education (CTE) has been a fixture in American education since the 1920s, and today nearly one in four high school students enrolls in a concentration of CTE courses<sup>1</sup>, while the career academy movement, now more than 30 years old, includes more than 7,000 career academies nationwide<sup>2</sup>. Both of these complementary models center on the idea of providing pathways for students, helping them explore their future options and make a clear connection to college and career opportunities.

Given the positive impact that pathways initiatives like these can have in the lives of students, and their importance for both education and workforce outcomes, the National Center for College and Career Transitions (NC3T) surveyed educators and administrators in the field to learn about the current state of pathways programs and get a sense of what the future holds. The results of this survey reflect only the views of those who received the survey and chose to complete it, so the specific data may not be nationally representative. Still, it provides a real-time look at the perceptions of state and local practitioners who are doing the work of CTE and related academies and pathways.

## A. Key Findings

- ◇ The percentage of students participating in pathways programs is growing: 37.4% said that there are more students in CTE programs than three years ago, versus 18.3% saying there were fewer, while 31.7% stated that there were more students in career academies, compared with 11.7% saying there were fewer. While the number of CTE programs appears static, 29.0% said there were more academies than three years ago, compared with 14.0% saying there were fewer.
- ◇ While all areas of education are facing funding challenges, pathways programs have seen smaller levels of cuts in the past three years, and expect static levels going forward. Those in the Northeastern states saw the fewest reports of funding declines among their pathways initiatives.
- ◇ Pathways practitioners have active relationships with their communities: 71.0% of respondents have advisory boards for each CTE program and career academy, with strong representation from key stakeholder groups. There are opportunities for improvement in having board members take leadership roles within their partner schools, and in tying programs to current workforce needs.
- ◇ Employers are heavily engaged in areas such as advisory boards (89.7%), sharing expertise with students (85.0%), and offering work-based learning opportunities (80.6%); however, there remain significant opportunities for growth in areas such as offering opportunities to teachers (35.5%), sharing expertise with the schools (26.9%), and serving as executive mentors (16.3%).

<sup>1</sup> <http://nces.ed.gov/fastfacts/display.asp?id=43>

<sup>2</sup> <http://casn.berkeley.edu/resources.php?r=158>

- ◇ Respondents expect continued growth of both CTE programs and career academies over the next 1-3 years, including a higher percentage of students, more programs, and higher levels of business engagement. In spite of this growth, however, survey participants expect static levels of staffing and a slight decline in funding.
- ◇ The best areas for pathways programs appears to be urban areas and Southeastern states: in both cases, respondents reported higher-than-average participation rates, growth rates, activity rates, and a more optimistic view of the future.

## B. Implications

Federal policy for Perkins Career Technical Education funding has encouraged states and localities to adopt “programs of study,” which are connected CTE programs that span between secondary and postsecondary education. Federal policy relating to education more generally is essentially silent on areas like career academy and pathways, instead focusing on accountability, and assessments. Race to the Top funding, for example, has focused support more specifically on teacher effectiveness evaluation and turning around struggling schools.

The growth of academies and pathway models, as indicated in this survey report, is occurring in the absence of strong federal or state guidance and funding, which is somewhat surprising. It may demonstrate that a movement toward pathway models is picking up grass-roots support; even modest federal and/or state encouragement could lead to widespread adoption rather quickly.

## I. Data Collection Process

The National Center for College and Career Transitions conducted this survey between May 9th and June 1st. The survey was promoted via email to a list of 5,000 educators and administrators who work in pathways-related fields such as CTE and career academies, including the subscriber list of NC3T’s Engage. Connect. newsletter and a compiled list of district and state CTE leaders. Notices requesting participation were sent on May 9th and May 22nd; two incentives were offered, including a copy of the survey results and a chance to win one of five copies of *Building Advisory Boards That Matter*, a book written by Hans Meeder and Brett Pawlowski of NC3T.

As a result of this outreach, 801 individuals started the survey, with 540 completing the entire online questionnaire. Readers should remember that, as an opt-in survey, the results may be biased in favor of those who are more active in the field.

