

# *2014 Survey of Career and Technical Education in New York City*

## **Schools survey results**

**December 2014**

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# *Introduction*

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# *Introduction*

- The aim of this project is to establish baseline data on the current state of Career and Technical Education (CTE) in NYC public high schools and to identify what educators and employers perceive as issues and obstacles facing CTE schools and programs.
- Aims:
  - To inventory the current status of employer and non-profit engagement in career and technical education (CTE) initiatives and, to the extent possible, the outcomes being achieved in terms of student performance, work experience opportunities and job or advanced training placements.
  - To map and assess existing resources and conduct a gap analysis to identify what the education system and employers must provide in order to improve outcomes and scale up effective programs.
- Survey findings will be supplemented with interviews and focus groups to determine what is working as well as issues and gaps in the CTE system that can be best addressed through public-private collaboration.
- **This pack contains the results of the schools survey with results shown by each school type (CTE dedicated schools and schools with CTE programs). The survey of employers will be conducted as a second phase of this study.**

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# *Methodology & Definitions*

# Methodology

- 119 online surveys were conducted across CTE schools in New York City during October 2014.
- The sample consisted of both CTE dedicated schools and schools with CTE program(s).
- The survey was open for two weeks and generated an overall response of 90% completion.
- The CTE dedicated school population was a census with 100% response.

## Response Rate



	Sample number	Completes number	Response rate
<b>CTE dedicated school</b>	48	48	100%
<b>School with CTE program(s)</b>	84	71	85%
<b>Total</b>	132	119	90%

## ***Definitions of Important Terms from NYC DOE***

- **Criteria for CTE endorsement:** Successfully complete a CTE approved program of study including participation in WBL experiences, take and pass technical assessments, and complete an employability skills profile
- **NYSED does not require a minimum of 60 hours of work experience**
- **Criteria for a CTE certified teacher:** 2-4 years work experience, NYC teacher license and related course work. Additional detail:
  - NYS CTE Certification in the appropriate subject area for the program of study – years of work experience may vary by career area – standard across the board is typically 2-4 plus coursework (usually a degree or min of 30 credits) and teacher certification exams depending on which certification route the candidate qualifies for will determine the exam(s). Workshops on Child Abuse Identification, Dignity for All Students Act, School Violence Intervention and Prevention, fingerprint clearance, school district recommendation.

## ***Definitions of Important Terms from NYC DOE (con't)***

- **Program Approval Criteria:**
  - CTE state certified teachers;
  - Coherent sequence of courses;
  - Post-secondary articulation;
  - Industry partnership;
  - Quality technical and academic curriculum, including integrated English language arts, mathematics, science, economics, and government and technical instruction;
  - Faculty with State certification in appropriate academic and/or technical fields;

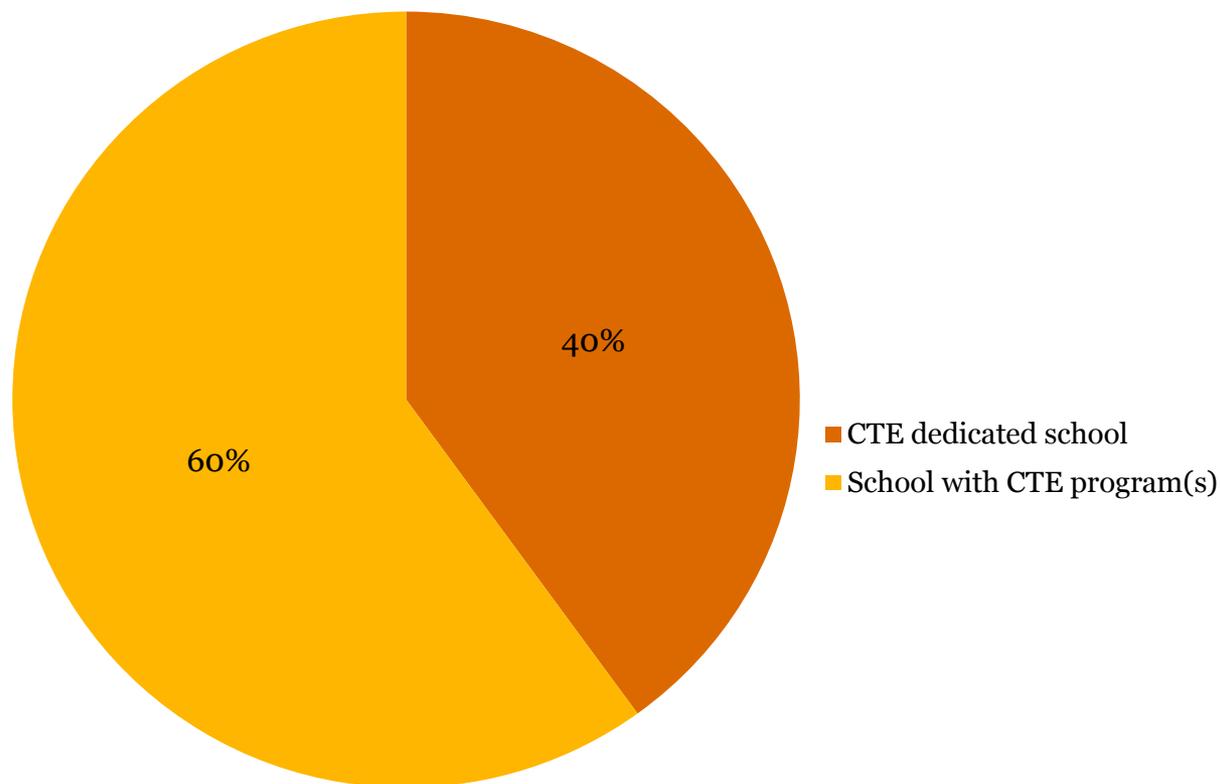
## ***Definitions of Important Terms from NYC DOE (con't)***

- **Program Approval Criteria (con't):**
  - Technical assessments that certify students meet current industry standards;
  - Post secondary articulation agreements;
  - Work-based learning experiences for students; and
  - Data on student progress and performance in order to evaluate their success on Regents examinations or alternatives approved by the State Assessment Panel, technical assessments and placement in employment, military or higher education.

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# *Overall School Profile*

# *Respondents represented an even mix of dedicated CTE schools & schools with CTE programs*



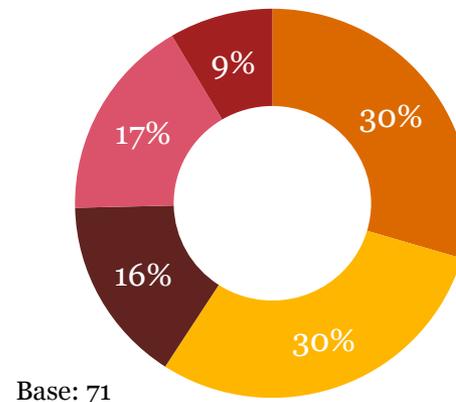
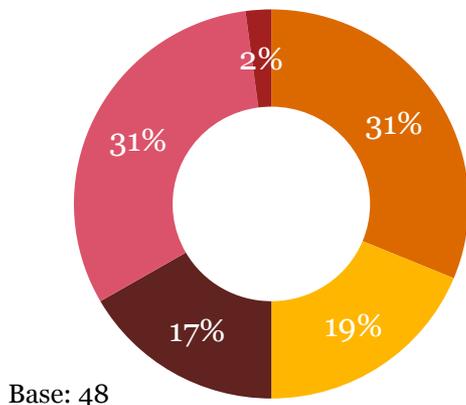
Base: 119

# Profile of schools – of CTE Schools & Programs

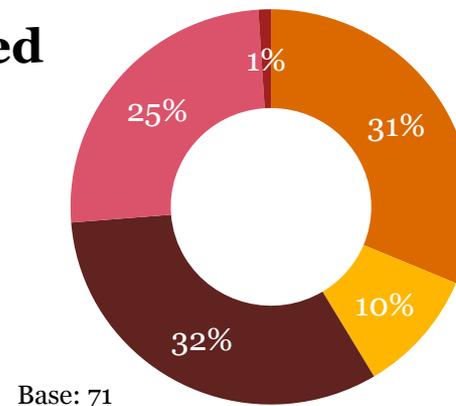
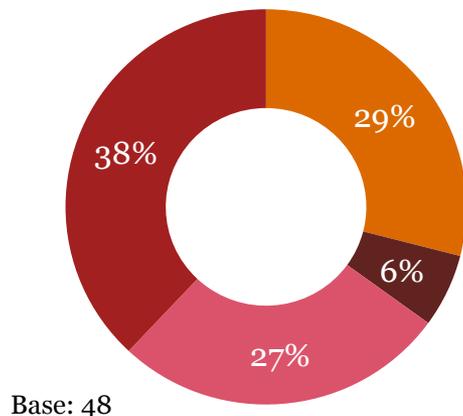
## CTE dedicated school

## School with CTE program(s)

### Borough

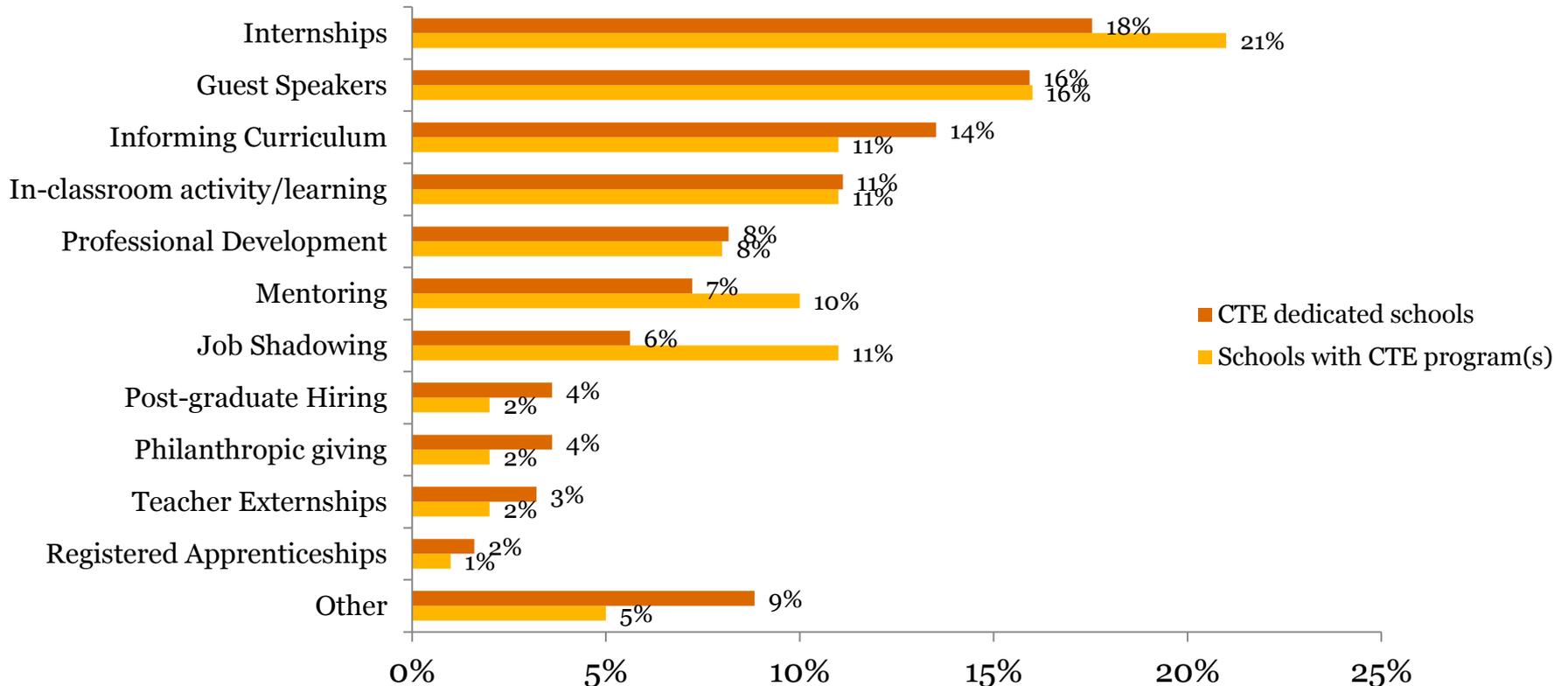


### Year school opened



Note: Borough and year of school opening were included as part of the sample information  
 CTE Schools Survey  
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## Summary table - Nature of relationship with employer(s)/nonprofit organization(s)



Base: 747 (CTE dedicated schools), 1098 (Schools with CTE program(s)) (Note: Multi-response question: Base represents the count of total number of options selected).

Note: Question only asked to those who entered any response at Q1 or Q2. The graph presents the number of times each option was selected across all employers/nonprofit organizations.

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# *Section 1 – Overview*

## Overview – key findings

- Today, of the 400 public high schools in New York City, 51 are dedicated to Career and Technical Education and these “CTE schools” accommodate 26,000 students. There are also 178 CTE programs offered in 88 traditional high schools throughout the five boroughs.
- A total of 120,000 New York City high school students (40%) are enrolled in CTE classes or programs.
- 234 employers in total are engaged (active in schools)
  - 85 employers are engaged by CTE dedicated schools
  - 149 employers are engaged by schools with CTE programs
- 256 nonprofits in total are engaged (active in schools)
  - 90 nonprofits are engaged by CTE dedicated schools
  - 166 nonprofits are engaged by schools with CTE programs
- 18 schools reported no current private sector or non-profit organization engagement of any sort.

## Overview – key findings

- Survey findings showed that overall, 2004 students graduated with a CTE-endorsed diploma, 1575 students were placed in an internship and of these 60% were paid.
  - Of the students in CTE dedicated schools, 1,329 graduated with a CTE-endorsed diploma; of those in schools with CTE program(s), 675 students graduated with a CTE endorsed diploma.
  - Of those students in CTE dedicated schools, 748 students were placed in an internship and of these 76% were paid; in schools with CTE program(s), 827 students were placed in an internship and of these 53% were paid.
- Of those schools who have the top 5 highest numbers of internships, some of the employers they use include The Park Avenue Armory, Center for Arts Education and NY Presbyterian Hospital. Some of the nonprofits they use include Exploring, Skills USA and Theater Development Fund.
- CTE program schools that have the highest numbers of internship placements deliver Arts, Business and Engineering/Science programs. When exploring CTE program schools with the lowest number of internship placements, some of the programs they deliver are Pre-Law/Law Enforcement, Engineering/Science and Media/Design.

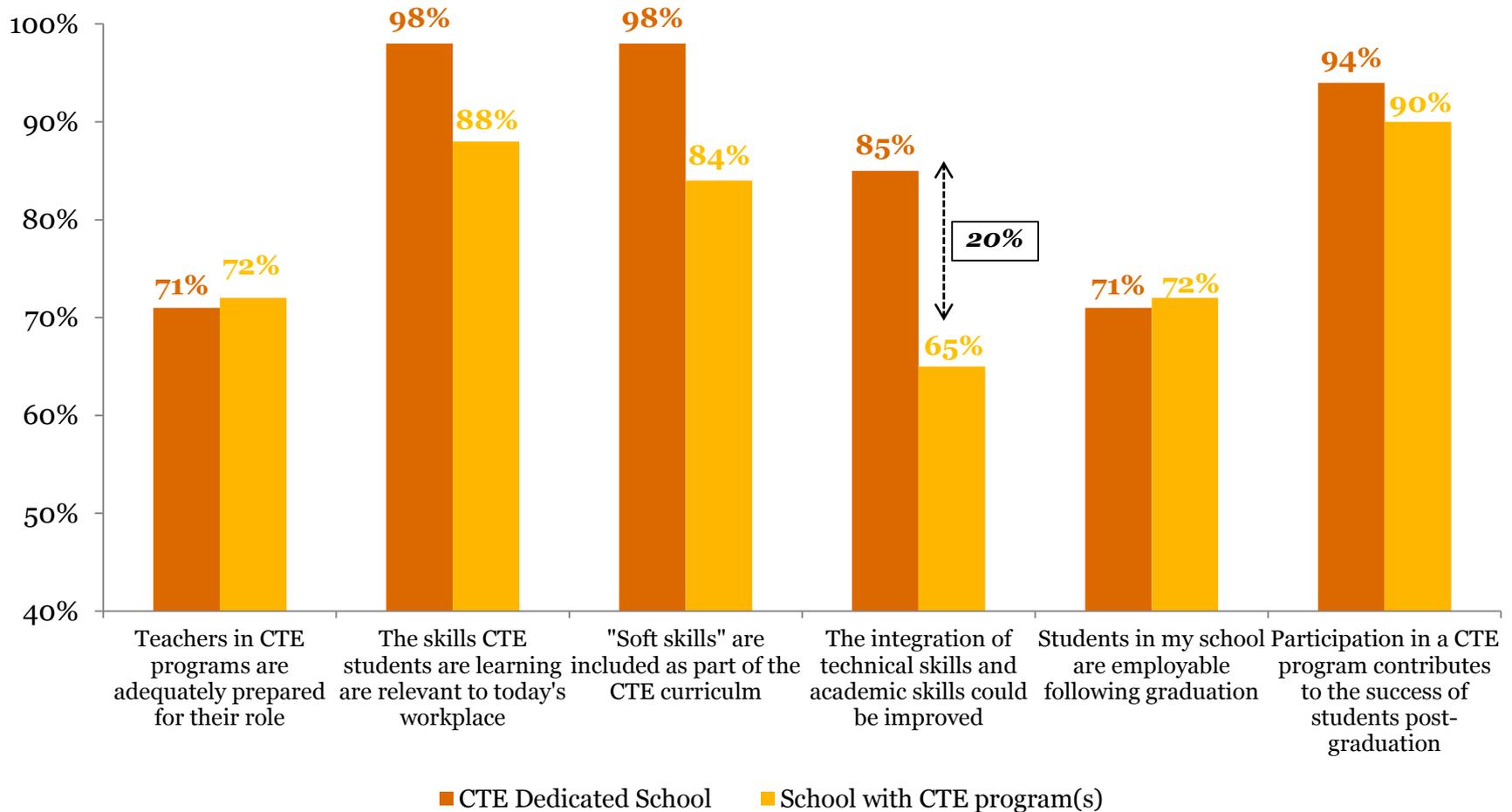
## *Overview – Exploring the gap*

- CTE dedicated schools were more likely to agree that ‘the integration of technical skills and academic skills could be improved’ than schools with CTE program(s) (85% vs 65% net agreement respectively).
- When exploring the gap between the two school types, CTE dedicated schools are more likely to agree that they value industry engagement by both employers and trade unions. They are also much more likely to agree that ‘CTE is deeply embedded in the culture of our school’ than schools with CTE program(s) (90% vs 61% net agreement respectively).
- Both school types are aligned in the view that the school/program benefits from involvement in a CTE Industry Commission.

## ***Overview – Employer engagement***

- 47% of CTE dedicated schools track employer/organization engagement using an electronic database, compared to only 28% of schools with CTE program(s). Overall, those tracking with an electronic database were able to place 821 students in internships compared to 604 students with a manual tracking system and 148 students with no tracking system in place.
- Of schools using an electronic database the gap between the number of internships needed and the number acquired was greater than those using a manual list, or not tracking.
- Regarding relationships with employers/organizations that involve mentoring, 54% of CTE dedicated schools say this involves group mentoring and 50% mentor once a week, whereas in schools with CTE program(s) 55% say this involves mentoring by a volunteer professional but 58% only mentor several times a year.
- Overall, Justice Resource Center was the support service with the highest ranking (80%) for 'extremely satisfied' with regards to support provided to schools.

