Data Brief

Advocates for Children of New York

Protecting every child's right to learn

JULY 2017

Missed Potential

ENGLISH LANGUAGE LEARNERS UNDER-REPRESENTED IN NYC CAREER AND TECHNICAL EDUCATION PROGRAMS

In 2016, only about 27% of English Language Learners (ELLs) in New York City graduated from high school by June of their fourth year.[1] While ELLs, especially those recently arrived in the United States, are generally less likely to graduate from high school in four years, in 2016 only 52.3% had graduated by the end of their sixth year—still well behind the corresponding non-ELL graduation rate (79.8%).

High school-level Career and Technical Education (CTE) is shown to help students at risk of not completing high school to stay engaged in school.[2] Given New York City's status as by far the largest provider of high school-level CTE in the state, these programs could arguably play a key role in improving educational outcomes for ELLs. But are ELLs accessing these programs? And if so, does it help them stay on track to graduate?

KEY FINDINGS

- In 2015-16, ELLs made up about 8.7% of students at the 117 NYC high schools that offer CTE programs (all grades), as compared to about 12.2% of other, non-CTE high schools.
- In 2015-16, only about 5.3% of CTE participants were ELLs, significantly lower than the approximate system-wide ELL rate of 10.8% for high school students.
- Out of 23,000 students who completed most or all of a CTE program in 2016, only 477 were ELLs (about 2.1%), far lower than ELLs' 8.3% share of that year's graduating class.
- While ELLs who successfully *complete* a CTE program are more likely to graduate than ELLs not in CTE, the overall graduation rates for ELLs at CTE high schools was lower than for those at non-CTE high schools (26.4% and 31.3%, respectively).

[1] New York State Education Department, 2017; data analysis by Advocates for Children.

[2] Stephen Plank, "A Question of Balance: CTE, Academic Courses, High School Persistence, and ...: EBSCOhost," *Journal of Vocational Education Research* 26, no. 3 (2001): 279–327.

Using city and state data, this paper examines whether ELLs in New York City are equitably represented in CTE programs offered through the New York City Department of Education (hereafter, the Department). This analysis also investigates to what extent these programs succeed in helping ELLs stay on track to graduation.

The findings are not encouraging: ELLs appear to be under-represented at CTE high schools, among CTE participants, and among students who finish most or all of a CTE program. Additionally, while ELLs who successfully *complete* a CTE program graduate at rates substantially higher than the citywide ELL graduation rate, ELLs at CTE high schools as a group appear to actually graduate at *lower* rates than ELLs at other schools. Considering these findings, this paper concludes with recommendations to increase participation from ELLs and to provide supports aimed at helping these students successfully complete CTE programs.

FINDINGS

Acquiring more advanced skills in a given career area can help any student, including ELLs, build their resumes as they enter the job market or prepare them for further training or post-secondary learning. Many CTE programs have close relationships with industry partners, and students who complete state-approved programs may earn a technical endorsement on their diplomas by passing a performance assessment and a written technical exam. Furthermore, through the State's "4+1 pathway," students in certain CTE areas may use a passing score on an industry-recognized technical assessment in place of one of the five State Regents exams otherwise required for graduation. This option can especially benefit ELLs, whose pass rates on the State Regents exams typically trail far behind those of non-ELLs. For these students, the ability to substitute a passing score on a technical assessment for one of the Regents exams could mean the difference between graduating with a diploma and not graduating at all.

Given the potential benefits of CTE for ELLs, this paper analyzes data publicly reported by the city and state, as well as data obtained through New York's Freedom of Information Law, to examine the following factors that are relevant to this issue: (1) ELL enrollment in NYC high schools that offer CTE programs; (2) ELL participation rates in those programs; (3) CTE "concentration" rates—the rate of completion or near-completion—for ELLs; and (4) overall graduation rates for ELLs at CTE high schools. The Department distinguishes between CTE high schools that are "CTE-designated" (hereafter, "CTE-Designated High Schools") and those that "offer CTE programs as part of their offerings" (hereafter, "Non-Designated CTE High Schools").[3,4] Where appropriate, this paper reports observed differences between these two types of CTE schools.

[3] "CTE Schools and Programs," accessed June 20, 2017, http://cte.nyc/site/content/cte-schools-and-programs.
[4] Generally speaking, CTE-designated schools are those where all students are expected to pursue a CTE path and at least one program in the school has been approved by the New York State Education Department. CTE programs at non-designated schools may not be given the same priority (although some non-designated CTE high schools report more CTE participants than do some designated schools).