**Table 1: Respondent Characteristics**

Survey Item	%
<b>In what part of the country are you located?</b>	
West	25.8%
Midwest	27.4%
Northeast	16.7%
Southeast	30.1%
<b>If you work at the school or district level, how would you describe your school district’s location?</b>	
Urban	30.5%
Suburban	38.2%
Rural	31.3%
<b>At what level of education do you work?</b>	
School	52.1%
District	30.1%
State	17.8%

## II. Respondents

This survey captured information from a diverse group of respondents, with solid representation geographically and in terms of operating level (school, district, state). Table 1 displays a breakdown of respondent characteristics; additional highlights are as follows:

- ◇ Of the school-based respondents, two-thirds (66%) were from administrators, including general administrators, academy directors and CTE administrators, and one-third (34%) were from classroom educators.
- ◇ Respondents from the Western part of the country were more likely to be school-based (67.4% versus 52.1% average) and more likely to be from urban settings (40.6% versus 30.4% average). Respondents from the Southeast were more likely to be working at the district level (40.9% versus 30.1% average). Both Midwestern and Southeastern respondents were more likely than average to represent rural locations (39.8% and 38.4% respectively, versus 31.4% average).

## III. Current Work on Pathways

When asked about the current state of pathways initiatives within their schools, respondents clearly indicated that programs were reaching a sizeable portion of the student body, and were generally either stable or slightly growing. They also noted that pathways efforts were geared toward the entire student

body, and that pathways-related practices like creating a personalized college and career plan had firmly entered the mainstream. Finally, while funding for schools is under pressure, pathways-related initiatives, while not seeing funding increases, were at least less susceptible to funding declines.

### A. CTE Programs

As seen in Table 2, respondents reported having varying numbers of students participating in CTE programs, with the two largest groups reporting between 11-25% of students in CTE programs or 26% to 50% students (indicated by a total of 52.6% of respondents). (Note that, a “program” as locally defined usually connotes participation in two or three related CTE courses.) These numbers are generally higher than the last estimate provided by the US Department of Education, at 21% to 23%, in 2005; it is unclear whether trends have changed, if the Department of Education’s definition was stricter (3 or more classes, versus NC3T’s “a sequence of courses, not just a single elective”), or if a respondent bias is evident here.

**Table 2: Trends in CTE Programs**

Survey Item	%
<b>What % of high school students participate in a CTE program?</b>	
10% or less	10.7%
11% to 25%	25.6%
26% to 50%	27.0%
51% to 75%	17.8%
76% or more	19.0%
<b>Is this more or less than three years ago?</b>	
A lot more	8.3%
A little more	29.1%
About the same	44.3%
A little less	13.7%
A lot less	4.6%
<b>Do you have more or fewer CTE programs than three years ago?</b>	
More	35.8%
The same	35.4%
Fewer	28.8%

There are indications that the number of students in CTE programs is growing: 37.4% of respondents said that there are more students in CTE programs than three years ago (including “a lot more” or “a little more”), versus 18.3% saying there were fewer (“a lot less” or “a little less”). This is distinct from the change in the number of programs, with comparable numbers saying there were more (35.8%) versus less (28.8%).

- ◇ Respondents from the Southeast reported much higher rates of participation in CTE, with 52.1% indicating that more than half of students were involved in these programs. Those in the Southeast also noted stronger growth in student participation, with 48.5% reporting “a little more” or “a lot more” participation; this was followed by respondents from the Western region, with 43.6% noting such growth.
- ◇ Rural sites noted somewhat higher rates of participation, with 54.2% reporting that between 26% and 75% were involved in CTE (versus the average of 43.4% for that group); interestingly, however, it was the urban and suburban sites who recorded the greatest growth in the number of programs, at 38.4% and 40.5% respectively, versus 30.0% for the rural sites.
- ◇ According to 70.0% of respondents at the state level, most schools are seeing CTE participation rates between 11% and 50%; this view is in contrast to the average of 52.3% of overall survey participants reporting participation in this range. State-level respondents were also more likely to report that participation rates had declined within the past three years (33.3% saying “a little less” or “a lot less,” compared to the average 18.3%), and that the number of programs had declined over that same period (42.3% report fewer programs, compared to the overall 28.2%). This may indicate that school-level respondents represent more active sites than the average high school.