# Gap analysis – CTE dedicated vs CTE program schools – Net agreement



Base: 117

Note: Graph shows % NET Agreement (Sum of 'Strongly Agree' & 'Agree' responses)

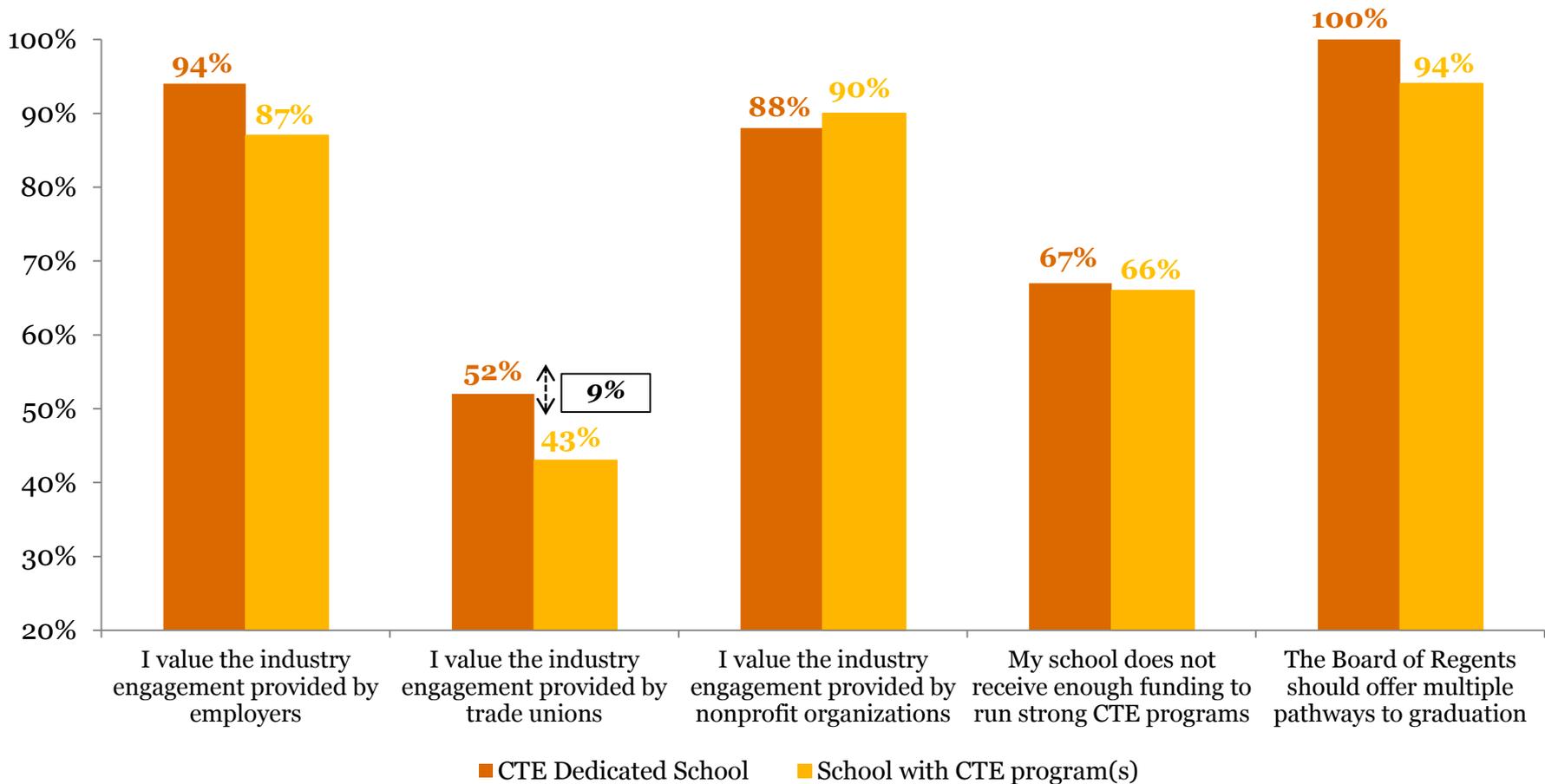
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## Gap analysis – CTE dedicated vs CTE program schools – Net agreement



Base: 115-116

Note: Graph shows % NET Agreement (Sum of 'Strongly Agree' & 'Agree' responses)

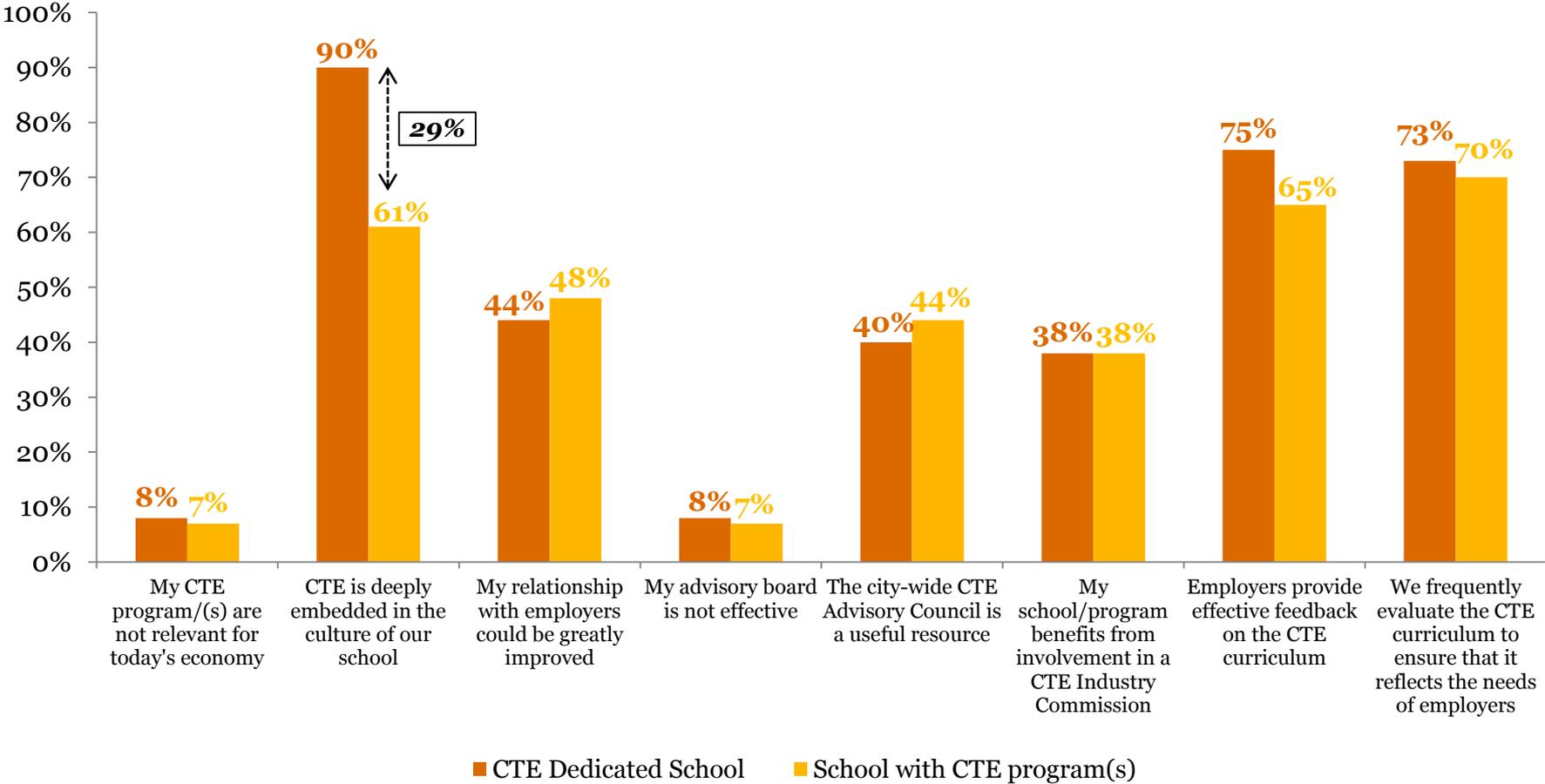
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Slide 20

# Gap analysis– CTE dedicated vs CTE program schools – Net agreement



Base: 115-117  
 Note: Graph shows % NET Agreement (Sum of 'Strongly Agree' & 'Agree' responses)  
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# *Section 2 – CTE dedicated schools*

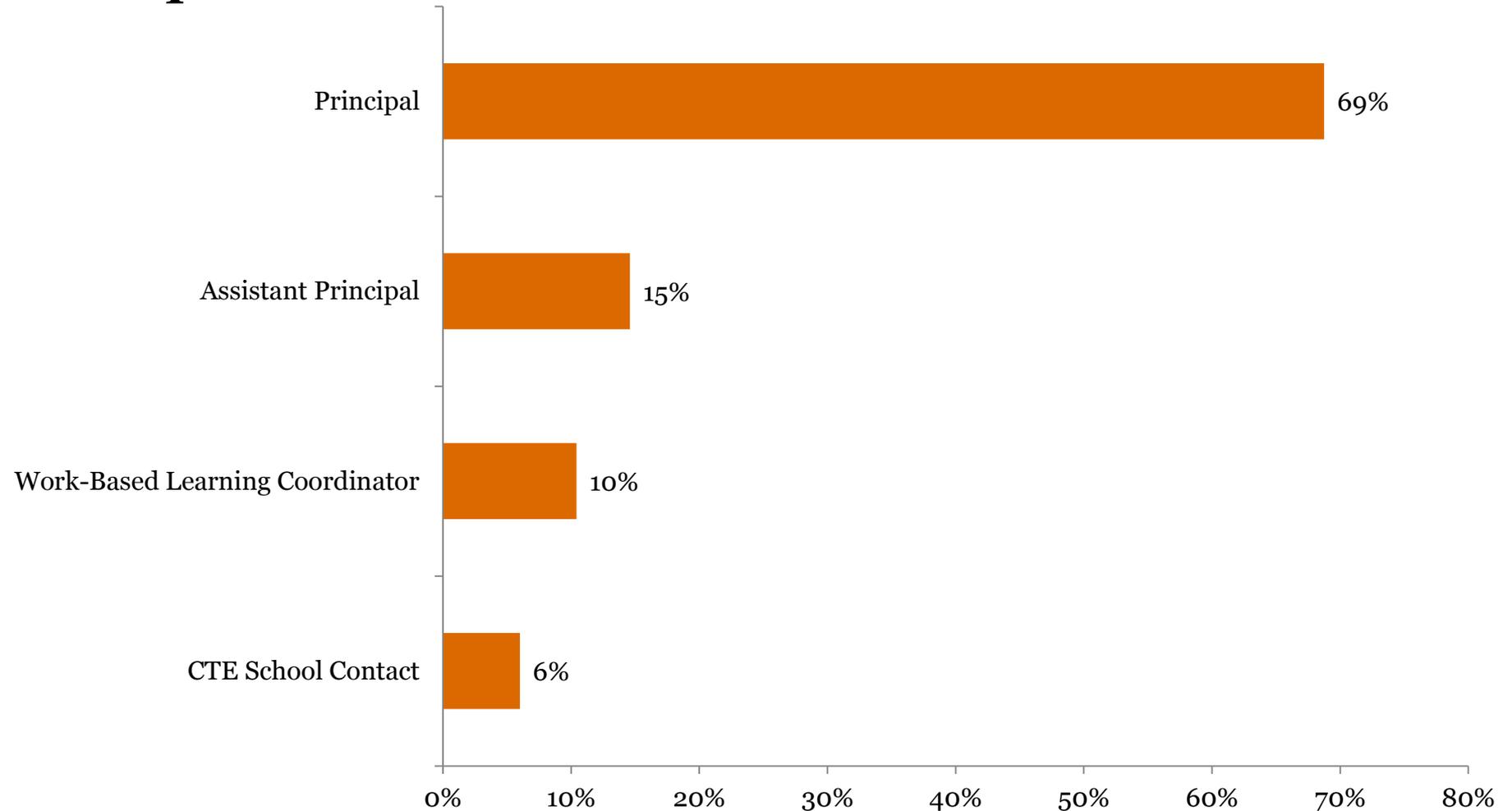
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# *Section 2.1 – School Profile*

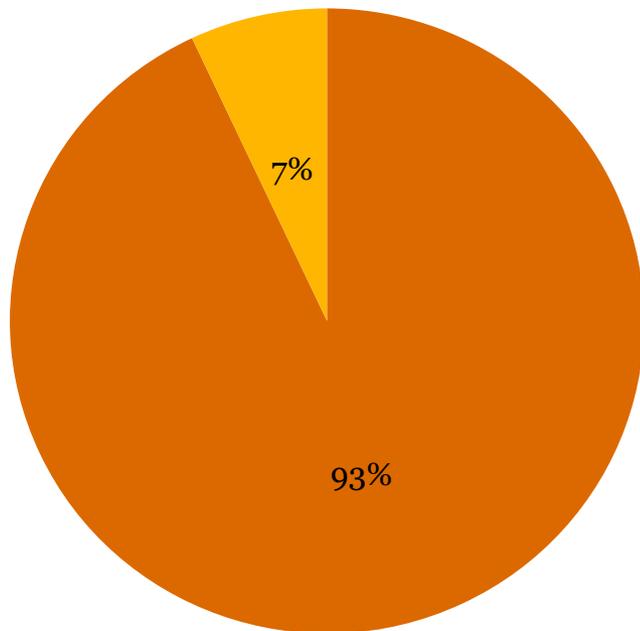
## *Section 2.1 – School Profile – key findings*

- The majority of respondents were Principals (69%).
- 93% of schools surveyed have an Advisory Board but out of these almost half (49%) meet twice a year or less.
- 83% of CTE dedicated schools have a Work-Based Learning Coordinator but of these over half (51%) are teaching on average 4 or more classes per day.
- 92% of schools have a relationship with a post-secondary institution, with the most common types of relationship being ‘campus tours’ (27%), ‘transferable credits’ (17%) and ‘access to courses’ (14%).

## *School principals provided almost all of the survey responses*



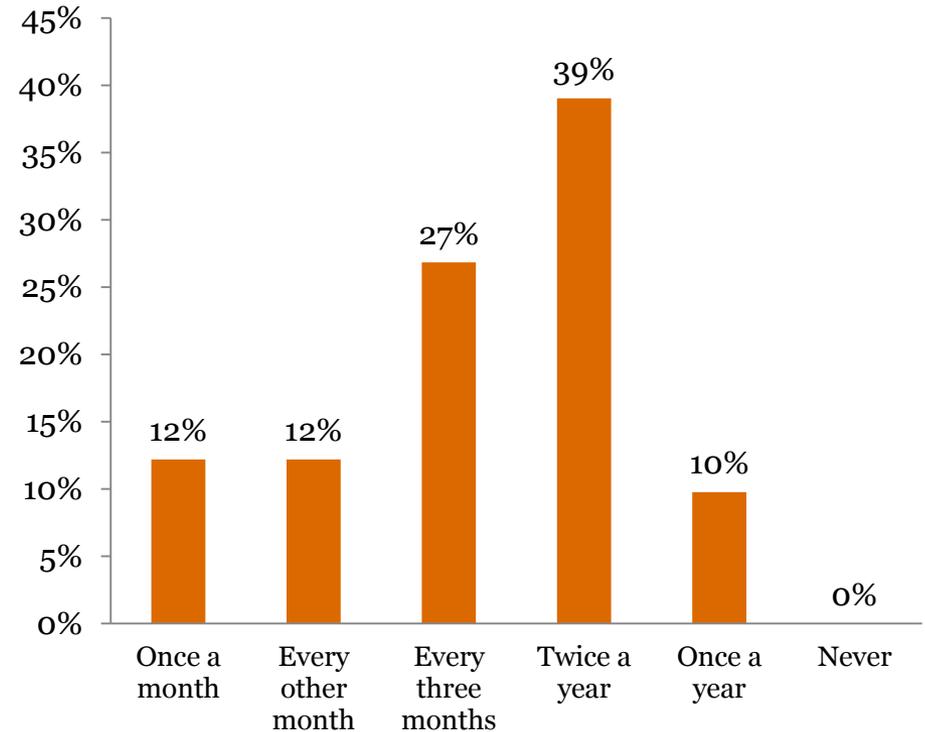
***Almost all the schools have an advisory board... ..however most do not meet regularly.***



■ Yes ■ No

Base: 44

Note: Question only asked to those who selected 'CTE dedicated school' at D1



Base: 41

Note: Question only asked to those who selected 'Yes' at D5

# Most students do not graduate with a CTE endorsed diploma

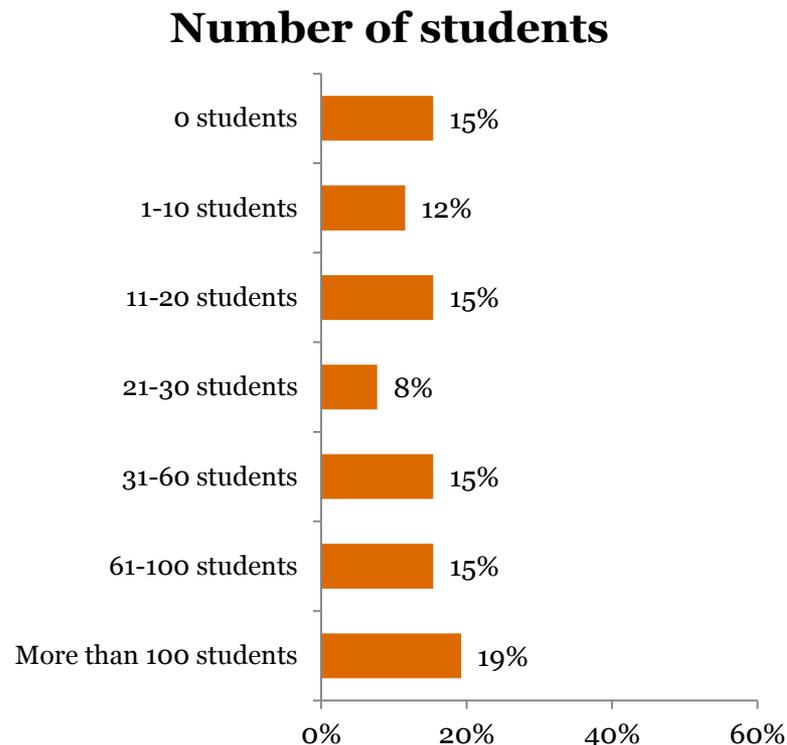


Average

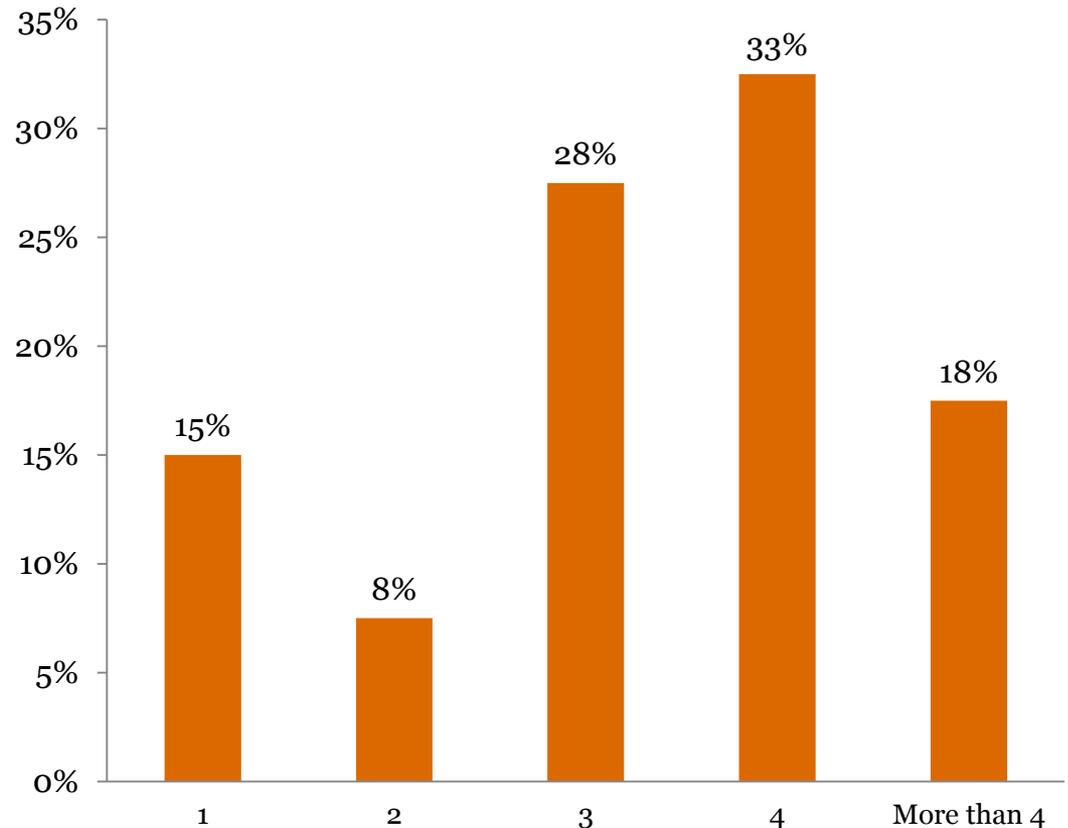
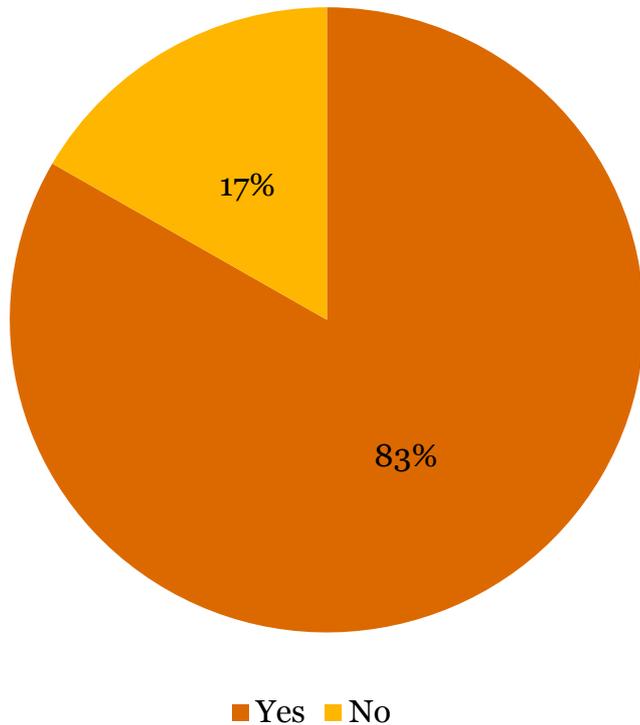
## Number of Students

Minimum number of students	Maximum number of students
0	150

Note: 18 people said 'Not Applicable'