ELLs attend CTE high schools at lower rates than non-ELLs.

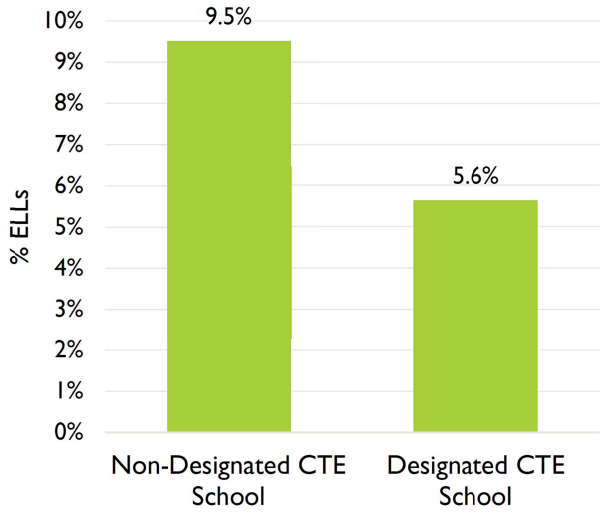
Analysis of enrollment patterns and school-wide demographic data for CTE high schools as compared to other high schools reveals an under-representation of ELLs at CTE schools:

- For the 2015-16 school year, ELLs represented, at most, 9.5% of students who went through the city's high school application process and ultimately enrolled in a CTE-designated school—notably lower than the roughly 11.5% of emerging ninth graders that year who were ELLs.[5]
- In 2015-16, ELLs made up about 8.7% of those who attended the 117 public high schools that offer CTE programs (all grades) versus about 12.2% of other, non-CTE high schools.
- Among high schools that do offer CTE, CTE-designated schools tend to have notably smaller ELL populations than non-designated CTE schools. Out of 102,897 students who attended non-designated CTE schools last year, 9,783—or 9.5%—were ELLs. However, only 1,526—or 5.6%— of the 27,131 students attending a designated CTE school were ELLs (Figure 1).

These data suggest that ELLs are substantially more likely to attend a school that offers no CTE programs than one that does. And among CTE schools, ELLs are more likely to attend a non-designated CTE school than a designated one. Note that the percentage of ELLs who go through the high school application process does not capture ELLs who arrive in the city during high school and are placed at schools by Family Welcome Centers. However, the overall under-representation of ELLs suggests that CTE high schools are probably not recipients of many students who enroll at Family Welcome Centers. Advocates report that Family Welcome Centers seldom present CTE as an option.

FIGURE 1

2015-16 ELLs attending CTE high schools by English Language Learner status and type of CTE school



SOURCE: New York City Department of Education, 2017; Advocates for Children Analysis

Fewer ELLs who attend CTE high schools participate in CTE.

Attending a CTE high school does not mean that all students—whether ELLs or non-ELLs—actually participate in the CTE programs there. Many schools require additional admittance to CTE programs or approval from a guidance counselor, representing another potential hurdle to access for ELLs.

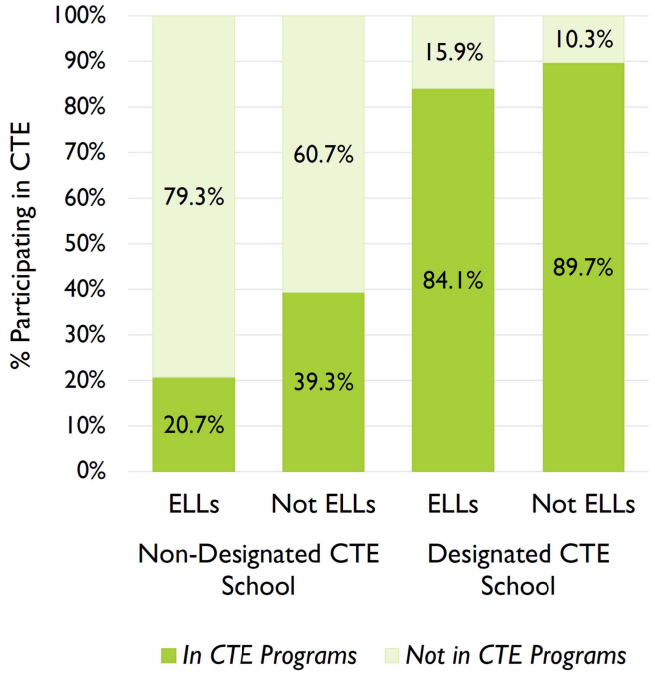
[5] Because per-grade demographic data is not publicly available for 2015-16, this percentage is estimated by using school-level ELL percentages for all schools that serve eighth graders, adjusted to account for schools serving non-traditional age ranges (K-8, K-12, and 6-12).