## B. Career Academies

Survey participants were also asked about participation rates in career academies, and the growth or decline in student participation or number of academies over the past three years (see Table 3 for detailed breakouts). Respondents saw low levels of student participation in career academies, with 54.7% saying 10% or less of high school students were in academies, and another 19.6% saying 11% to 25% of students were enrolled. There was evidence of growth, however, with 31.7% stating that there were more students in career academies, compared with 11.7% saying there were fewer; and with 29.0% saying there were more academies than three years ago, compared with 14.0% saying there were fewer.

- ◇ Around the country, states in the Midwest had the lowest rates of academy

**Table 3: Trends in Career Academies**

Survey Item	%
<b>What % of high school students participate in career academies?</b>	
10% or less	54.7%
11% to 25%	19.8%
26% to 50%	10.1%
51% to 75%	5.9%
76% or more	9.7%
<b>Is this more or less than three years ago?</b>	
A lot more	10.3%
A little more	21.4%
About the same	56.4%
A little less	8.3%
A lot less	3.4%
<b>Do you have more or fewer career academies than three years ago?</b>	
More	29.0%
The same	57.0%
Fewer	14.0%

participation, with most (70.9%) saying that 10% or fewer of their students were in career academies; in contrast, those in the West and Southeast reported higher rates of participation, with just 43.1% of those in the West and 51.2% of those in the Southeast saying they had 10% or fewer of students in academies. Those in the West and Southeast reported the highest growth rates as well: 43.2% of those in the West and 37.9% in the Southeast said they had “a little more” or “a lot more” student participation over the past three years (versus 18.3% and 17.6% in the Midwest and Northeast, respectively), and with 37.3% in the West and 34.1% in the Southeast saying they had more academies than three years ago (versus 18.1% in the Midwest and 20.0% in the Northeast).

- ◇ Rural sites were less likely to have students in career academies, and less likely to report growth in academy participation or in the number of academies. Most (67.5%) rural respondents report having 10% or fewer students in academies, in comparison to 37.7% of urban and 53.8% of suburban respondents reporting similar levels; over the past three years, only 18.4% of rural respondents report seeing “a little more” or “a lot more” participation, compared with 43.5% of urban and 31.9% of suburban respondents seeing such growth. Rural respondents also recorded the lowest rate of growth in the number of academies, with 15.9% noting more academies than three years ago, compared with 31.5% of urban and 31.1% of suburban respondents.
- ◇ As with the questions on CTE, those at the school level see higher rates of participation in career academies than do those at the state level, with 67.4% of state-level respondents reporting a student participation rate in academies of 10% or less, compared with just 49.3% at the school level reporting similar participation rates. This again points to the likelihood that a more active group of school-level practitioners responded to this survey. Interestingly, those at the state level were more likely to note growth in the number of academies than were those at the school

level (40.0% and 25.0% respectively), indicating that the growth in career academy locations is more likely to be at schools without any academy presence.

### C. Pathways Practices

NC3T was interested in finding out about some practical elements of pathways implementation, such as what percentage of CTE programs were embedded in an academy or Linked Learning<sup>3</sup> model, and whether students were required to create personalized career and college plans. As to the first question, the majority of respondents (59.0%) indicated that “some CTE programs” or “most CTE programs” were embedded in career academy models. When asked about personalized plans for students, 55.8% said that the majority of students (specifically, 75% or more) were required to create personalized college and career plans, with others, with the remaining respondents’ answers varying widely. Table 4 offers detailed response rates; it should be noted that both of

<b>Survey Item</b>	<b>%</b>
<b>What % of your CTE programs are embedded in an academy or Linked Learning model?</b>	
All CTE programs	18.6%
Most CTE programs	23.5%
Some CTE programs	35.5%
No CTE programs	22.4%
<b>What % of students are required to create a personalized college and career plan?</b>	
10% or less	20.4%
11% to 25%	8.8%
26% to 50%	8.0%
51% to 75%	7.1%
76% or more	55.8%

3 For more about the Linked Learning model, see <http://connectedcalifornia.org/>

these questions warrant further research to explore how these practices are implemented and how quality is ensured.

- ◇ There was a general consistency within the subgroups on these two questions, with just two exceptions. Those in rural sites were far less likely to have CTE programs embedded in career academies (42.3% of rural respondents reported “no CTE programs” were found within academy models versus the average 22.4%), likely because they reported having far fewer students participating in academies overall. Most state-level respondents (65.2%) reported only “some CTE programs” being found within the academy structure, versus 35.5% of the entire respondent group, again indicating that state-level respondents were accounting for sites with no academy participation.