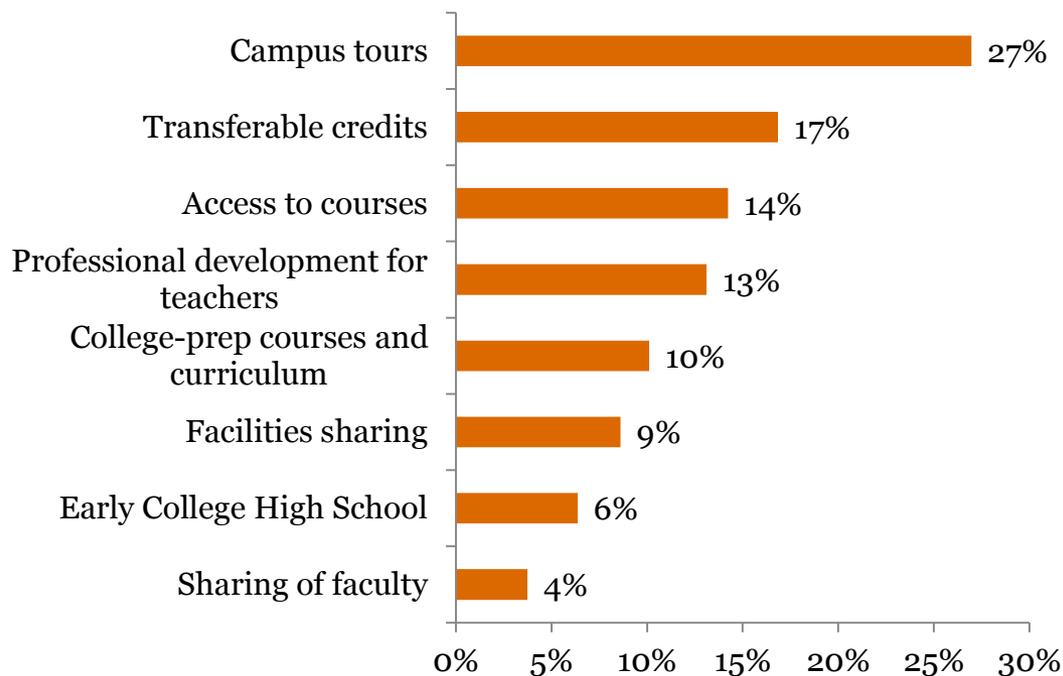
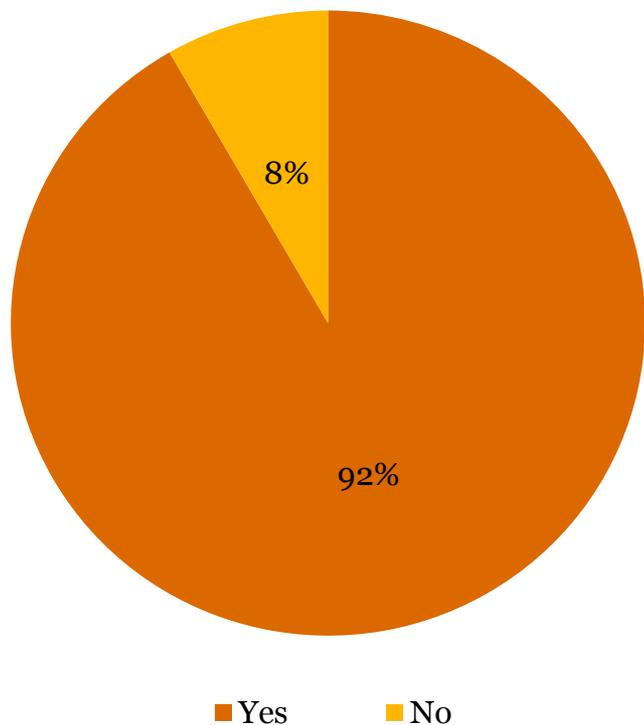
***Almost all the schools have a work based learning coordinator... however the majority are teaching a full class load as well.***



***Most schools have a relationship with a post-secondary partner.***

***Campus tours and transferable credits are the most commonly cited joint activity.***

**Nature of relationship – summary table**



Base: 48

Base: 267 (Note: Multi-response question: Base represents the count of total number of options selected)

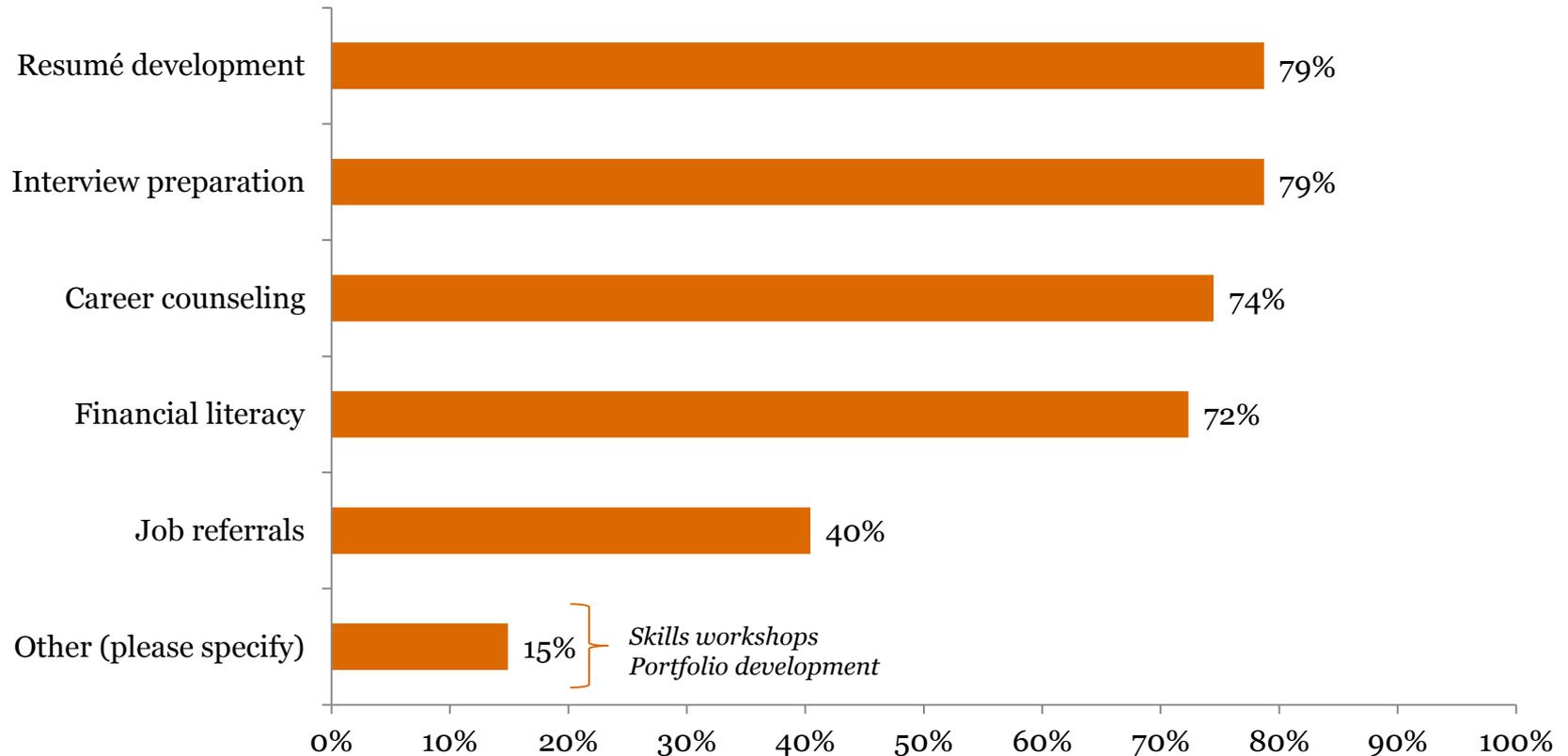
Note: Question only asked to those who entered a response at D13

# *Section 2.2 – CTE programs*

## *Section 2.2 – CTE programs – key findings*

- 30% of respondents did not agree that teachers in CTE programs are adequately prepared for their role.
- 98% of respondents agreed that ‘the skills CTE students are learning are relevant to today’s workplace’, however 15% did not agree that students in their school are ‘employable following graduation’.
- Number of students placed in internships (91%) is valued as importantly in defining CTE success as graduation rates (91%).
- Inadequate funding (60%) was stated most often in the top 3 challenges CTE programs face. Additionally, when asked what is the most important change that could be made to enhance CTE in New York City, 23% mentioned greater funding/investment in their response.
- No respondents from CTE dedicated schools mentioned the application/approval process as a change that could enhance CTE in New York City, contrary to those in schools with CTE program(s).

# *The majority of schools offer a wide range of support services to students who decide not to go on to college.*



Base: 47

Note: This is a multi-response question

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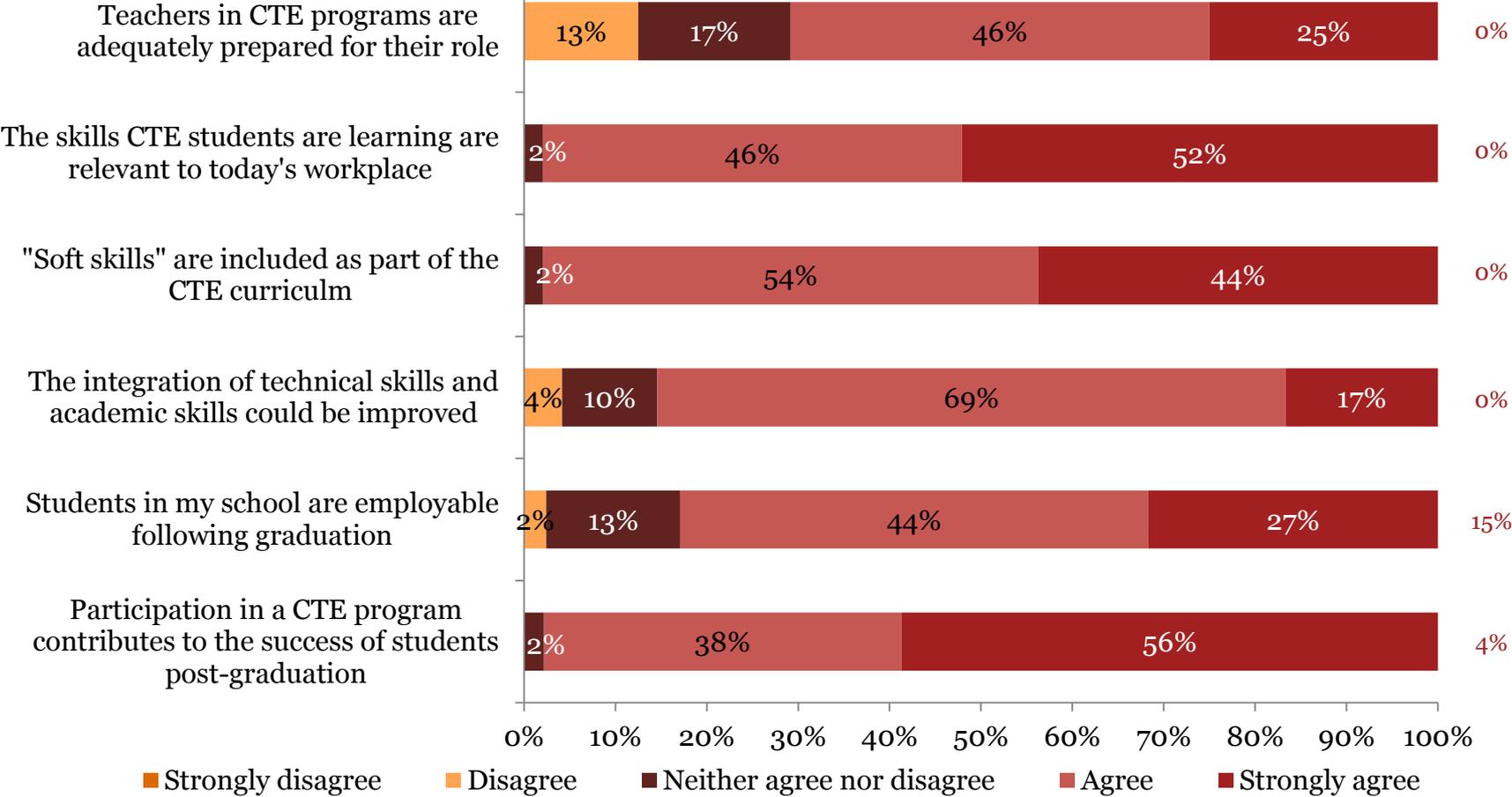
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December 2014

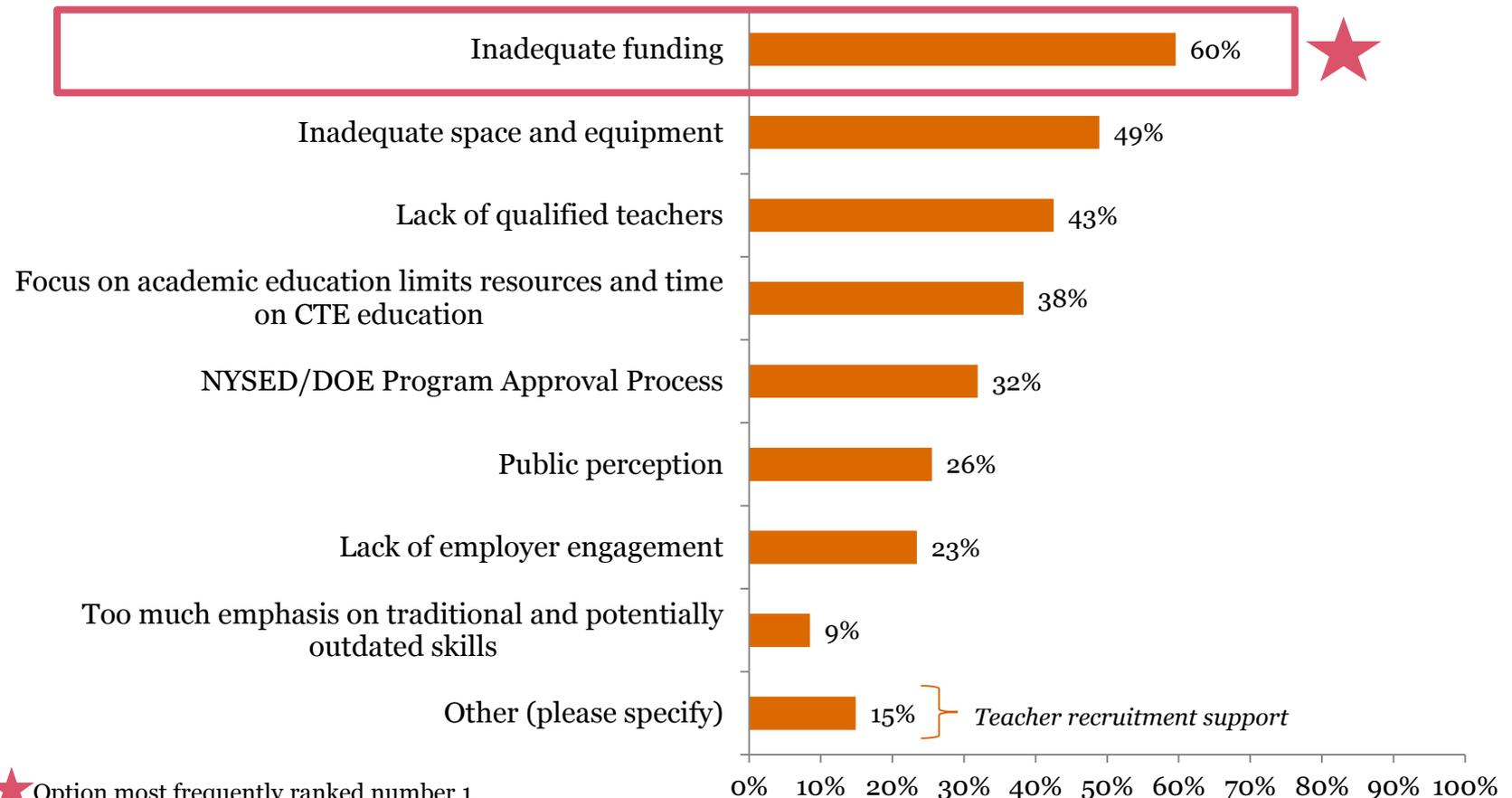
Slide 32

# Respondents were generally in agreement about teacher preparation, skills relevancy and overall importance of CTE programs.

N/A



# *Inadequate funding is the top challenge faced by CTE dedicated schools.*



Base: 47

Note: Respondents were asked to rank their THREE most important factors.

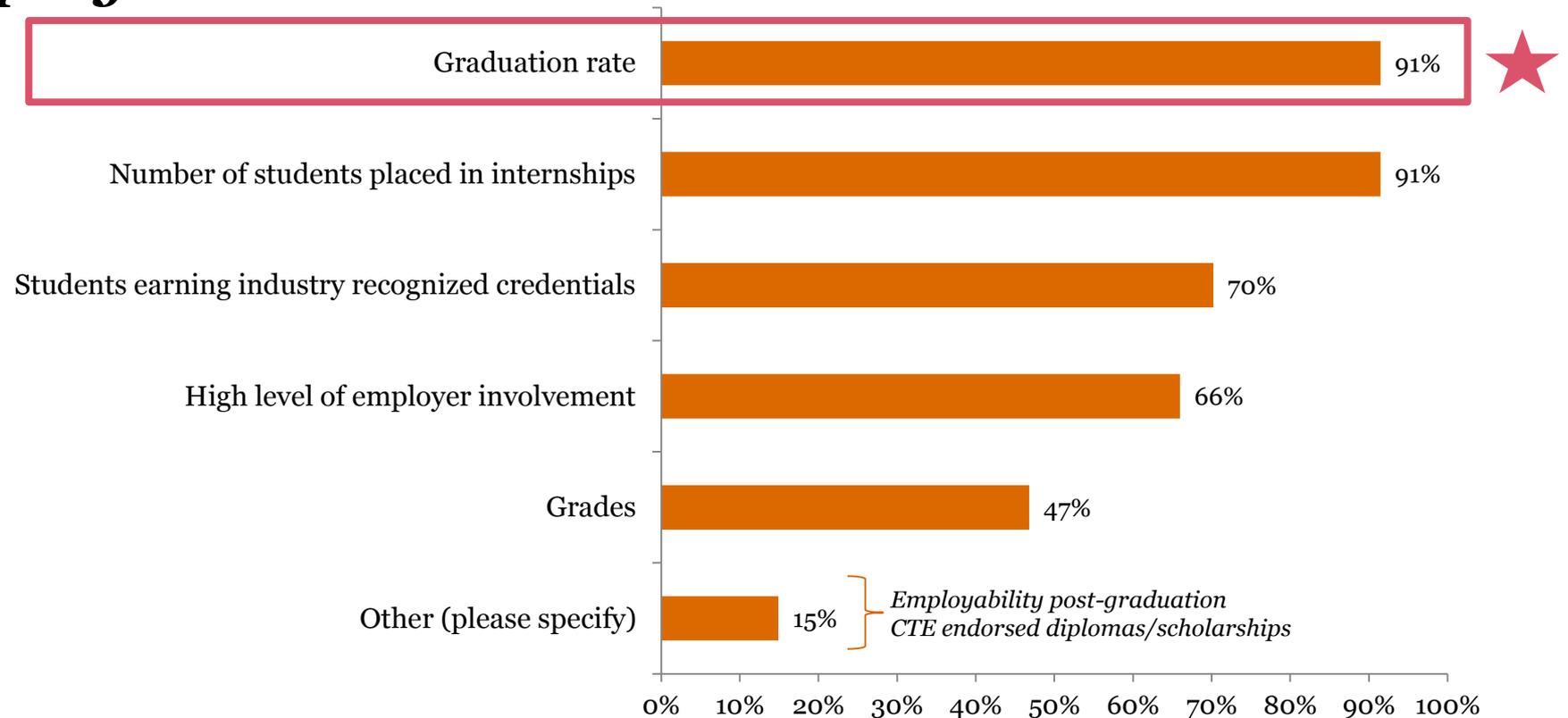
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Slide 34

# Graduation rates and internships are the most important factors in defining the success of CTE programs.



★ Option most frequently ranked number 1

Base: 47

Note: Respondents were asked to rank their THREE most important factors.

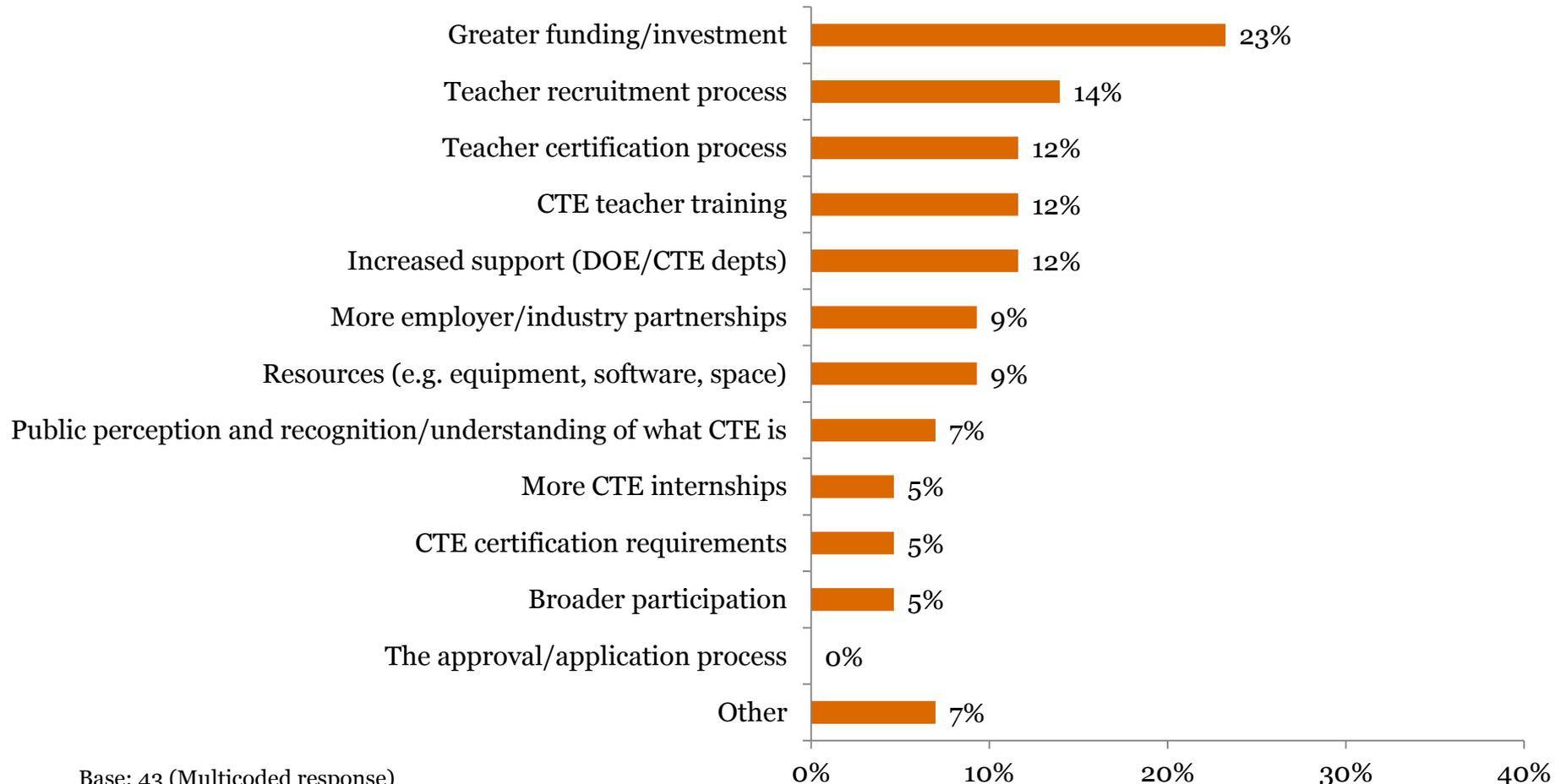
CTE Schools Survey

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# ***Greater funding and investment is the most commonly mentioned change that would strengthen CTE programs in NYC.***



Base: 43 (Multicoded response)

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Slide 36

## ***In your opinion what is the most important change that could be made to enhance CTE in New York City – verbatim comments***

***We need a lot more funding to start new programs instead of being restricted to sustain old CTE programs.***

***More control over student enrolment to better match student capabilities with the skills of the CTE program.***

***Industry related PD for CTE teachers - on the job training sessions to update and maintain their industry skills.***

***Increased space and funding***

***Flexibility on teacher certification and courses within the sequence.***

***Providing multiple pathways and changing public perception of CTE in our schools will help change enhance CTE.***

***Support to small schools in finding certified CTE teachers or funding to support teachers in acquiring CTE certification.***

***Greater resources/opportunities to link schools with private sector.***

# *Section 2.3 – Partner Engagement*

## *Section 2.3 – Partner Engagement – key findings*

- In total, 32 CTE dedicated schools named 1 or more private sector employers engaged with their school; 37 schools named 1 or more nonprofit organizations engaged with their school.
- In total, 85 employers and 90 nonprofits are engaged in CTE dedicated schools.
- For the majority of schools, the relationships with employers/nonprofits was rated as ‘very’ or ‘totally’ successful.
- Of these, the most frequent relationships are through internships (18%) and guest speakers (16%).