- In 2015-16, only about 5.3% of CTE participants were ELLs, significantly lower than the approximate system-wide ELL rate of 10.8% for high school students.
- At CTE-designated schools, about 5.2% of CTE participants were ELLs, nearly proportional to the aforementioned ELL enrollment rate at these schools (5.6%). In contrast, even though ELLs represented 9.5% of students attending non-designated CTE schools, they only made up about 5.3% of CTE participants at these schools.
- Presented another way, about 84.1% of ELLs at CTE-designated schools were CTE participants, less than—but still approaching—the percentage for non-ELL students (89.7%). At non-designated CTE schools, however, only about 20.7% of ELL students participated in CTE, as compared to 39.3% of non-ELLs (Figure 2).

Overall, the CTE participation rate for ELLs falls well below what you would expect given the citywide student population. But the above analysis suggests distinct dynamics at each type of CTE high school. At CTE-designated schools, the low CTE participation rate for ELLs may simply be a function of the relatively low numbers of ELLs attending these schools in the first place. By contrast, while non-designated CTE schools seem to enroll ELLs at comparably higher rates, once there, these students are substantially less likely than non-ELLs to pursue the school's CTE offerings.

FIGURE 2

2015-16 Percentage of students participating in CTE by English Language Learner status and type of CTE school



SOURCE: New York City Department of Education, 2017; Advocates for Children Analysis

VARIABILITY ACROSS CTE HIGH SCHOOLS

As stated above, non-designated CTE schools tend to struggle more than designated schools to get their ELLs involved in CTE at rates proportional to their own student enrollment. For example, while 681 ELLs attended New Utrecht High School, a non-designated CTE school, only nine of the 922 CTE participants there were ELLs.

But there are *also CTE-designated schools* that seem to struggle in this area. At Clara Barton High School, a CTE-designated school with seven programs in the medical and dental fields, only about 40% of its ELLs participated in CTE, verses about 70% of non-ELLs. While overall trends may be instructive to education officials, these and other examples emphasize the need to identify and address the unique contributing factors at individual schools.

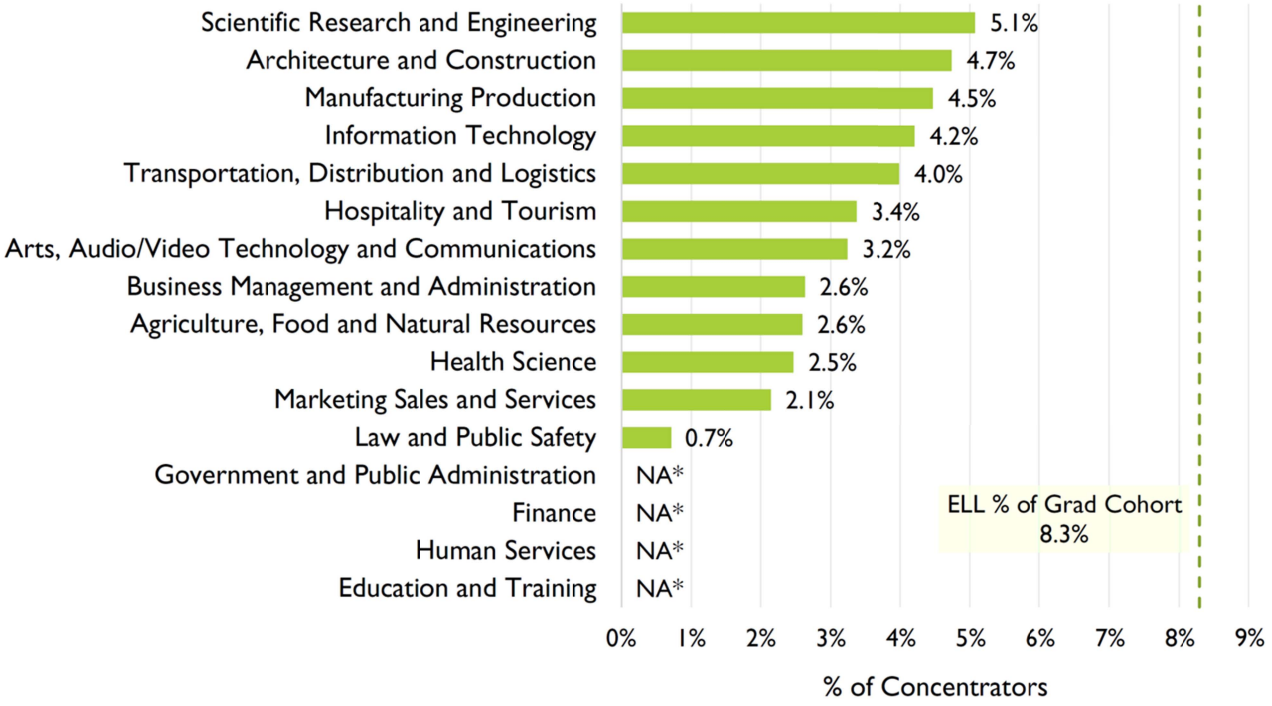
Few ELLs complete most or all of a CTE program.