### D. Funding

Funding plays an important role in the success of K-12 education; NC3T asked survey participants both about general education funding and about funding targeted specifically for pathways initiatives. As seen in Table 5, the majority of respondents indicate that education funding in general is down over the last three years, with 26.1% stating that funding is down between 1% and 9%, and 52.4% saying funding is down 10% or more. While funding targeted specifically for pathways also appears to be down, respondents indicate a less severe decline, with 27.9% saying that pathways-specific funding is down between 1% and 9%, and 36.1% saying it is down 10% or more.

- ◇ Among the regions of the country, respondents in the Western states report the greatest funding challenges, with 86.9% noting declines in general education funding and 78.0% noting pathways-specific funding reductions. Among the other regions, those in Northeast states share a better-than-average funding scenario, with 71.1% noting a general education funding decline, and just 47.5% reporting a decline in pathways-specific spending over the past three years.
- ◇ One of the starkest differences is the contrast between school- and state-level respondents, with 84.2% of school-level respondents suggesting some level of education funding declines in general, and 68.5% reporting declines specifically in pathways funding, compared with state-level responses at 60.5% and 44.6%, respectively. The marked differences between these two sets of responses could be due to the fact that school-level respondents may be more aware of spending levels of some things (salaries, supplies) and less aware of spending on administration, facilities, pensions and benefits and the like.

<b>Survey Item</b>	<b>%</b>
<b>Compared to three years ago, what is the state of education funding in general?</b>	
Down 10% or more	52.4%
Down between 1% and 9%	26.1%
Flat	13.7%
Up between 1% and 9%	6.1%
Up 10% or more	1.8%
<b>Compared to three years ago, what is the state of education funding specifically for pathways programs?</b>	
Down 10% or more	36.1%
Down between 1% and 9%	27.9%
Flat	25.6%
Up between 1% and 9%	8.0%
Up 10% or more	2.3%



## E. Barriers to Implementing Career Academies

For those sites that did not utilize a career academy or Linked Learning model, NC3T wanted to find out why. Less than half (41.8%) of those who completed the survey responded to this question. Among the top reasons were because “our school focuses on general college preparation for all students” (at 41.9%) and “our administration does not understand the potential value of career academies” (40.3%); among the least selected reasons were that “our CTE teachers are not interested in career academies” (6.8%) and “our CTE teachers do not understand the potential value of career academies” (14.8%). Those who wish to promote the academy or Linked Learning model may want to focus their efforts on highlighting the benefits with administrators rather than with CTE educators, who appear to have already bought in to the concept.

## IV. Community Relationships

Community relationships, particularly with employers and postsecondary programs, are an essential component of pathways systems. NC3T set out to see how practitioners were involved with their communities, including how they engage partners in their work and how they design their programs based on feedback from partners. According to respondents, community guidance and support are fully ingrained into their work, with strong participation in advisory boards and other types of student support, and with systems designed according to employer needs and postsecondary requirements.

**Table 6: Advisory Boards**

Survey Item	%
<b>Do you have advisory boards?</b>	
Yes, we have boards for each CTE program and career academy	71.0%
Yes, but only at the school level	11.2%
Yes, but only at the district level	9.7%
No	8.1%
<b>How would you describe your advisory boards? (Scale of 1-5; 1=“not at all” and 5 being “absolutely”)</b>	
	<b>Rating</b>
Small companies well-represented	3.77
Post-secondary well-represented	3.64
Board makeup consistent with strongest local industries	3.46
Large employers well-represented	3.43
Board members provide students with opportunities	3.35
Board members active at the school	3.08
Board members provide teachers with opportunities	2.90
Board members take a leadership role in the school	2.55

### A. Advisory Boards

As seen in Table 6, most survey participants (71.0%) report having advisory boards for each CTE program and/or career academy; just 8.1% note that they have no advisory board structure in place. In terms of the makeup of these boards, respondents are more likely to consider small companies to be well-represented than large employers (3.77 versus 3.43, respectively, on a five-point scale) and, while board members generally do provide students with opportunities such as mentoring and job shadowing, they are less likely to take a leadership role at the school itself (3.35 versus 2.55 respectively).