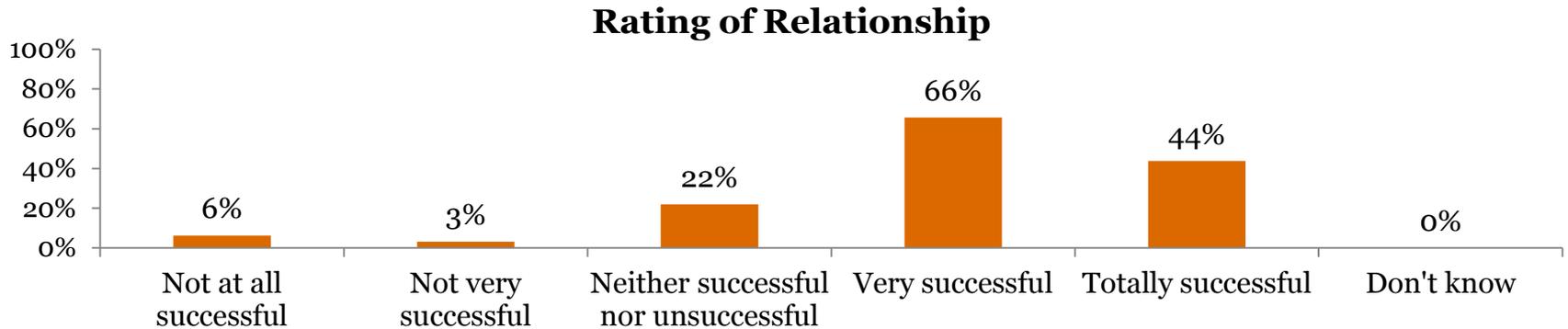
## *Section 2.3 – Partner Engagement – key findings*

- In total, 19 employers and 25 nonprofits carry out mentoring activities in CTE dedicated schools.
- Of those relationships that are based on mentoring, 54% involve group mentoring; 50% mentor once a week; and 71% of mentoring programs are 1-3 years in length. 19% of CTE dedicated schools do not track employer/nonprofit engagement and only 47% track using an electronic database.
- 43% of respondents felt that their relationship with employers could be greatly improved. In addition, 21% did not agree that they frequently evaluate the CTE curriculum to ensure it reflects employers needs. When exploring further the verbatim comments around this area, 58% of responses mentioned increased employer integration as key.
- 87% of respondents said additional financial resources are most important to strengthen CTE programs in the long term.

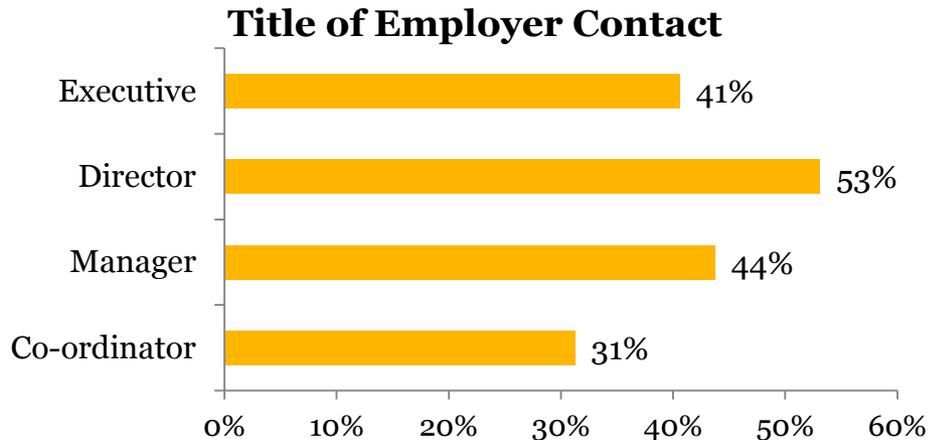
## *Section 2.3 – Partner Engagement – key findings*

- 52% of respondents said that during the 2013-2014 school year there was a gap between the number of internship placements and the desired number of placements, with the average gap being a shortfall of 87 students. The main reasons for this were ‘lack of internships available’ (53%) and ‘lack of funding’ (41%).
- Internship selection for the majority of students is based on grade (75%) and recommendations (71%).
- The average gap between the actual number of internship placements and the desired number of internship placements was a shortfall of 87 students (compared to a shortfall of 35 students in schools with CTE programs).
- Skills USA, National Academy Foundation (NAF) and PENCIL were the three most frequently mentioned active support services.
- PENCIL and NAF were the support service with the highest ranking (45%) for ‘extremely satisfied’ with regards to support provided to CTE dedicated schools.

# Level of engagement with private sector employers – Summary tables



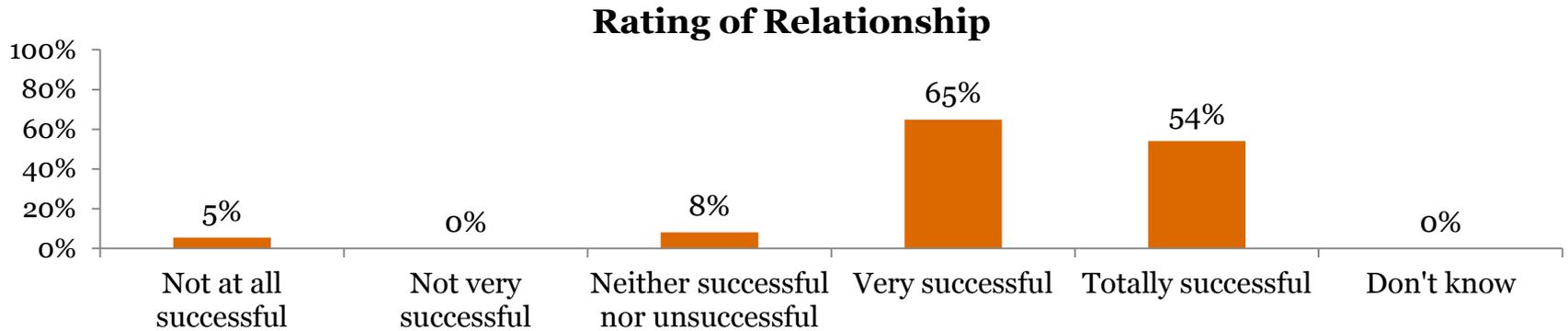
Base: 32  
Note: This is a multi-response question



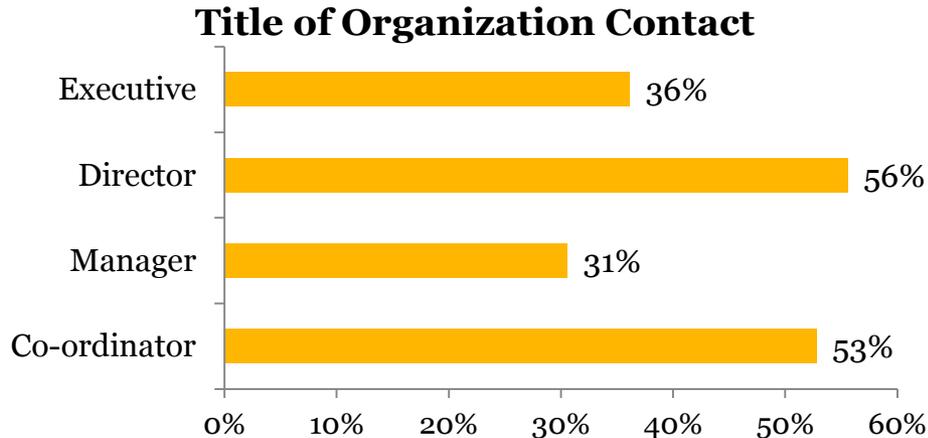
Base: 32

*Employers who are involved range from JPMC, Citigroup and Deloitte to Warby Parker, Ballet Hispanico and New York Hospital.*

# Level of engagement with nonprofit organization(s) – Summary tables



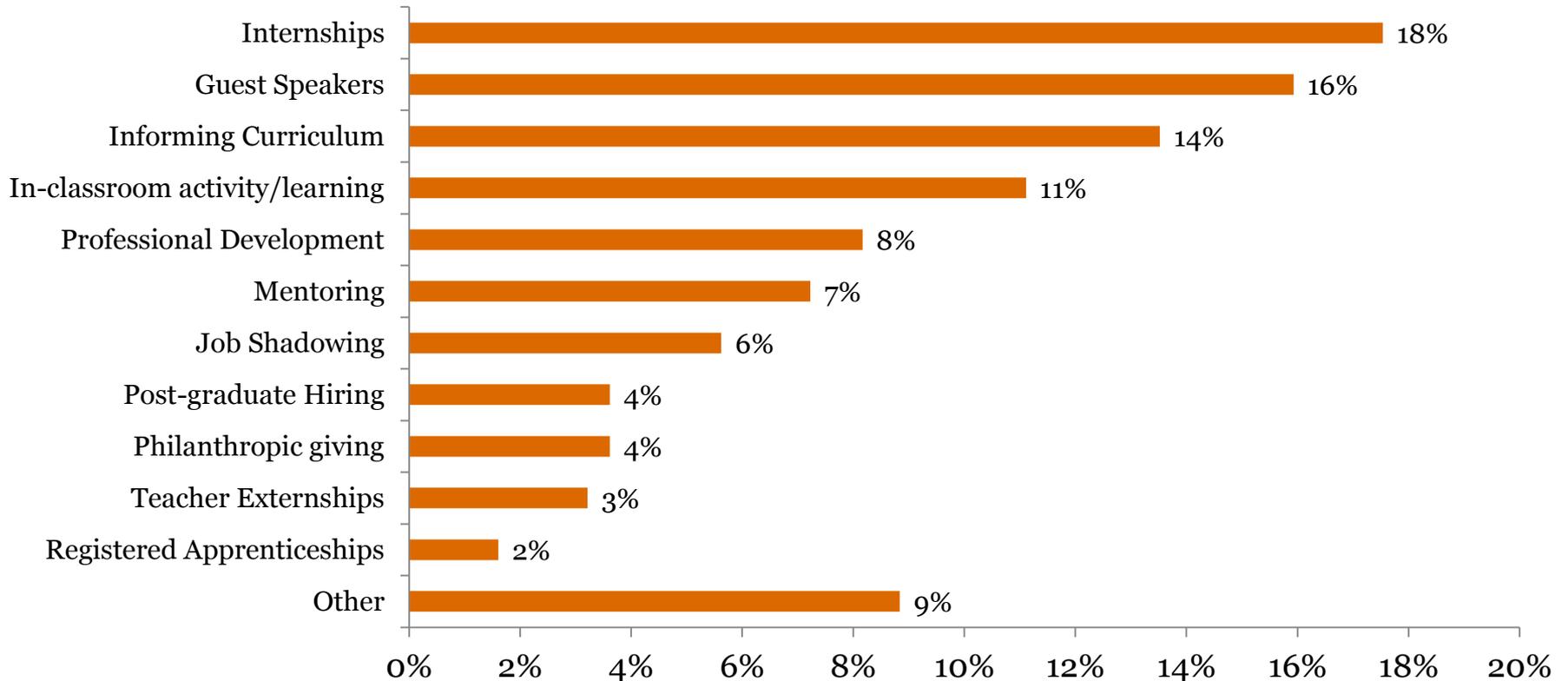
Base: 37  
Note: This is a multi-response question



Base: 36

*Organizations include New York Public Library, Studio in a School, The Salvation Army and National Park Service.*

# *Internships, guest speakers and curriculum input are the most common ways partners engage.*



Base: 747 (Note: Multi-response question: Base represents the count of total number of options selected)

Note: Question only asked to those who entered any response at Q1 or Q2. The graph presents the number of times each option was selected across all employers/nonprofit organizations.

Note: 'Other' responses are summarized on slide 45.

## ***Please summarize any other type of relationship you have with these employers/organizations – Verbatim responses***

*Student Success Center - college readiness workshops; college field trips; college persistence program and providing a dedicated college counsellor.*

*They provide information regarding requests for proposals, provide letters of support for grant proposals, provide support for growing partnerships.*

*Advisory board members; career exploration opportunities.*

*They provide service learning opportunities that align with our CTE theme.*

*Community Service Activities.*

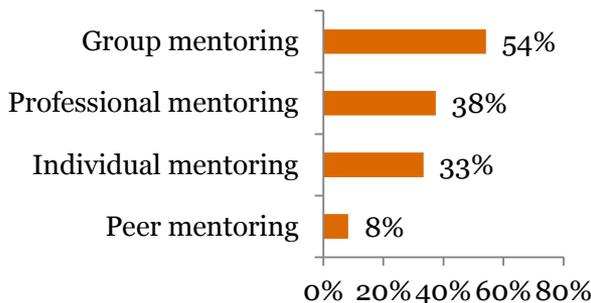
*Some of these organizations are a part of our advisory board, offer job readiness workshops, and personal finance workshops.*