While CTE participation rates are important to understanding whether ELLs are accessing CTE offerings at a school, they do not convey students' depth of engagement in CTE or whether they completed the program. Program sequences often entail two to three years of progressive study in a given area, the completion of which can confer valuable benefits both before and after graduation. The City annually reports to the State on the number of "CTE Concentrators"—students who complete at least two-thirds of a CTE course sequence[6]—included in that year's graduation rate calculation. Reporting for the 2015-16 school year indicates that few ELLs in New York City make it through a CTE program:

- Out of 23,000 concentrators reported by the City to the State, only 477 were English Language Learners (about 2.1%), far lower than ELLs' 8.3% share of the corresponding graduating class citywide.
- Aggregated by the 16 "career clusters" defined by the State, ELLs are under-represented in every industry area (Figure 3).[7]

FIGURE 3

2015-16 ELL representation among CTE concentrators in New York City CTE programs, by career cluster



* Indicates clusters with <10 ELLs or <10 students overall

SOURCE: New York City Department of Education, 2017 (career cluster data); New York State Education Department, 2017 (graduation cohort data); Advocates for Children Analysis

[6] "CTE Data:CTE:NYSED," accessed July 10, 2017, http://www.p12.nysed.gov/cte/Data/home.html.

[7] Because reports made publicly available by the New York State Education Department do not disaggregate CTE Concentrator data by career cluster, this analysis utilizes separate data obtained from the City through New York's Freedom of Information Law (FOIL).

UNDER-REPRESENTATION IN CTE PATHWAYS ALIGNED WITH EMERGING INDUSTRIES

ELLs are under-represented in some program areas associated with industries expected to add significant numbers of new jobs in the city. In some sectors, such as "Human Services," the low numbers of ELL concentrators is less remarkable considering the low enrollment overall. However, there are also several clusters associated with growing industries that serve large numbers of students, but very few ELLs. For example, in Information Technology programs, the fastest-growing career sector in the city, the city reported that only about 4.2% of concentrators were ELLs. Similarly, in Health Sciences programs (the second fastest-growing job sector), only about 2.5% of concentrators were ELLs. In raw numbers, the City reported the most ELLs in the Manufacturing programs, a sector that is among the slowest-growing in the city. While a number of factors could contribute to the low percentage of ELLs in these growth areas, advocates anecdotally report incidents of school personnel suggesting that certain areas—such as carpentry—would be especially suited for ELLs, based on pre-conceived notions about the student's skill sets or likely area of career interest.

Given that ELLs make up about 5.3% of CTE participants citywide, the lower number of concentrators who are ELLs suggests that program attrition for these students is substantially higher than for non-ELLs. Numerous factors could play a role in driving this outcome. For example, ELLs may be forced to drop CTE study in order to focus on required coursework or prepare for Regents exams. Additionally, students who are undocumented may not be able to participate in work-based learning opportunities associated with CTE programs, potentially reducing the incentive to continue CTE work.

ELLs at CTE high schools may not fare better than ELLs at other schools.