◇ Respondents in the West and Midwest regions of the country were more likely than others to have advisory boards for each program or academy (72.9% and 75.7%, respectively, versus 71.0% average). In terms of the makeup and activity of these boards, those in the Southeast offered consistently higher ratings for both the participation of each group (small business, large employer, and postsecondary partner) and for each type of activity studied.

- ◇ While urban, suburban, and rural sites all reported similar breakdowns in the existence of their advisory boards, the makeup and activities of those boards did vary by location. Urban sites, for example, were somewhat more likely to have large employers and postsecondary partners well-represented, have board members active in the school, provide both students and teachers with opportunities, and take a leadership role in the school. In contrast, rural sites were most likely to see strong representation from small businesses, and feel that their board makeup was consistent with the strongest local industries.

## B. Community Connections

Effective pathways initiatives rely on guidance from community partners, including identifying the community needs that a pathways program ties into as well as the entrance requirements for business and postsecondary education that graduates will be expected to meet. As seen in Table 7, reports are mixed on efforts to tie pathways work to local workforce needs: Just 32.3% of respondents have done such work within the last two years, and 33.1% believe that it has never been done. Respondents indicate more work being done to align programs to postsecondary and workforce entry requirements: In both cases, two-thirds note that almost all programs are aligned, and another one-third notes that some programs are aligned.

- ◇ Significant differences were found between the responses of school-level and state-level practitioners. State-level respondents seemed to be much more active in aligning programs to workforce needs, with 49.1% saying such work had taken place within the past two years, which stood in contrast to school-level practitioners at 23.5%. In fact, nearly half - 42.8% - of school-level respondents were not aware of such work ever having been done, compared with just 27.3% of state-level practitioners. Of course, state level administrators are required to ensure that Perkins-funded programs are aligned with “high-wage, high-skill and high-demand” occupations, so they are likely more aware of efforts to implement that policy. Local level CTE administrators and especially classroom teachers, would be less familiar with this requirement that may have been applied to local funding.
- ◇ Similar discrepancies were seen in questions about workforce and postsecondary alignment, with school-level respondents suggesting that almost all programs were aligned to postsecondary and workforce requirements (67.0% and 66.4% respectively), with fewer state-level respondents saying the same (46.2% and 50.0%). This may be explained by the larger range of programs that state-level administrators oversee, so there is more

**Table 7: Community Connections**

Survey Item	%
<b>In designing your programs, have you engaged in an economic/workforce needs planning process?</b>	
Yes, within the last two years	32.3%
Yes, within the last five years	24.8%
Yes, more than five years ago	9.8%
Not that I am aware of	33.1%
<b>Are your pathways programs intentionally aligned with postsecondary entry requirements?</b>	
Yes, almost all programs	64.4%
Some do, some do not	31.6%
No	4.0%
<b>Are your programs intentionally designed to help students meet the entry requirements for local jobs?</b>	
Yes, almost all programs	63.9%
Some do, some do not	33.0%
No	3.0%

likelihood that many of the programs they oversee are not yet well aligned to postsecondary and workforce requirements.

### C. Working with Local Partners

Pathways programs require the active participation of local employers. According to survey respondents, their business partners are highly engaged in some key ways, but not in others. As seen in Table 8, employers uniformly serve on advisory boards, share their expertise with students, and offer work-based learning opportunities. The picture is mixed on other types of supports, with just 40-60% noting partnerships in areas such as advocacy, providing resources, volunteering, and collaborating on program design or curriculum development. Few respondents point to connections between employers and staff and administration, with just 35.5% referencing teacher training, 26.9% noting that employers share their expertise with the school, and just 16.3% pointing to employers serving as executive mentors to administrators.

- ◇ Urban schools were more likely to note partnerships in several areas, including employers serving as student mentors (67.4% versus the average 55.5%) or executive mentors (25.2% versus average 16.3%), offering learning opportunities to teachers (48.1% versus 35.5%), or participating in program design (47.4% versus 39.8%) or curriculum development (51.9% versus 39.8%).