# Mentoring most often happens in groups with frequency and length varying widely.

## Mentoring type



*...provide group mentoring*

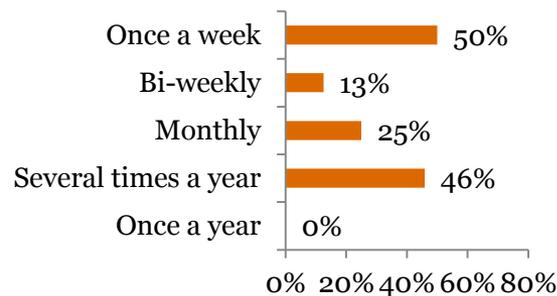


Base: 24

## Frequency of mentoring



*...mentor once a week*

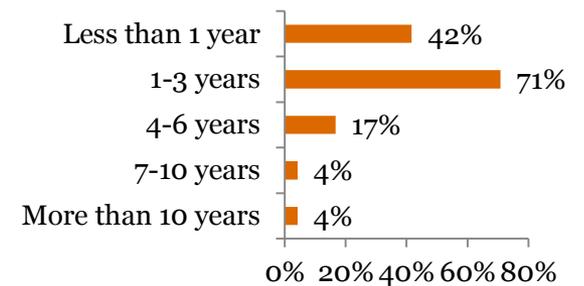


Base: 24

## Length of mentoring program

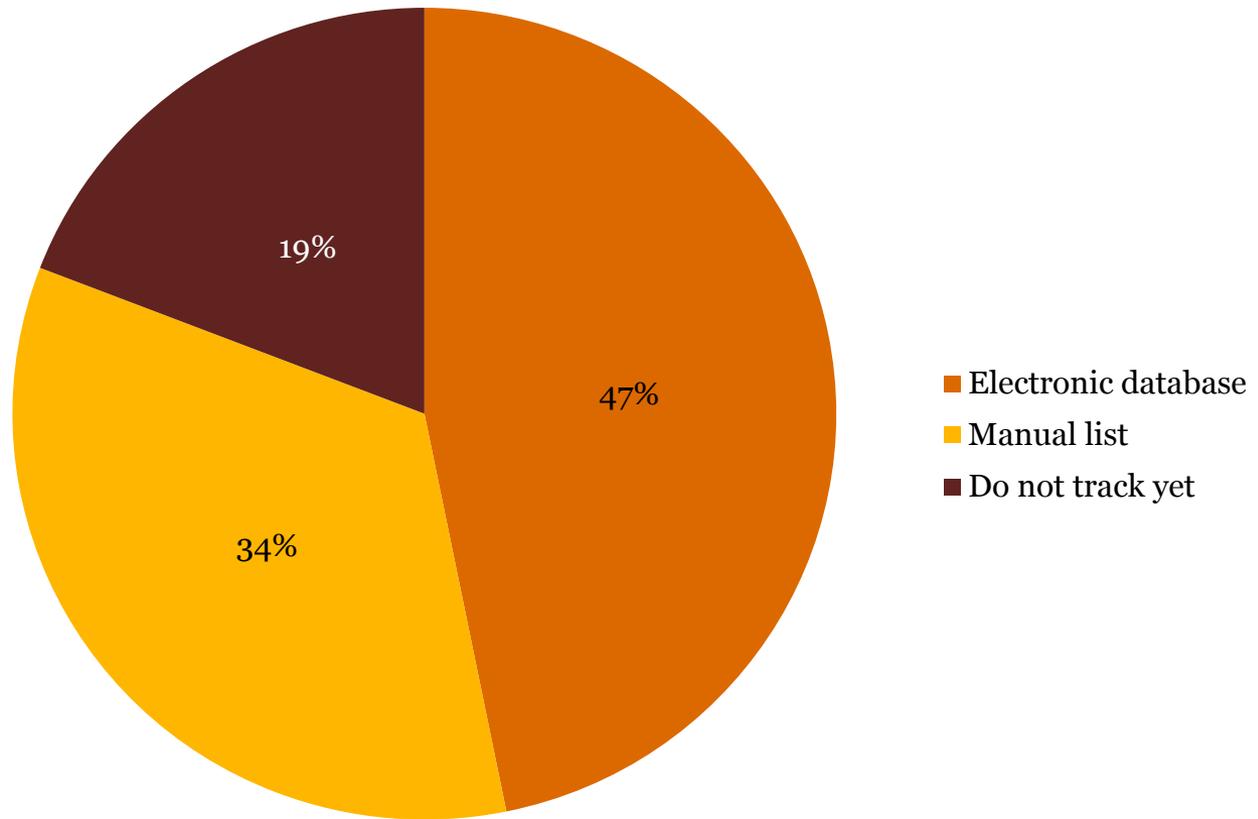


*...of programs are 1-3 years*

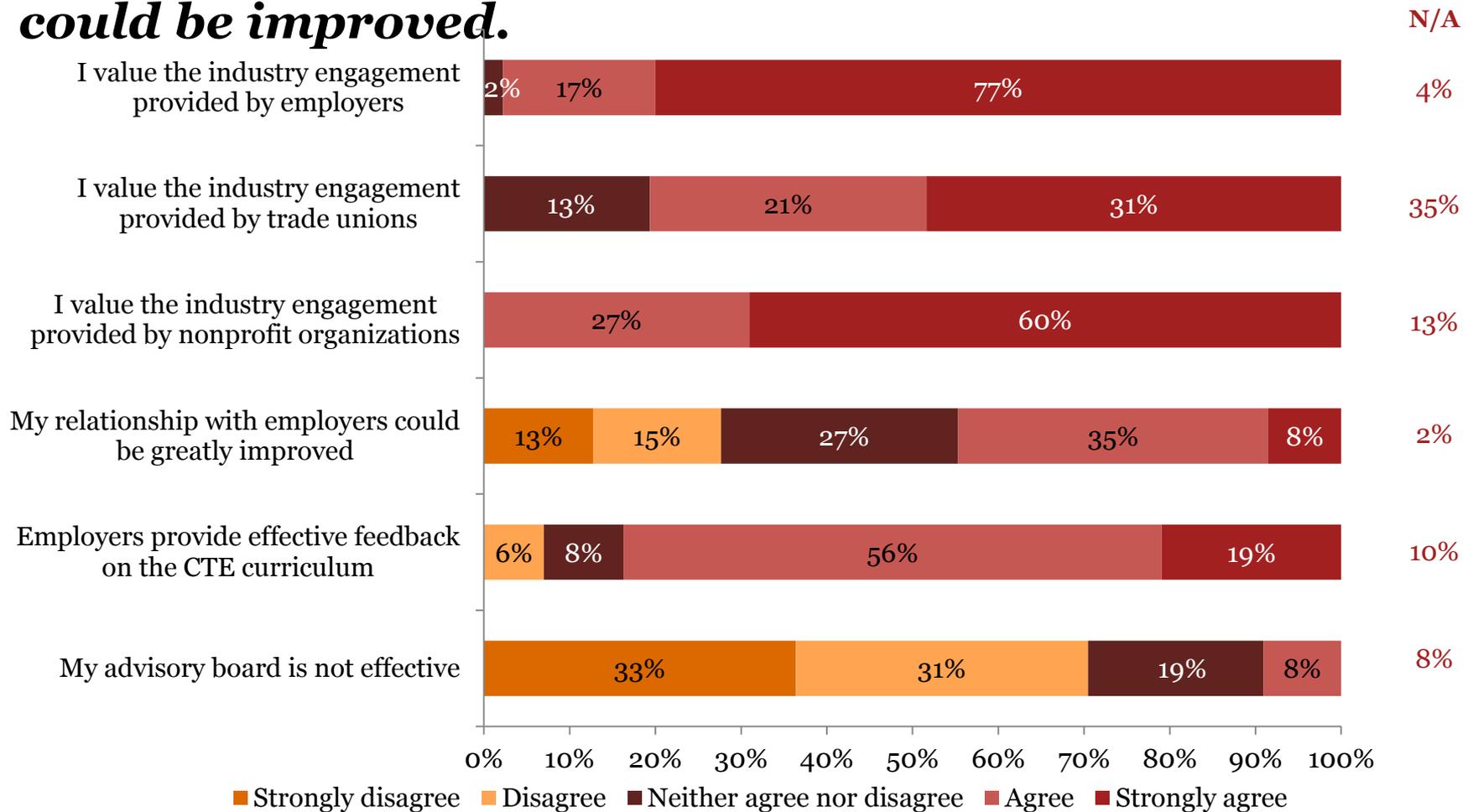


Base: 24

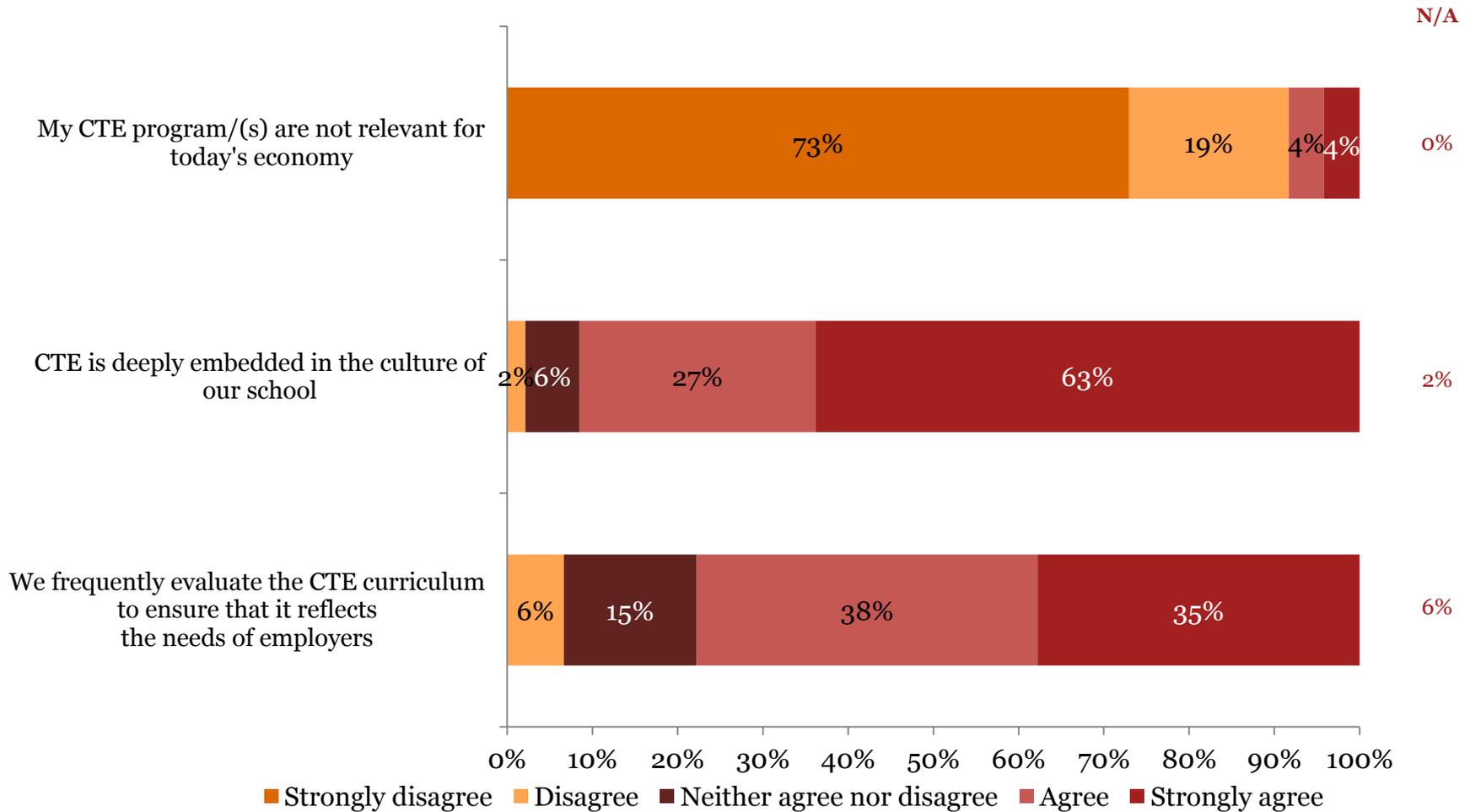
***Less than half of the CTE dedicated schools track partner engagement with an electronic database.***



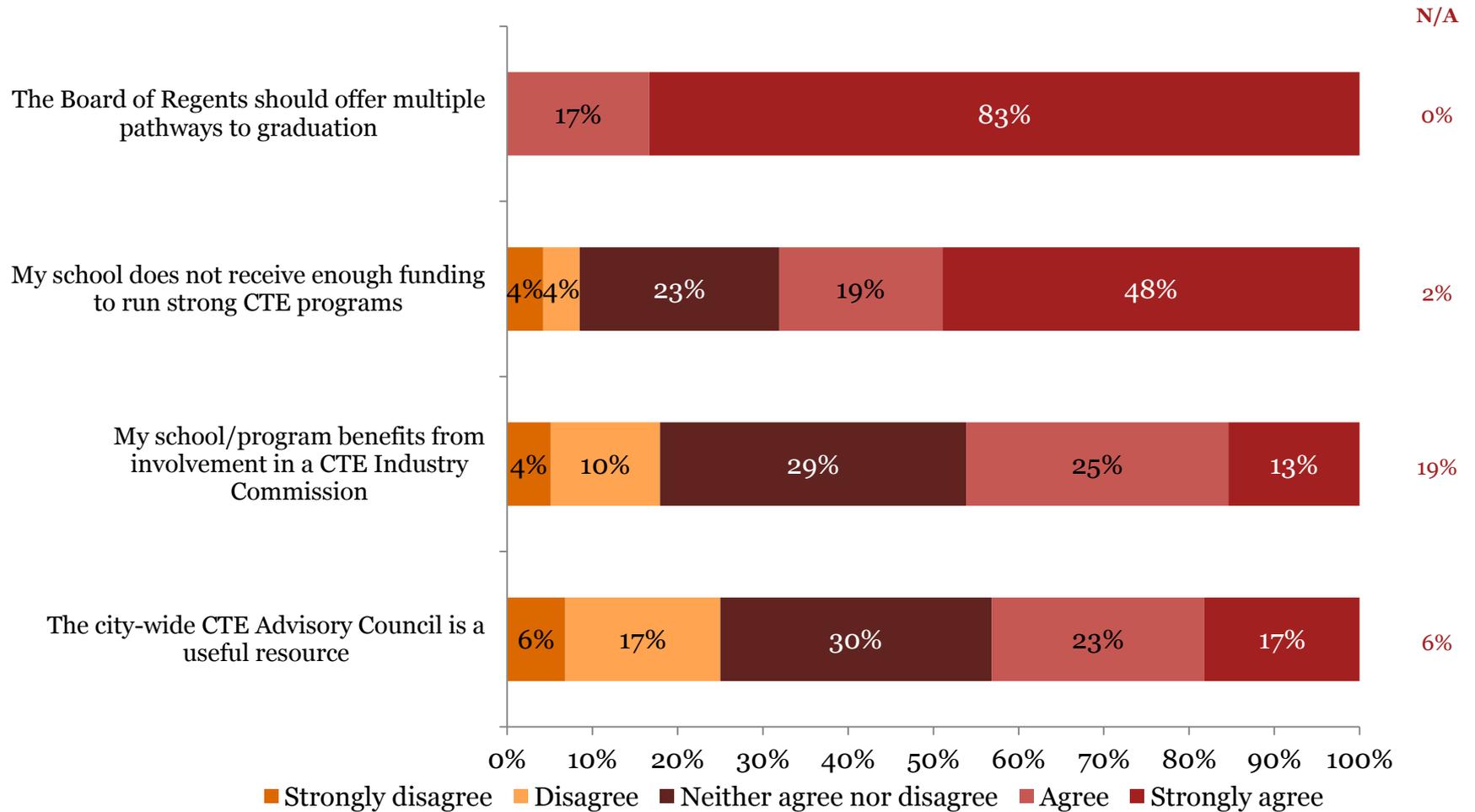
# Partner engagement is overwhelmingly valued by CTE dedicated schools while relationships with partners could be improved.



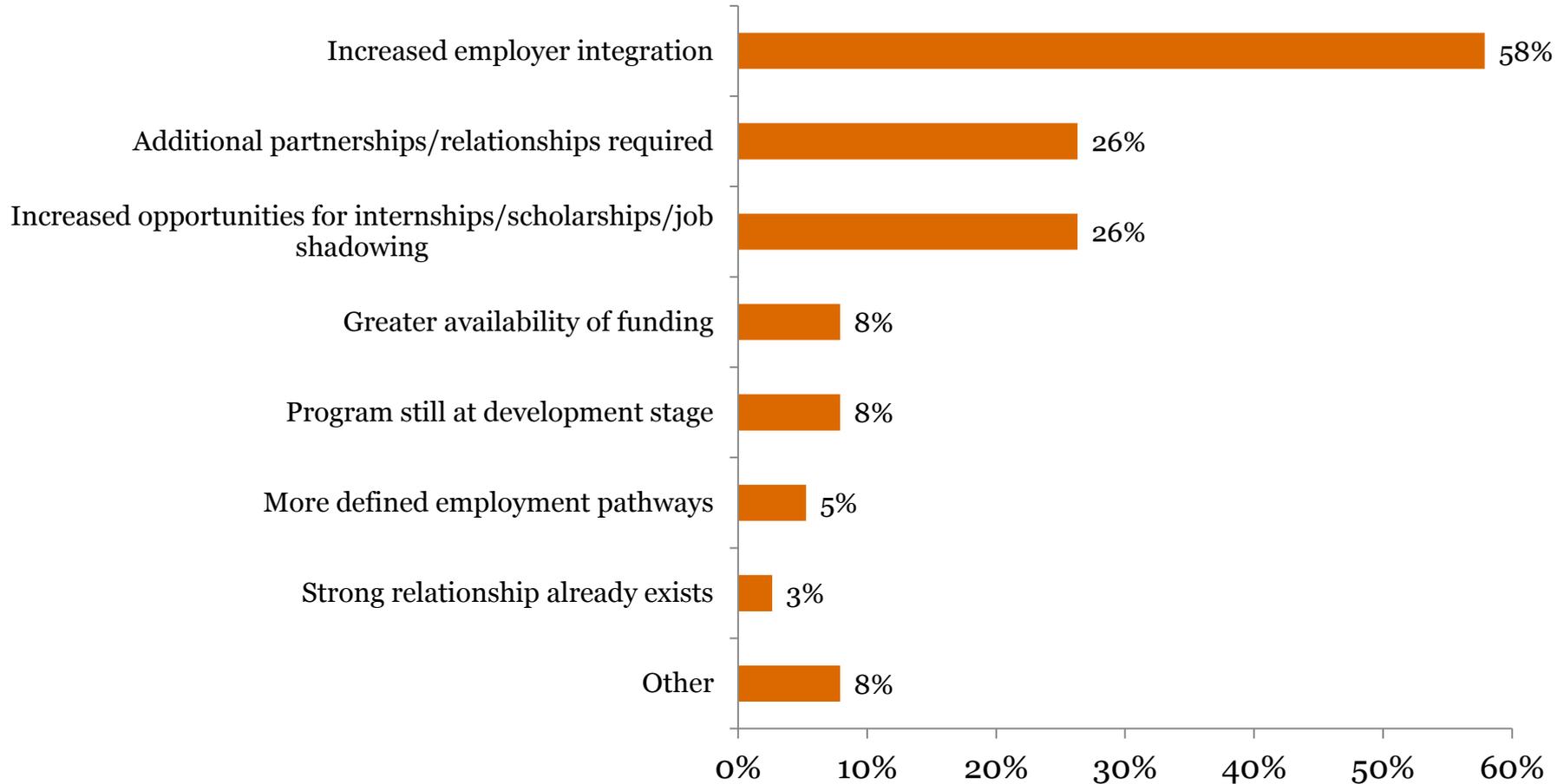
# CTE programs at dedicated schools are overwhelmingly relevant, and consistently updated.



# Multiple pathways to graduation and increased funding are clear needs.



# ***More integration of employers in the work at the CTE dedicated schools is the best way to increase engagement.***



Base: 38 (Multicoded response)  
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PwC

## ***How could your relationship with employers be stronger? – Verbatim responses***

***We would like to use our employers as a networking resource, in order to build our advisory board. Have employers make frequent visits to the School with updated technology.***

***We need more funds to hire more teachers to our CTE specific programs. Currently our teachers are all teaching 5 periods or more so they are not able to attend workshops and training sessions.***

***More focus on curriculum. More job shadowing opportunities***

***Ideally, it would be great for our teachers to take turns and visit our employers' worksite to understand and experience what our students experience.***

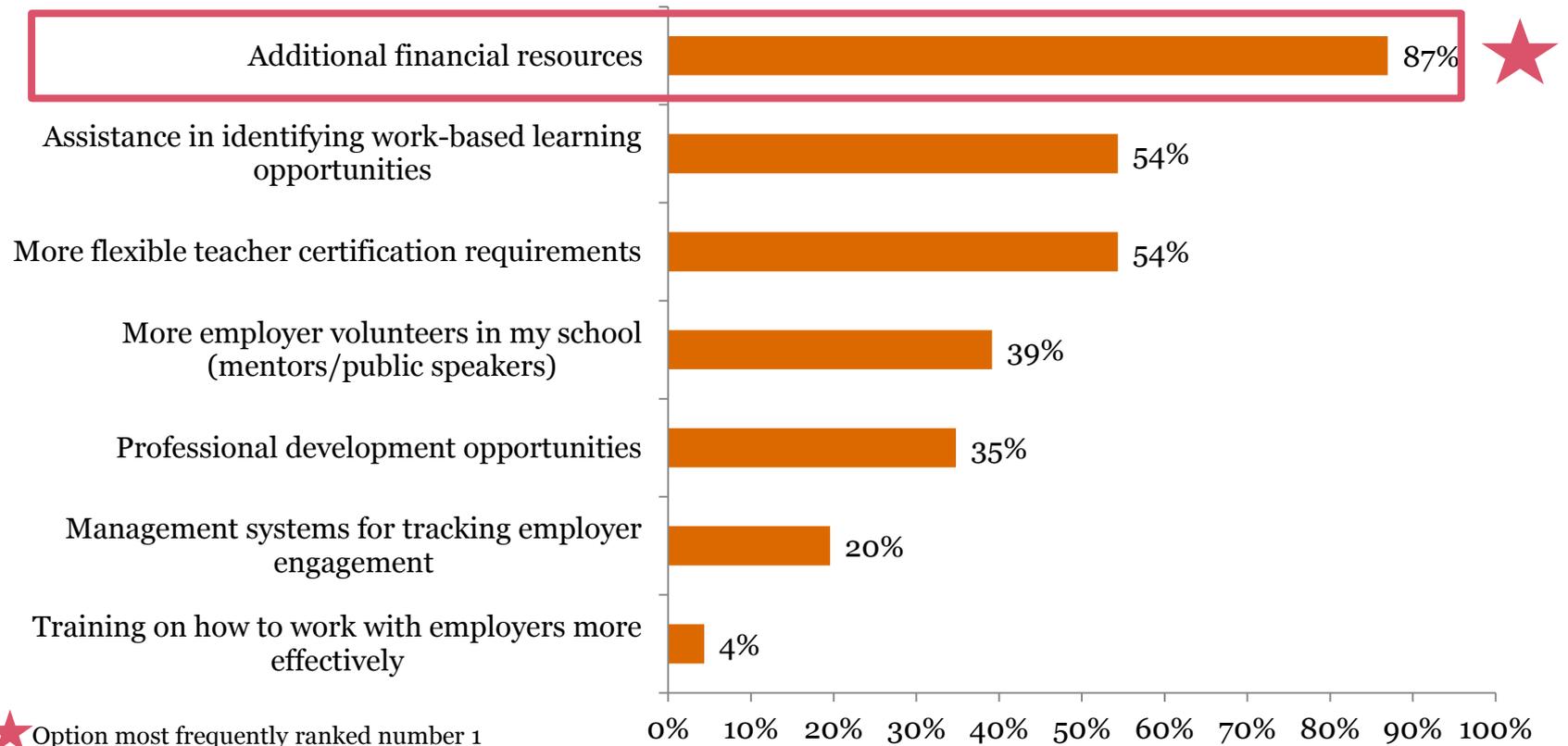
***Full time WBL position, more outreach to emerging tech industry, more industry engagement through internship offerings.***

***We need to be able to provide quality programs that match the needs of each particular industry in order to give back to the industries that partner with us.***

***We need more private sector employers so students can have a variety of experiences.***

***Although they provide internships we would like to have more externship opportunities for my teachers. This will allow my teachers to stay current with industry practices.***

# *Increased funding, assistance funding work based learning opportunities and certification flexibility will benefit CTE programs the most.*



★ Option most frequently ranked number 1

Base: 46

Note: Respondents were asked to rank their THREE most important factors.

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Slide 53

***Most CTE students did not have an internship but of those who did, the majority were paid internships.***

### Number of Students with internships



Minimum number of students	Maximum number of students
0	120

Base: 42

### Percent of paid internship placements

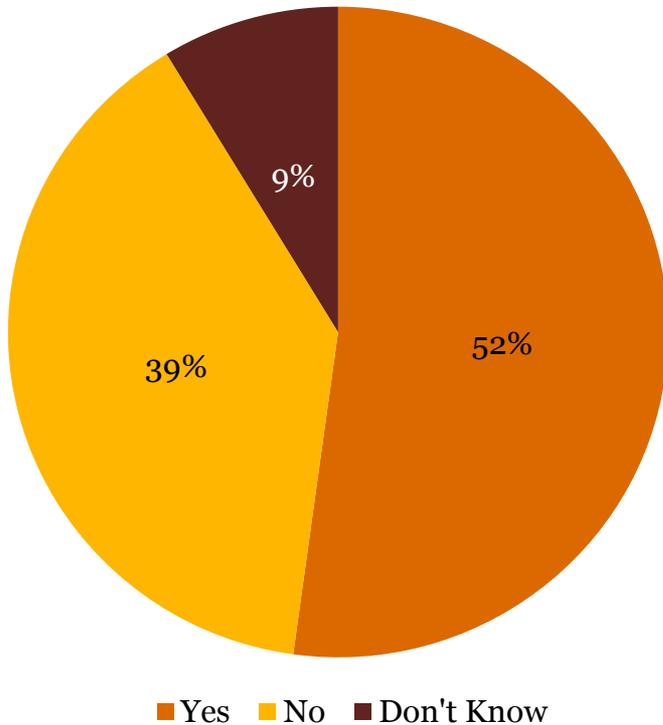


Minimum percent	Maximum percent
0%	100%

Base: 27

Note: Question only asked to those who reported 'number of students' as greater than '0' in Q9a

# The majority of schools did not have enough internship spots for students.



## Number of placements

Minimum number of placements	Maximum number of placements
0	100

## Desired number

Minimum desired number	Maximum desired number
15	731

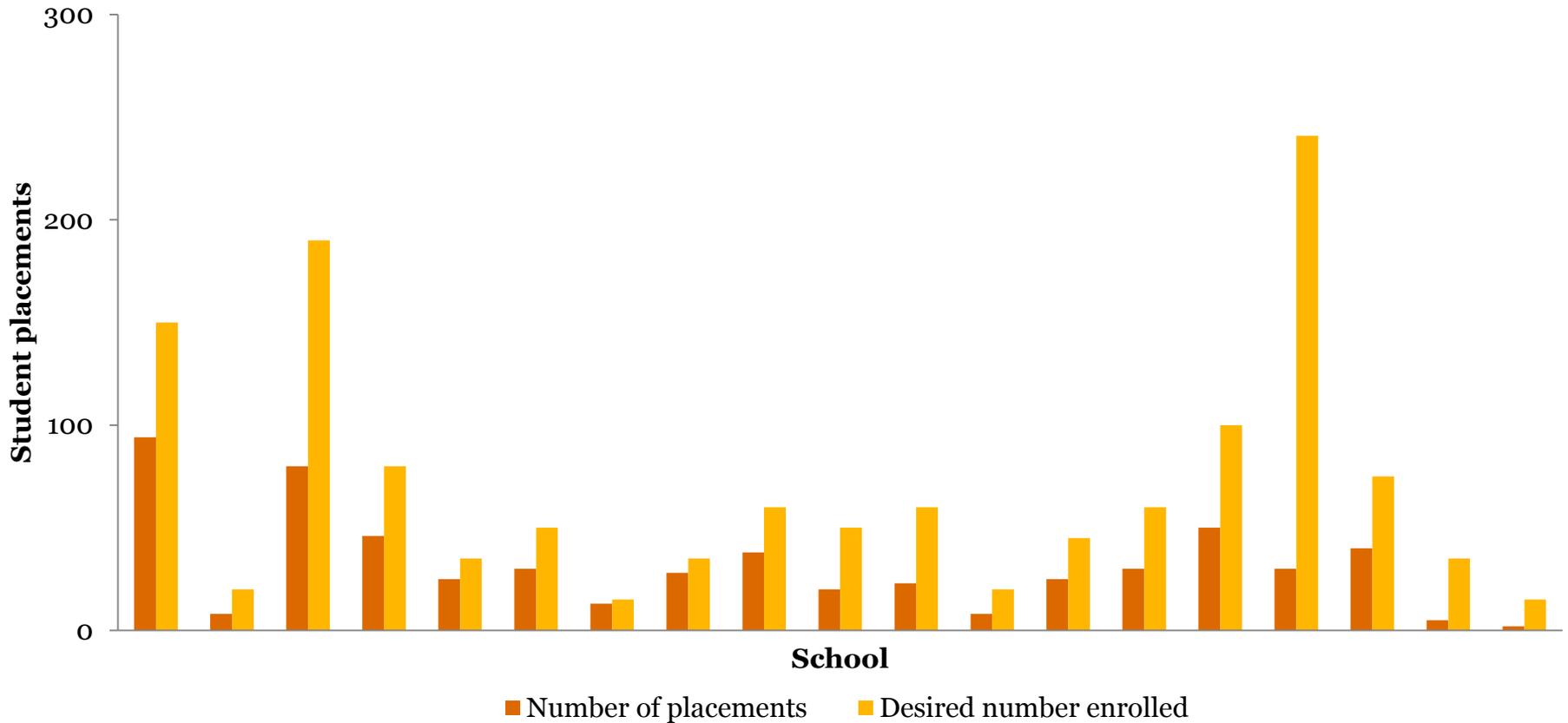
## Average gap

Minimum gap	Maximum gap
-2	-678

Base: 46

Note: Question only asked to who selected 'Yes' at Q10a  
Note: Average gap calculated using only those who provided a response to both the number of internship placements and the desired number