While achieving equitable CTE participation for ELLs is a worthwhile goal, it is also important to examine whether—under current conditions—ELLs exposed to CTE schools and programs fare better or worse than their peers in terms of graduation rates. Unfortunately, data limitations preclude a conclusive study of whether participation in CTE in New York City leads to higher graduation rates. Analysis of available data reveals seemingly contradictory trends:

- ELLs identified by the City as CTE concentrators graduated at rates more than double the citywide average for ELLs: while the four-year June graduation rate for ELLs was only about 26.9%, roughly 57.0% of ELLs who were CTE concentrators graduated in that time.
- However, the same year, only about 26.4% of ELLs who attended CTE schools[8]—regardless of whether they participated in CTE programs—graduated by June of their fourth year, a rate *lower than* that for ELLs at non-CTE schools (about 31.3%);

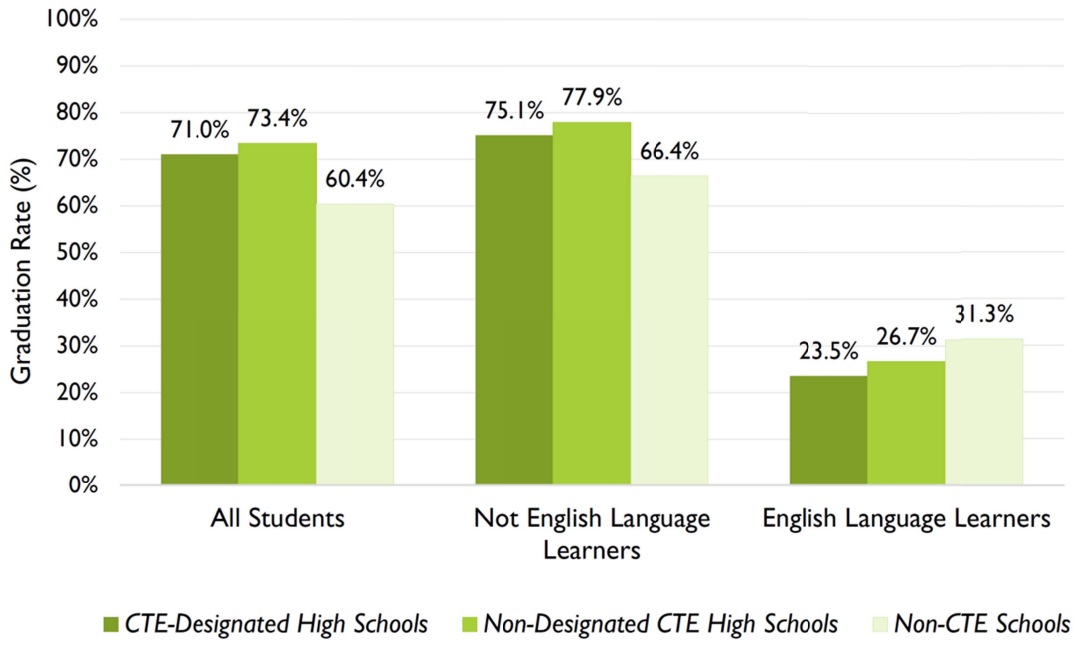
[8] This rate excludes the eight schools too new to have graduating cohorts, the 18 schools with no ELL students at all in the cohort, and the 32 schools with suppressed data due to extremely small ELL populations. However, even substituting the most optimistic values possible for redacted data still yields graduation rates for CTE schools that are lower than those for non-CTE schools.

- There was not a meaningful difference in overall graduation rates for ELLs at designated CTE high schools versus non-designated ones—23.5% and 26.7%, respectively (again, these rates include all ELLs, regardless of whether they participated in CTE);
- The pattern is opposite for non-ELLs: whereas only 60.4% of non-ELL students at non-CTE schools graduated in four years, their peers at CTE high schools graduated at a rate of 73.2%.
- After five years of high school, the ELL graduation rates for CTE high schools and non-CTE schools starts to even out at 50.1% and 51.8%, respectively. At the six year mark, the rates for both are functionally equivalent (52.2% and 52.6%, respectively).

While the outcomes for ELLs who are CTE concentrators are encouraging, there may also be some selection bias at play: the ELLs who are considered concentrators at the end of four years are, by definition, those who did not drop out of school or abandon CTE due to academic struggles in other areas. However, given research crediting CTE with helping keep at-risk students engaged and enrolled in schools, it is also possible that, for these students, involvement in CTE plays a positive role. Moreover, because not all ELLs who attend CTE high schools actually participate in CTE, it is not possible from these data to establish whether the programs themselves have a positive or negative effect.[9] Given this limitation, the Department should collect—and make publicly available—data on graduation outcomes for CTE participants.

FIGURE 4

2016 NYC 4-year June graduation rates by ELL status and CTE school type



SOURCE: New York State Education Department, 2017 (graduation rate data); New York City Department of Education, 2017 (school type definitions); Advocates for Children Analysis

[9] For the CTE schools with sufficient, un-redacted data available (n=58), schools with higher ELL participation rates in CTE generally have higher ELL graduation rates. However, regression analysis does not demonstrate a statistically significant relationship between these two variables.