## V. The Future of Pathways

After sharing information on current practices and recent trends, participants were finally asked for their predictions on the future of pathways programs. The first question was on the likely impact of state and federal legislation: While participants were confident that legislation would affect them

(only 11.3% expect “no effect”), responses were decidedly mixed as to whether legislative changes would expand, maintain, or damage pathways efforts. When asked for predictions in other areas of their pathways work, respondents stated that they expect growth in areas such as the number of students, number of programs, and level of business engagement, but that they expect staffing to remain static and funding to decline slightly. As seen in Table 9, respondents saw little distinction between the future of CTE and the future of career academies on any of these fronts.

<b>Survey Item</b>	<b>%</b>
<b>How are local employers consistently involved in your pathways programs?</b>	
Serve on an advisory board	89.7%
Share their expertise with students	85.0%
Offer work-based learning opportunities	80.6%
Act as advocates for the programs and/or school	58.8%
Provide resources (money, facilities, etc.)	58.6%
Serve as student mentors	55.5%
Serve as volunteers	54.9%
Offer real-world challenges to students	46.8%
Participate in program design or retrofit	39.8%
Participate in curriculum development	39.8%
Offer learning opportunities to teachers	35.5%
Share their expertise with the school	26.9%
Serve as executive mentors	16.3%

- ◇ Respondents from urban sites were more optimistic on every front, expecting growth in student participation, number of programs/academies, staffing, and business engagement, though they expected funding challenges like those in other areas. They were also more likely (32.4%) to expect legislation to expand pathways initiatives, compared with 23.0% of suburban sites and just 19.7% of rural sites.

- ◇ Like the urban respondents, those from Southeastern states had the most optimistic view of the future in every category; they were also more likely (30.1%) to expect that legislation would support pathways efforts over the next few years.
- ◇ While those at the school level and state level saw the future in similar terms, state-level respondents were somewhat more likely to expect growth in the number of career academies and the level of academy staff than they were in CTE programs, and less likely to anticipate funding declines in either. They were also less likely to see legislative efforts hurting pathways work, with just 15.4% expecting such damage, versus 29.2% of school-level respondents.

## VI. Summary

Pathways programs have been an integral part of K-12 education for decades and, as the responses to this survey indicate, they serve a sizeable - and growing - portion of the student population with strong links to, and participation from, the employer and postsecondary communities. While funding will be a challenge going forward (as it is in every area of education), practitioners expect that this work will grow and expand well into the future.

The degree to which academies and pathway models are being adopted as a school improvement strategy, in the absence of strong federal or state guidance and funding, is somewhat surprising. It may demonstrate that a movement toward pathway models is picking up grass-roots support, and even with modest federal and/or state support, could move towards widespread adoption rather quickly.

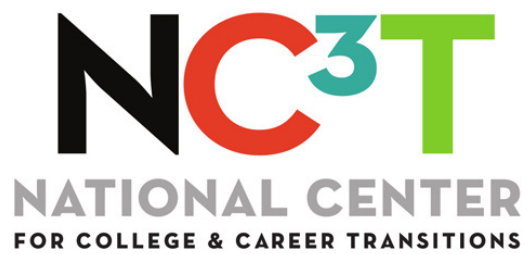
**Table 9: The Future of Pathways**

<b>Survey Item</b>	<b>%</b>
<b>What effect will state and federal legislation (including funding) have on your pathways programs?</b>	
Significantly expand them	25.7%
Maintain them, but not expand	35.1%
No effect	11.3%
Will hurt pathways efforts	28.0%
<b>How do you see the future (next 1-3 years) of your pathways programs? (Scale of 1-5; 1="will shrink/decline", 3="will stay the same", and 5 being "will grow/expand")</b>	
	<b>Rating</b>
% of students in CTE	3.66
% of students in career academies	3.49
Number of CTE programs	3.35
Number of career academies	3.25
Staffing for CTE	3.15
Staffing for career academies	3.08
Funding for CTE	2.75
Funding for career academies	2.74
Business engagement in CTE	3.66
Business engagement in career academies	3.50

### **About The National Center for College and Career Transitions**

The National Center for College and Career Transitions (NC3T) is a mission-driven organization created to foster community-wide college-career pathway systems that are supported and led by alliances of educators, employers, and civic organizations.

NC3T's ultimate goal is to see "every teen with a dream and a plan," helping them to develop a vision of their future and a clear path for reaching it. To that end, NC3T provides planning, coaching, technical assistance and tools to help community-based leadership teams plan and implement their college-career pathway systems.



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