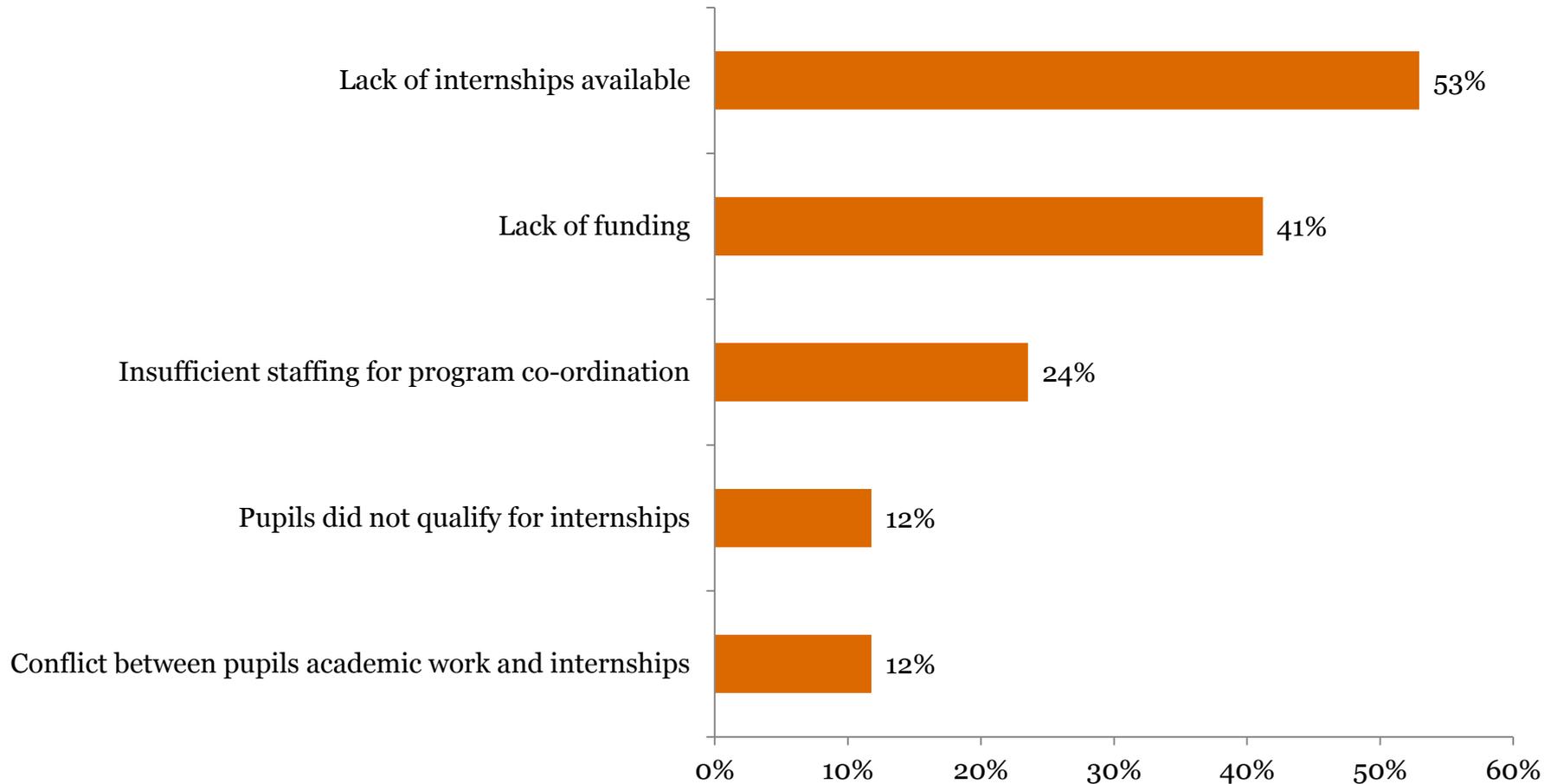
# Gap analysis – Number of internship placements vs desired number enrolled – detailed breakdown by school



Note: Question only asked to those who selected 'Yes' at Q10a

Note: Graph presents data from respondents who provided a response to both the number of internship placements and the desired number. Two outliers have been removed for presentational purposes

# *Lack of availability and funding were responsible for the gap between internships needed and found.*



Base: 17 (Multicoded response)  
CTE Schools Survey  
PwC

## ***Why was there a gap between the numbers of internship placements and desired number of internship placements? – Verbatim responses***

***It was very difficult to identify internship sites (regardless of whether they paid or not).***

***Not enough opportunities available for those who applied or were interviewed.***

***Most potential employers could not afford the internships. In other instances they didn't feel they had the time to spare in terms of student supervision and outreach with the school.***

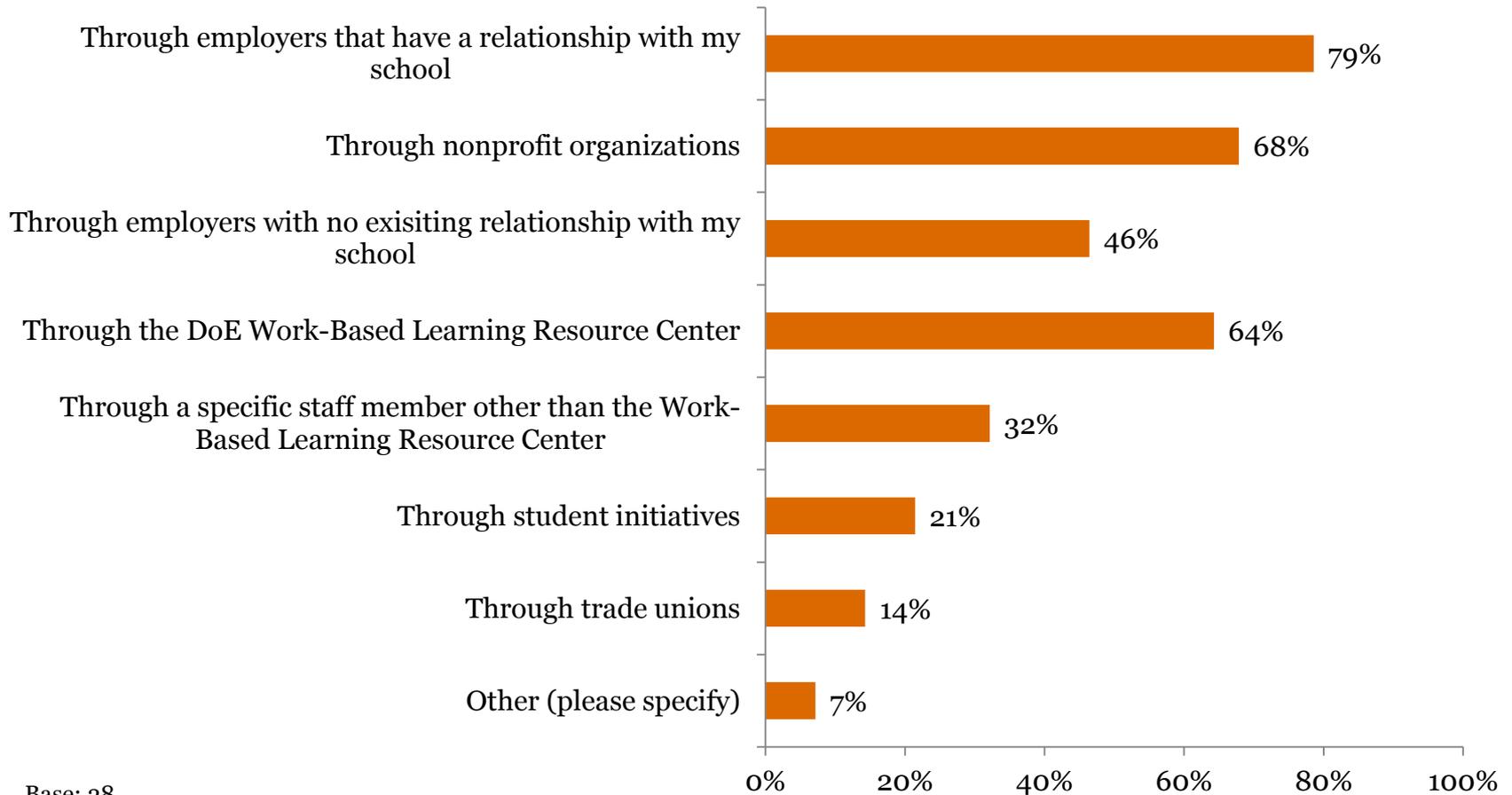
***Limited funding for paid internships; need for more industry partners to serve as host sites for unpaid interns.***

***The gap exists because of a lack of support in creating industry-based expectations for the employer/partners in addition to the student expectations.***

***Funding was not adequate to enrol the desired number of students and students did not always qualify.***

***Not enough staff to monitor 700+ internship placements.***

# Internships are found through a variety of channels.

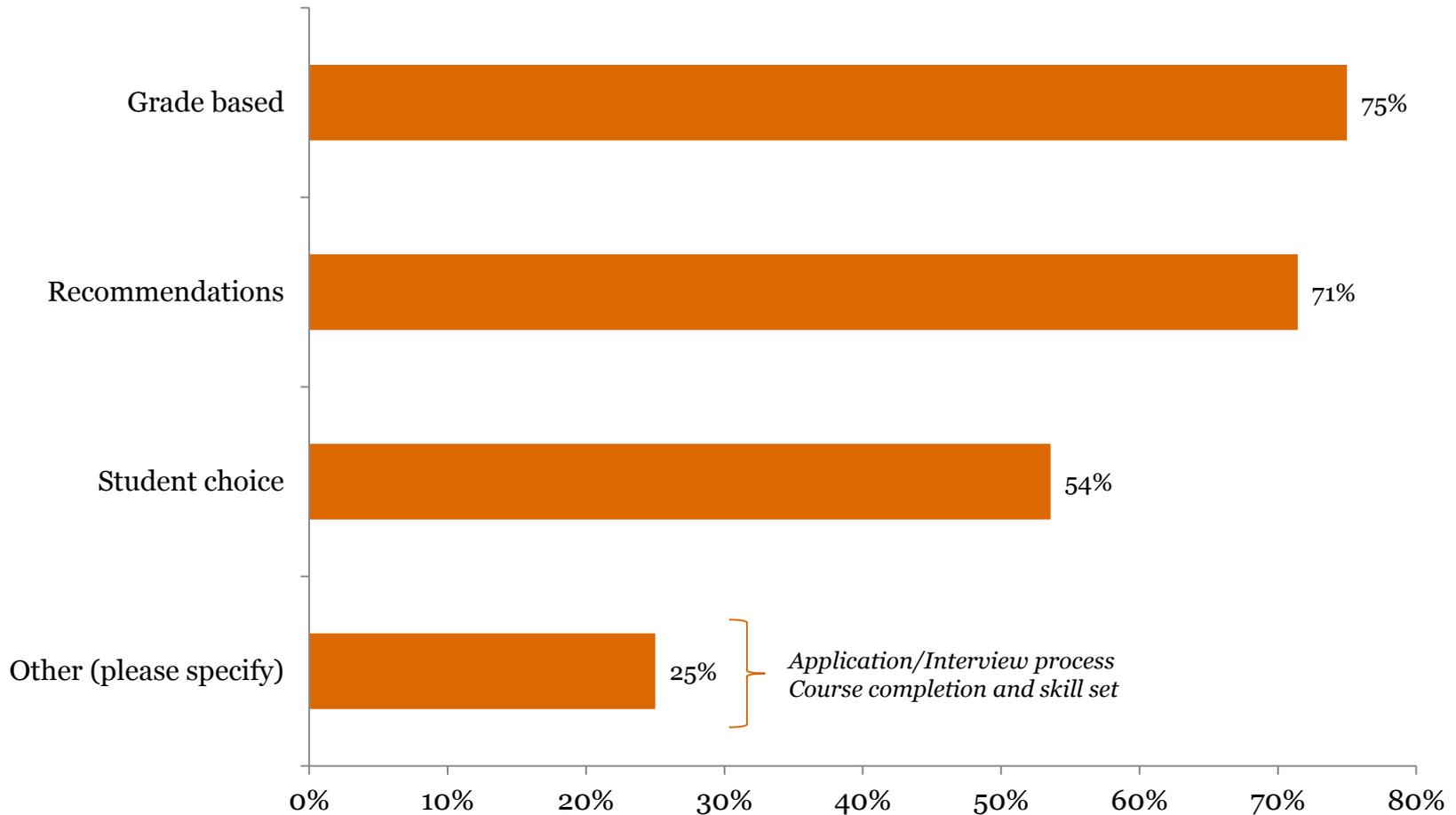


Base: 28

Note: Question only asked to those who entered 'number of students' as greater than '0' at Q9a

Note: This is a multi-response question

# Grades and recommendations play the biggest role in intern selection.



Base: 28

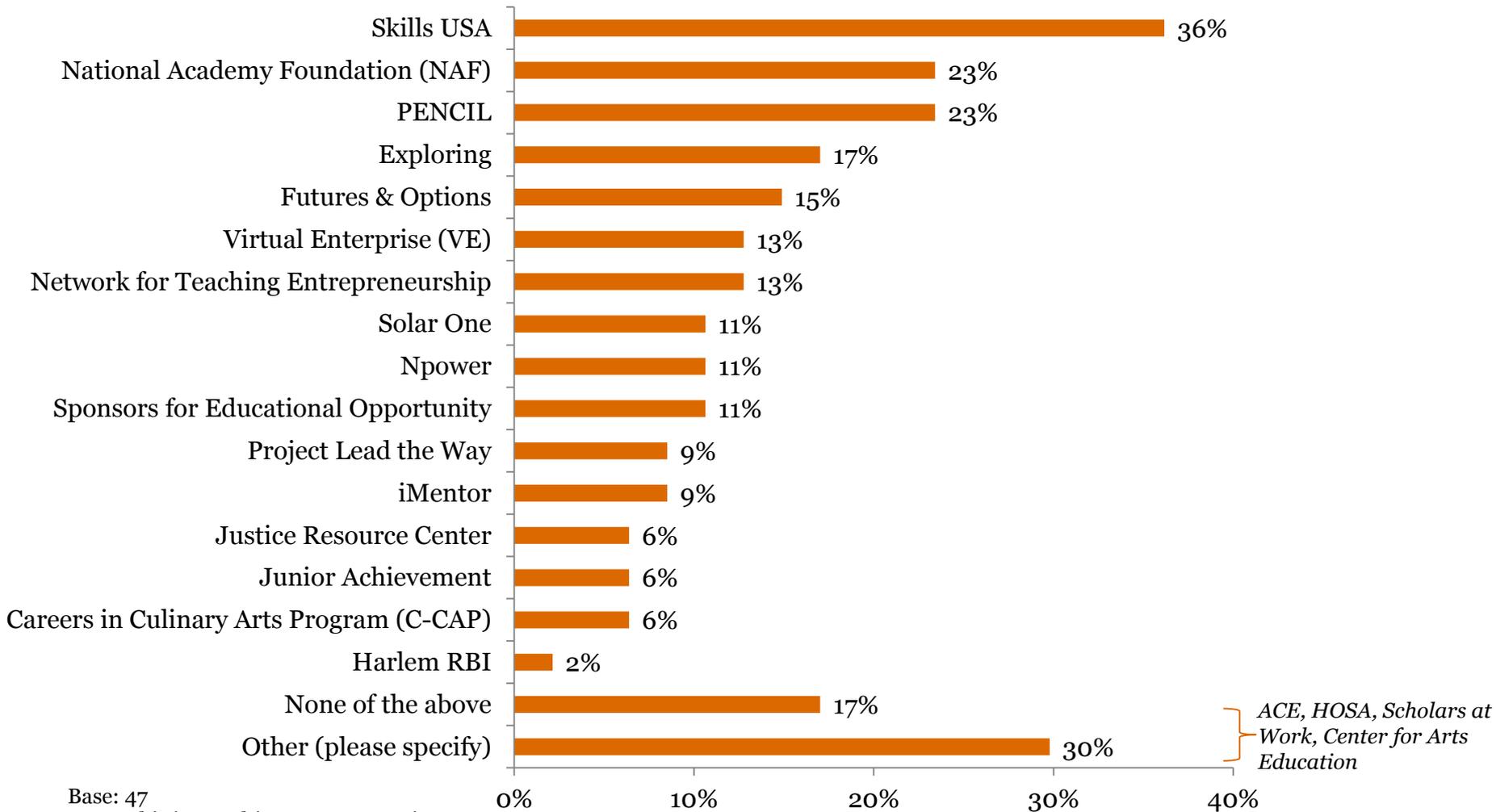
Note: Question only asked to those who entered 'number of students' as greater than '0' at Q9a

Note: This is a multi-response question

CTE Schools Survey

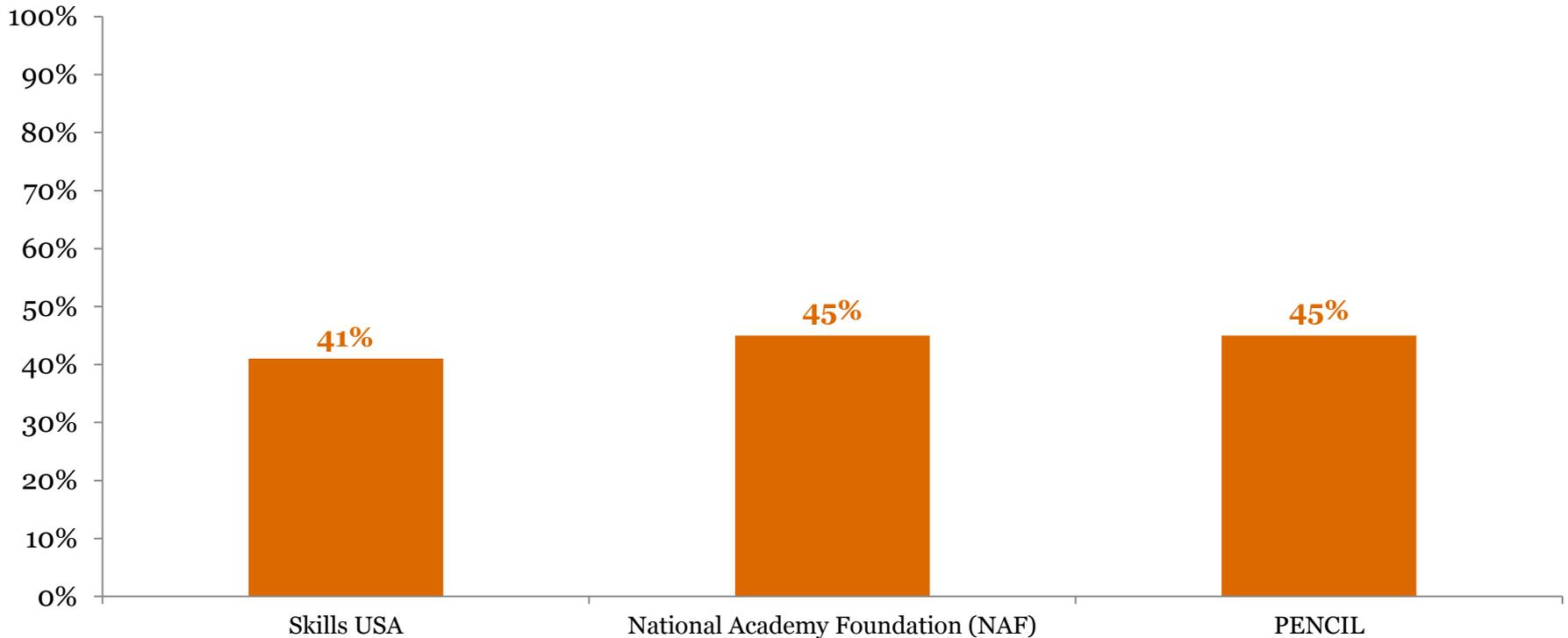
PwC

# There are many different support services active in CTE dedicated schools.



Base: 47  
Note: This is a multi-response question  
CTE Schools Survey  
PwC

# *Almost half of respondents are extremely satisfied with the most commonly mentioned support services.*



Note: Only support services with a base of 10 or more respondents have been shown on the chart

Note: Question only asked to those who selected any response apart from 'None of the above' at Q13

Note: The graph shows % of 'Extremely Satisfied' responses and bars are ordered based on frequency selected