CONCLUSION AND RECOMMENDATIONS

The analysis herein suggests that, in New York City, ELLs are under-represented at virtually every juncture—from enrollment in CTE schools to participation in the programs to completion of a CTE course sequence. Furthermore, despite CTE's established track record of helping students stay engaged in school, it is questionable whether the ELLs that attend CTE high schools enjoy these same benefits. While not exhaustive, we recommend that the Department of Education undertake the following measures to ensure that ELLs are, at minimum, equally represented in CTE and that they are adequately supported in these programs:

Identify factors driving under-enrollment of ELLs at CTE high schools.

The Department should evaluate admissions factors that may reduce application and acceptance rates for these students and/or other factors that may discourage ELLs from accepting an offer to attend. In particular, since ELL enrollment at CTE-designated schools tends to be lower than in non-designated CTE schools, the Department should consider ways these schools may boost enrollment. Given the number of ELLs who arrive in the city during high school who do not participate in the application process, the Department should also investigate to what extent these students are placed at CTE high schools and, as needed, develop strategies for addressing ELL under-representation.

Work with non-designated CTE Schools to ensure equitable access to CTE for their ELL students.

Because non-designated CTE schools have comparatively *larger* ELL populations, but more disparity in CTE participation, the Department should seek to understand and address the factors that keep ELLs out of these schools' CTE programs.

Increase data transparency on outcomes for CTE participants.

While new CTE data made public through Local Law 174 is a welcome advance, making available data on graduation rates for students who participate in CTE would help education officials, school administrators, and parents understand the potential benefits of these programs for their students. The City should also track year-to-year program attrition to capture whether ELLs (or members of other vulnerable groups) are more or less likely than other students to continue pursuing CTE coursework.

Increase supports for ELLs in CTE schools and classrooms.

As needed, the Department should make sure schools provide interpretation and translation services with respect to available programs, CTE curriculum, and safety protocols. To broaden access, the Department should also seek to develop bilingual CTE programs in areas of linguistic concentration and CTE curricula that meaningfully incorporate English language skills-building. The Department should also explore working with high schools that already have a successful track record serving ELLs to develop and launch CTE programs.

Ensure work-based learning opportunities are accessible to all ELLs.

The Department should meet with industry partners to identify barriers for ELLs and work collaboratively to design or modify work-based learning opportunities that enable all students, regardless of immigration status or English proficiency, to gain real world work experience in a given career area.

Support CTE instructors in supporting ELLs.

The Department should encourage and support meaningful collaboration among school staff specializing in ELLs and CTE instructors, with the goal of developing strategies to support ELL students in CTE. The Department should also consider providing professional development opportunities for CTE staff in two key areas: (1) how to integrate support for language development into CTE curriculum; and (2) cultural competency to improve communication with and understanding of ELL students and their families. Training in these areas could be made available as part of the Success Via Apprenticeship program (a training program for former CTE students interested in becoming teachers) and/or incentivized as a teaching license extension.

Learn from successful models.

Some CTE schools are already successful in helping ELLs access and successfully complete CTE programs en route to receiving a diploma. The Department should investigate approaches utilized by CTE schools with high ELL graduation rates—in particular those for which CTE participation increases students' likelihood of success—and help other CTE providers appropriately adapt effective strategies to their schools.

Convene an advisory committee focused on ELLs and CTE programs.

The Department should convene an advisory group comprised of educators and/or professionals with expertise working with ELLs, parents and, to the extent possible, current and/or past CTE students who are/were ELLs. An advisory group could make practical recommendations to help develop programs or strengthen supports and work with the Department to disseminate best practices.

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For more than 45 years, Advocates for Children of New York has worked to ensure a high-quality education for New York students who face barriers to academic success, focusing on students from low-income backgrounds who are at greatest risk for failure or discrimination in school because of their poverty, disability, race, ethnicity, immigrant or English Language Learner status, sexual orientation, gender identity, homelessness, or involvement in the foster care or juvenile justice systems. AFC achieves this through four integrated strategies: free advice and legal representation for families of students; free trainings and workshops for parents, communities, and educators and other professionals, to equip them to advocate on behalf of students; policy advocacy to effect change in the education system and improve education outcomes; and impact litigation to protect the right to quality education and compel needed reform.

151 West 30th Street, 5th Floor | New York, NY 10001 | (212) 947-9779
www.advocatesforchildren.org