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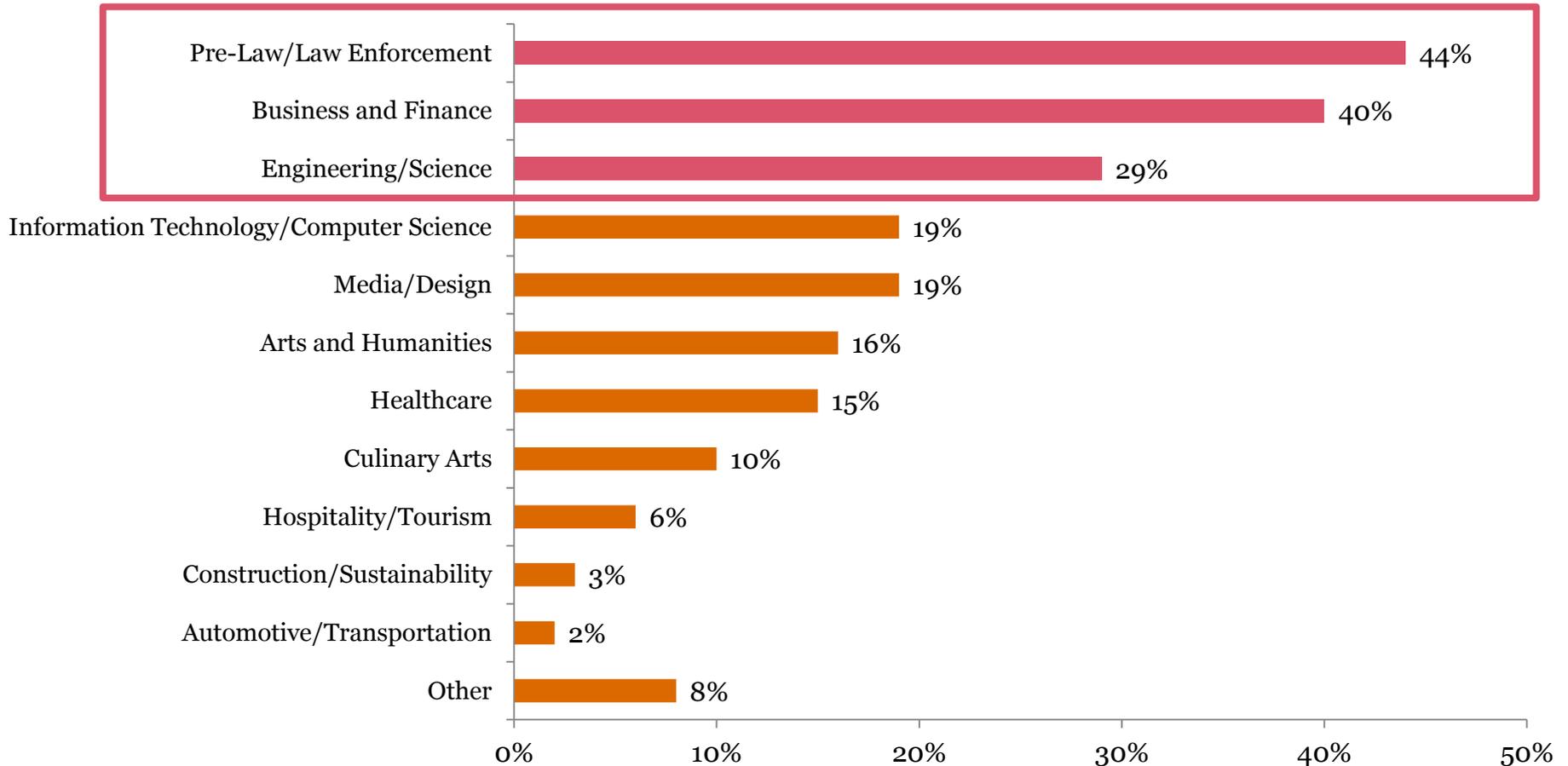
# *Section 3 – Schools with CTE program(s)*

# *Section 3.1 – School Profile*

## *Section 3.1 – School Profile– key findings*

- The top three program categories in schools with CTE programs are Pre-Law/Law Enforcement, Business and Finance, and Engineering/Science. 74% of these programs started after 2003.
- The majority of respondents were Principals (51%).
- 81% of schools with CTE programs have a Work-Based Learning Coordinator but of these 74% are teaching on average 4 or more classes per day.
- 91% of schools have a relationship with a post-secondary institution, with the most common types of relationship being ‘campus tours’ (23%), ‘transferable credits’ (20%) and ‘access to courses’ (16%).

# Major industry sectors are well represented across CTE programs

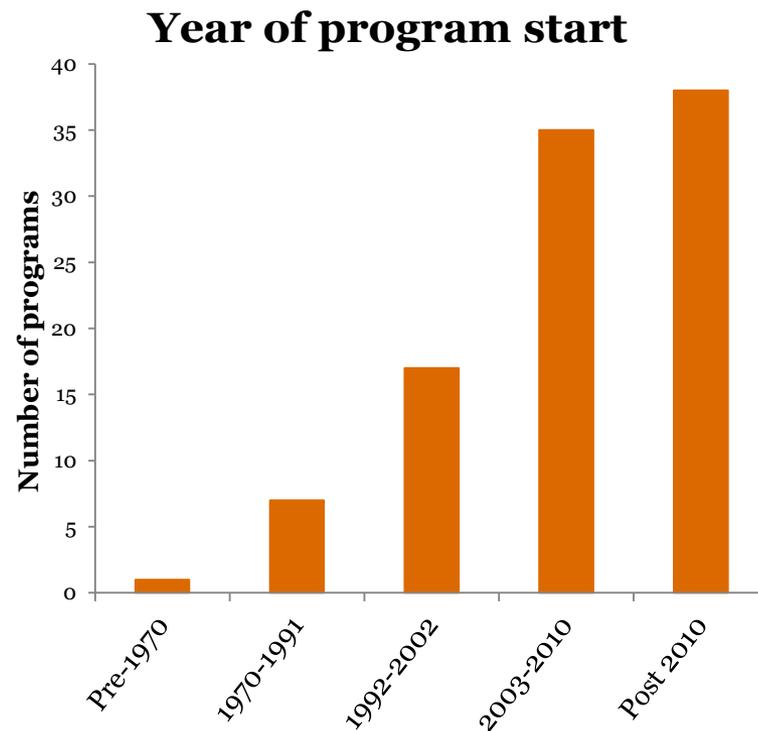
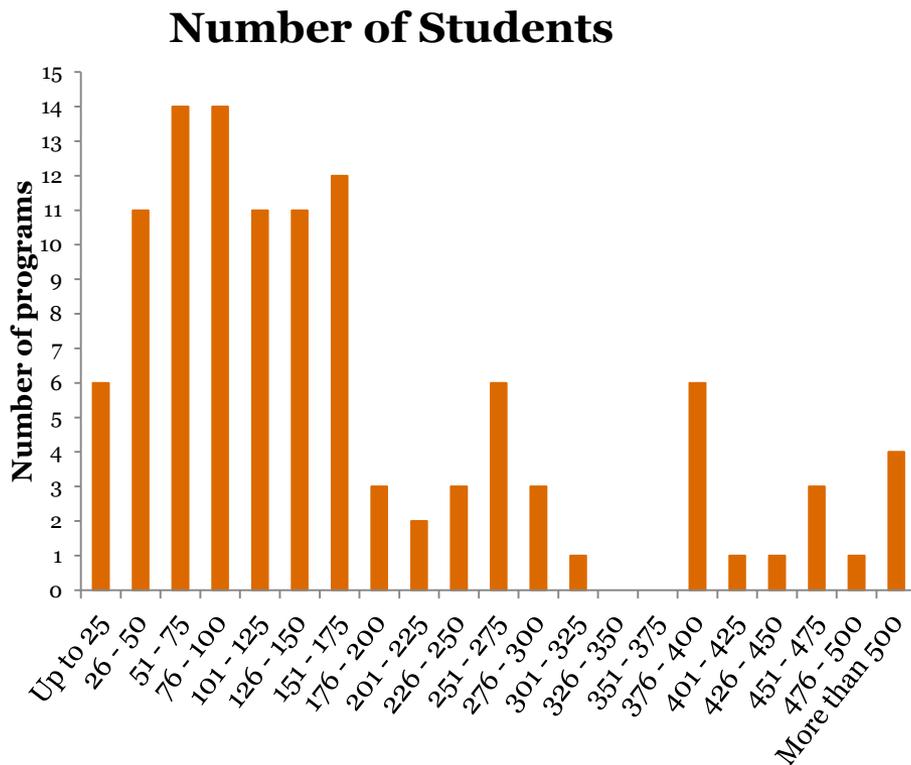


Base: 62

Note: Question only asked to those who selected 'School with CTE program(s)' at D1

Note: This is a multi-response question

# Development of CTE programs has ramped up since 2003 with most programs serving 50-200 students

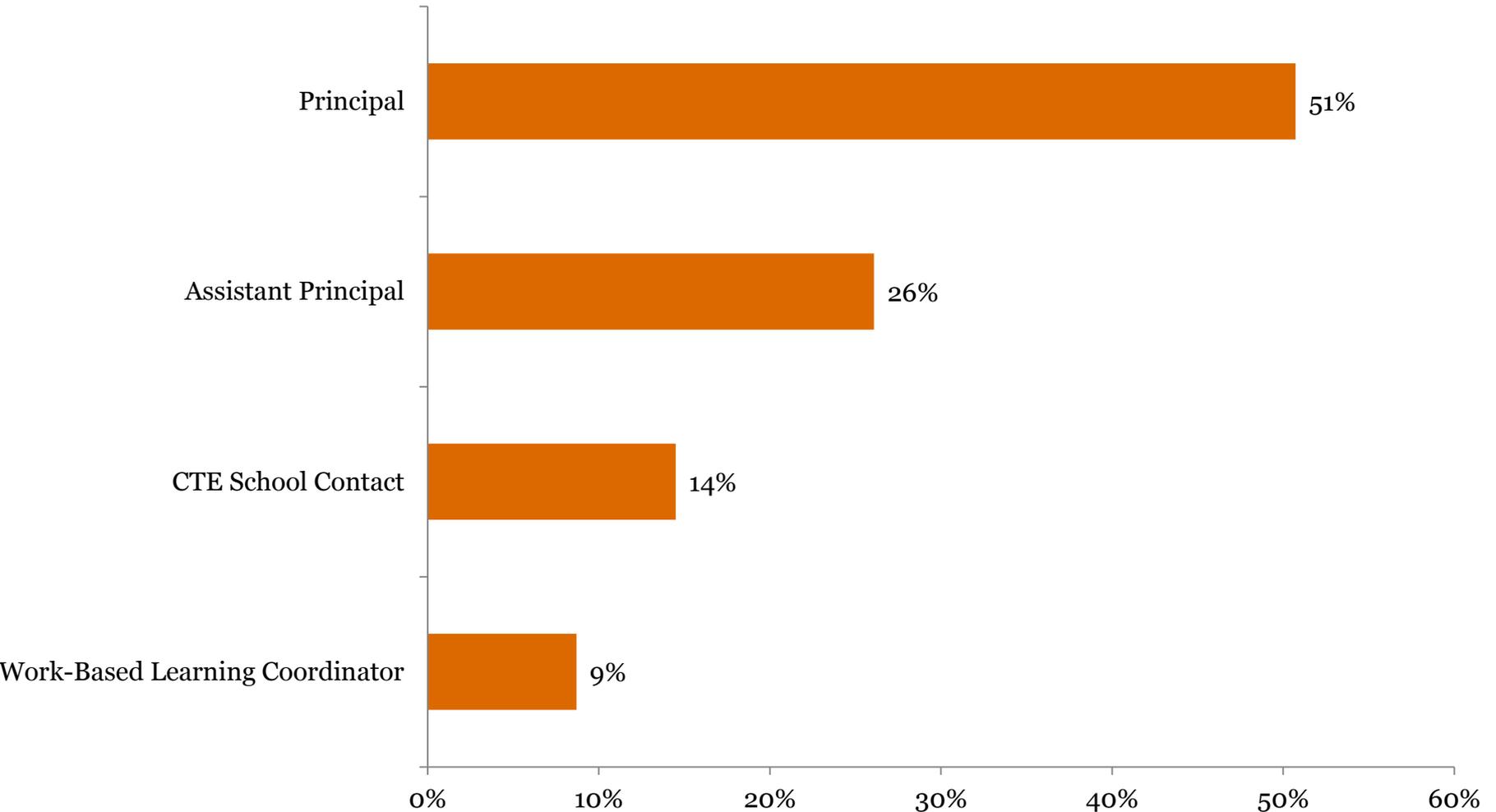


Base: 57

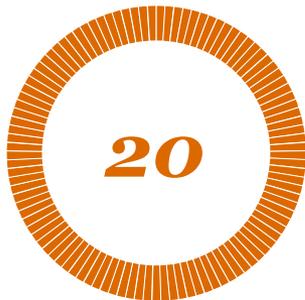
Base: 57

Note: Questions only asked to those who selected 'School with CTE program(s)' at D1  
CTE Schools Survey  
PwC

## *School principals provided the majority of responses*



# The majority of CTE students did not graduate with a CTE-endorsed diploma

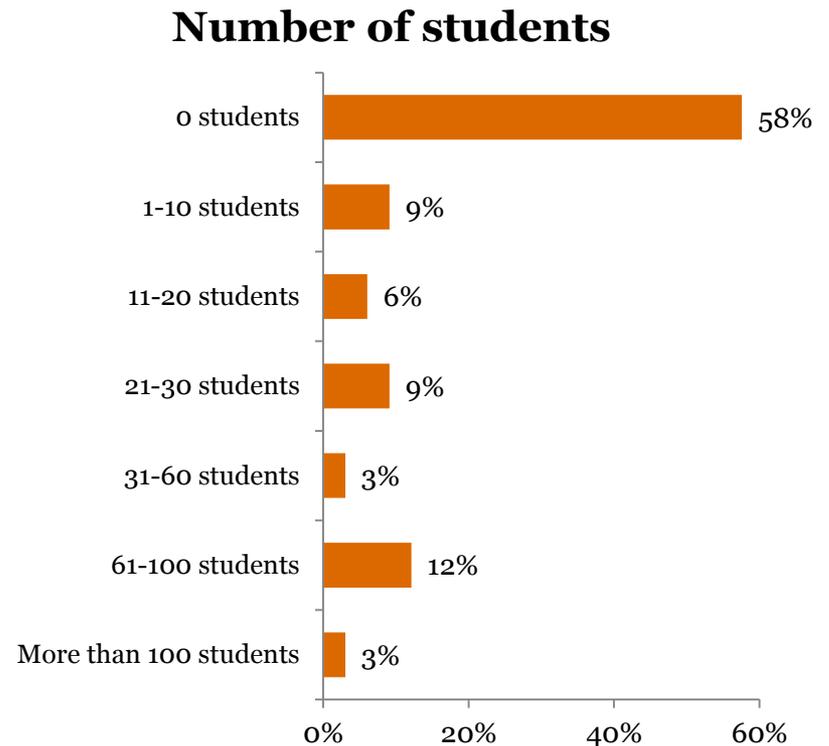


Average

## Number of Students

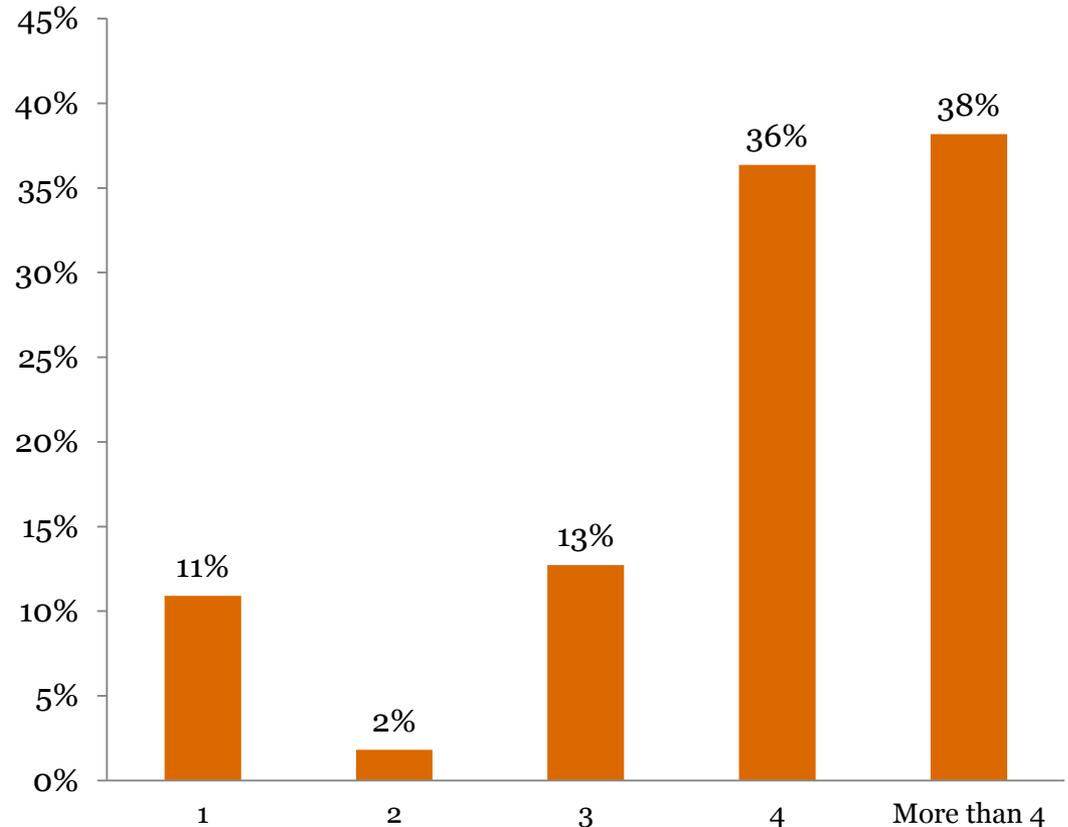
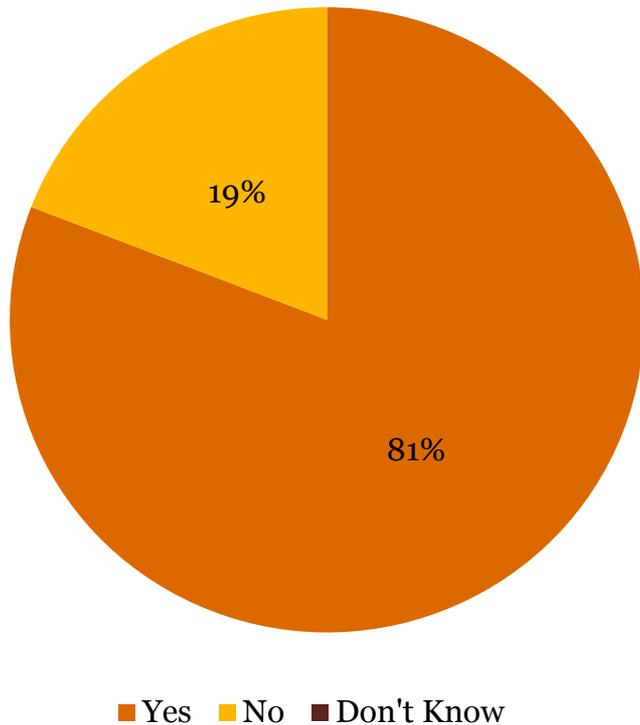
Minimum number of students	Maximum number of students
0	172

Note: 33 people said 'Not Applicable'



***Almost all CTE program schools have a work based learning coordinator...***

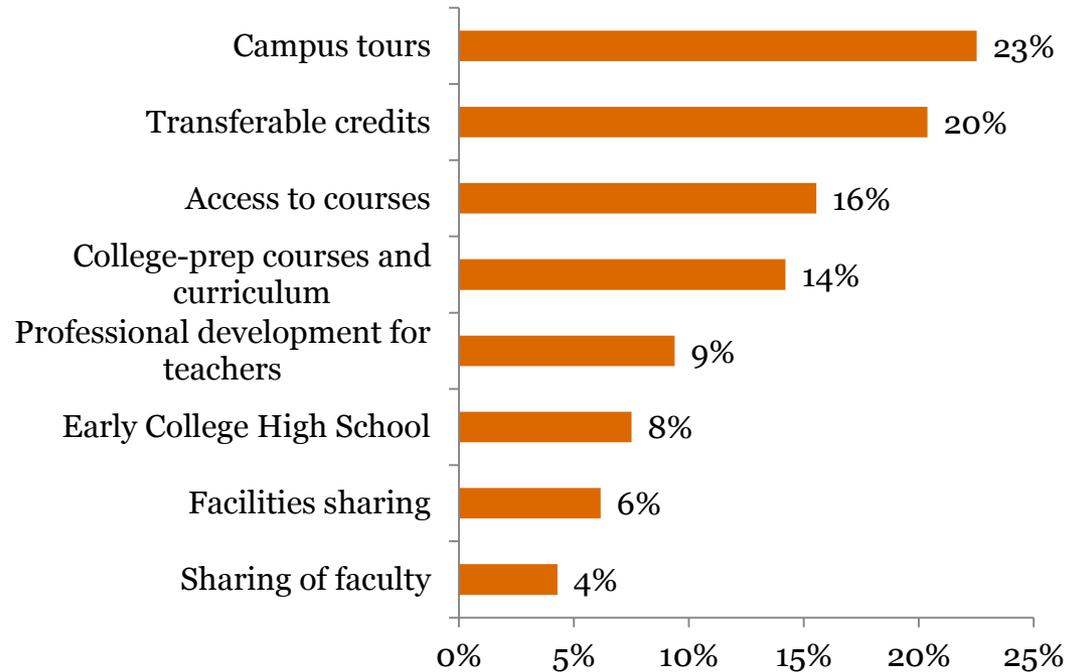
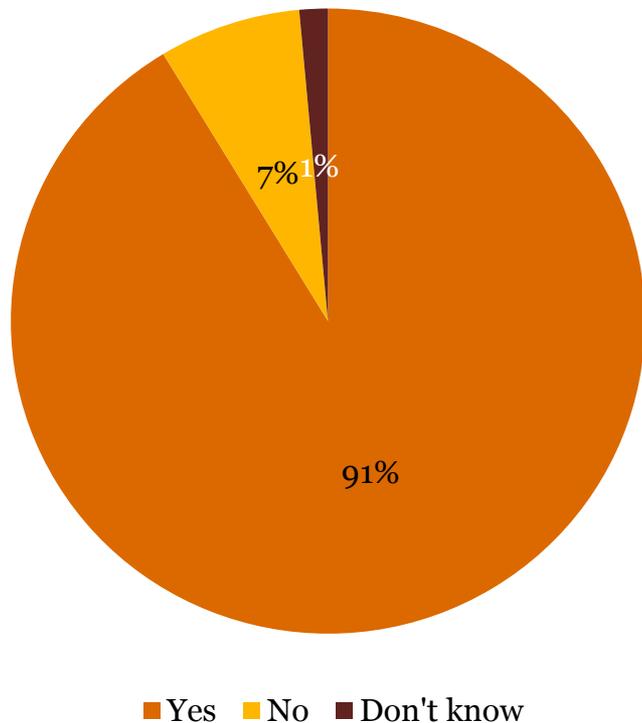
***...but most are teaching a full class load.***



**Post-secondary institutions are highly engaged.**

**Most of the relationships are focused on college prep and access to courses**

**Nature of relationship – summary table**



Base: 69

Base: 373 (Note: Multi-response question: Base represents the count of total number of options selected)

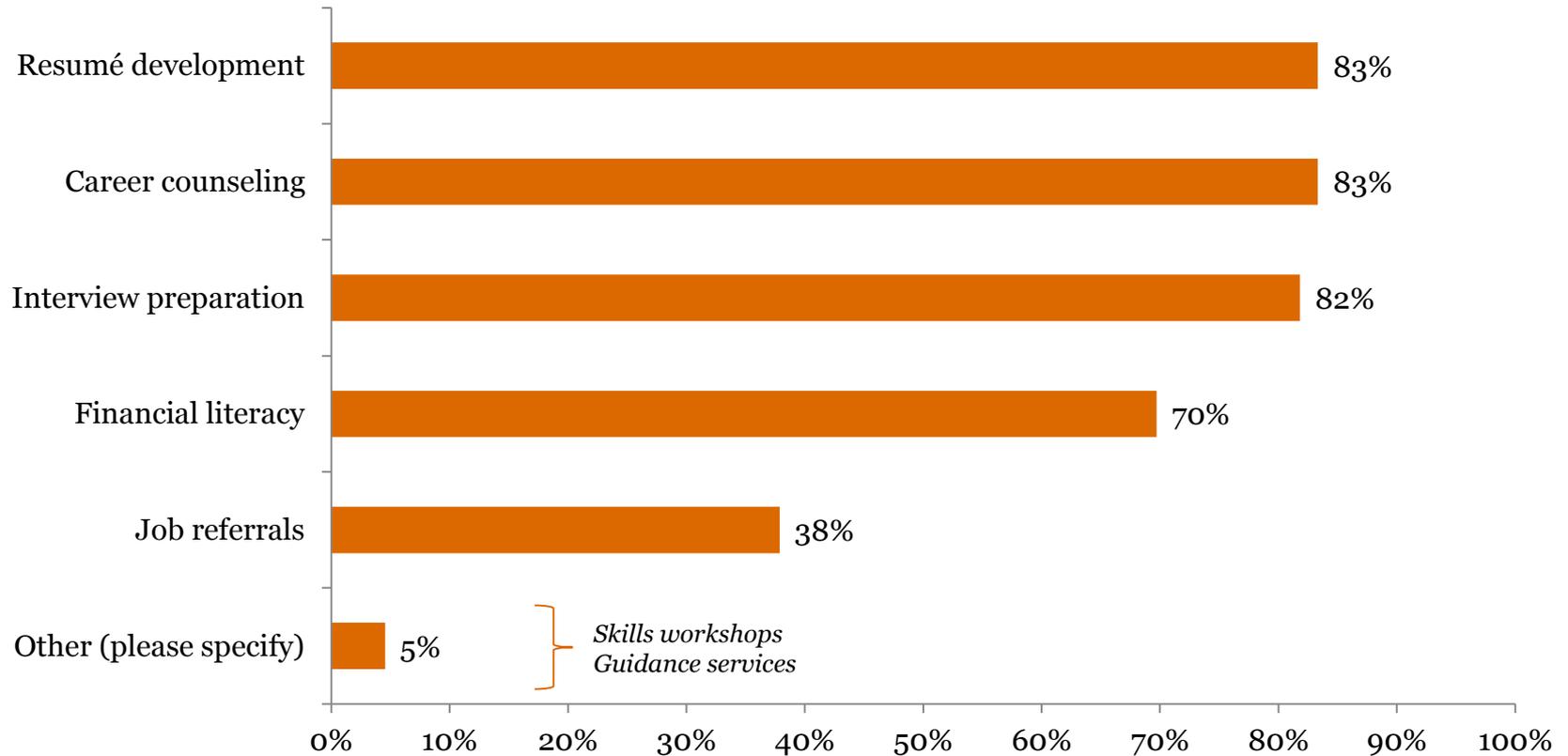
Note: Question only asked to those who entered a response at D13

# *Section 3.2 – CTE programs*

## *Section 3.2 – CTE programs – key findings*

- Over 25% of respondents did not agree that teachers in CTE programs are adequately prepared for their role.
- 88% of respondents agreed that ‘the skills CTE students are learning are relevant to today’s workplace’, however 23% did not agree that students in their school are ‘employable following graduation’.
- Students earning industry recognized credentials (82%) is valued as importantly in defining CTE success as graduation rates (83%).
- NYSED/DOE Program Approval Process (74%) and Inadequate funding (62%) were stated most often in the top 3 challenges CTE programs face. Additionally, when asked what is the most important change that could be made to enhance CTE in New York City, 22% mentioned the application/approval process in their response (contrary to CTE dedicated schools responses).

# The majority of schools offer a wide range of support services to students who decide not to go on to college.



Base: 66

Note: This is a multi-response question

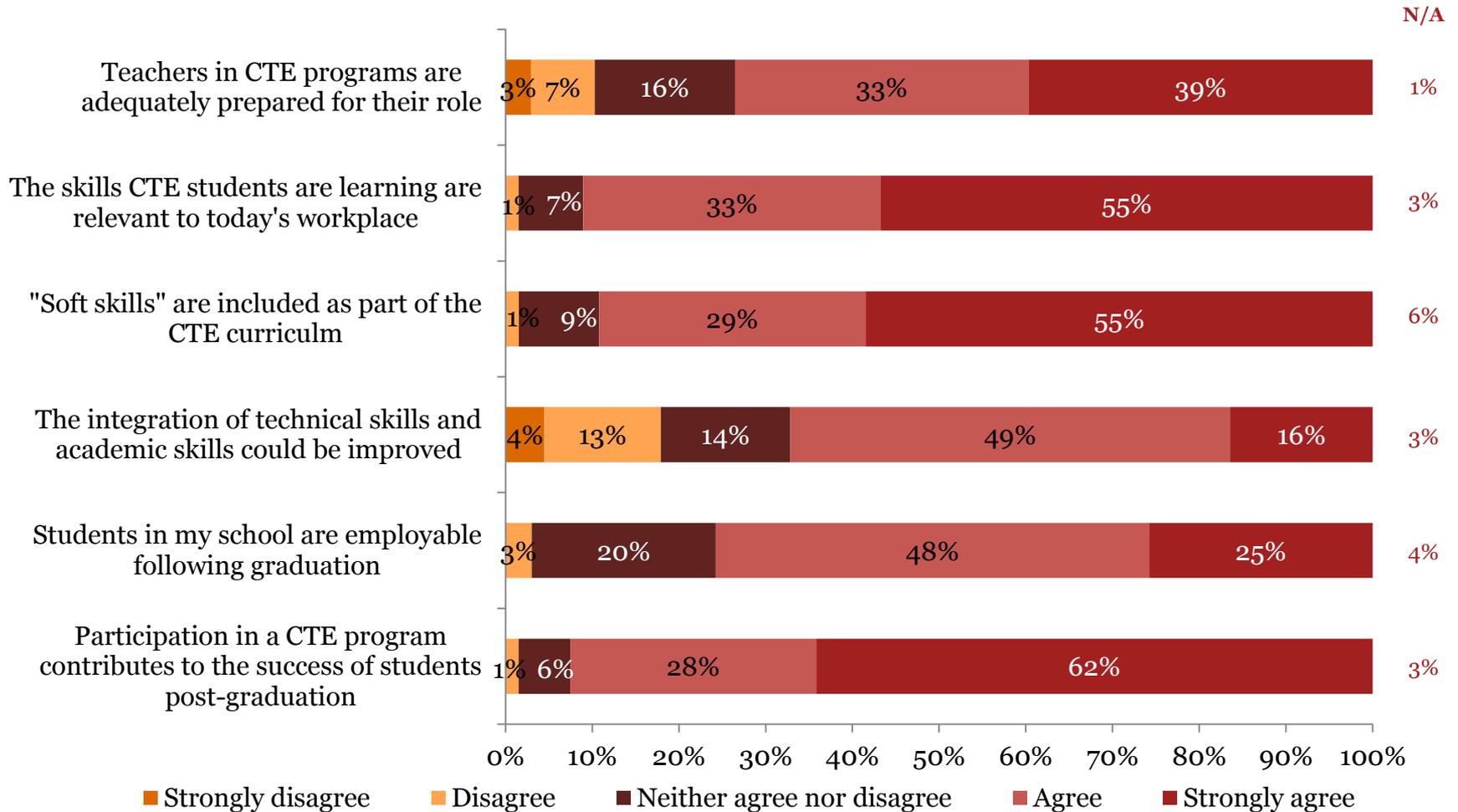
CTE Schools Survey

PwC

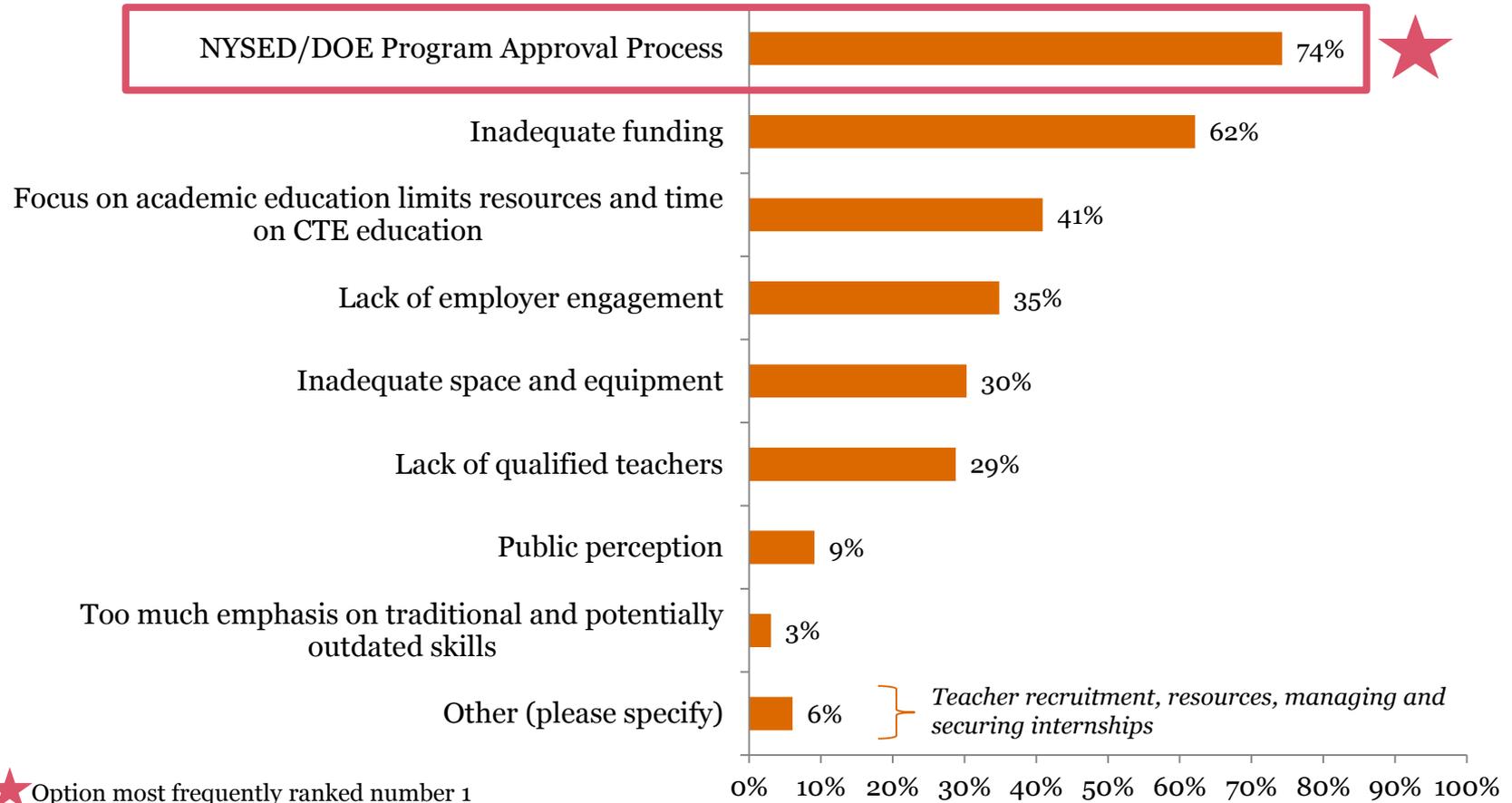
December 2014

Slide 74

# Overall, CTE programs are seen as relevant to today's workplace and contributing to student success.



# Inadequate funding and the program approval process are by far the biggest challenges



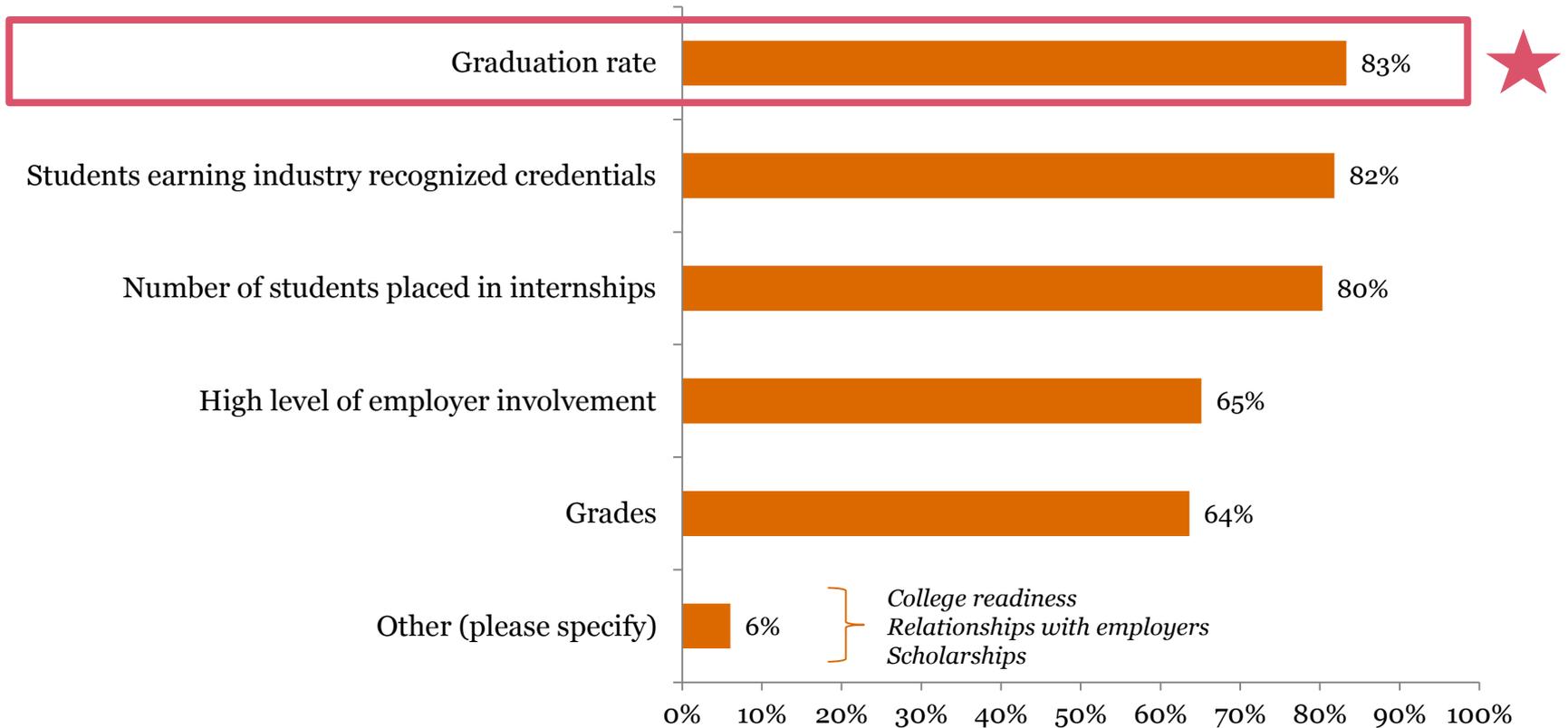
Base: 66

Note: Respondents were asked to rank their THREE most important factors.

CTE Schools Survey

PwC

# Industry recognized credentials and internships are crucial to success



★ Option most frequently ranked number 1

Base: 66

Note: Respondents were asked to rank their THREE most important factors.

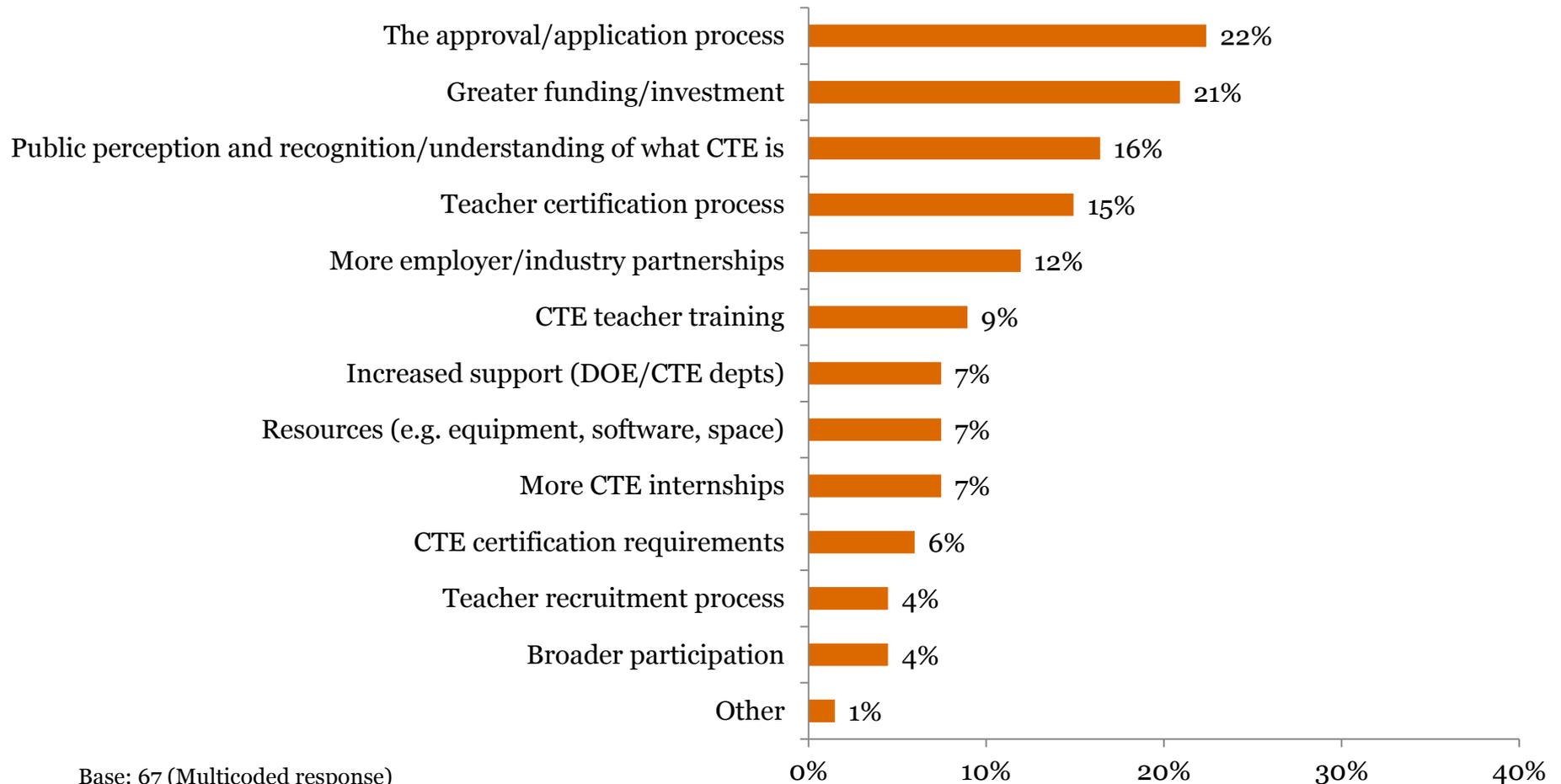
CTE Schools Survey

PwC

December 2014

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# Changes to the program approval process and increased funding would strengthen CTE Programs



Base: 67 (Multicoded response)

CTE Schools Survey

PwC

December 2014

Slide 78

## ***In your opinion what is the most important change that could be made to enhance CTE in New York City – Selected comments***

***A considerate effort on the part of the City and DOE to improve the link between private sector and CTE programs .***

***To streamline the state approval process.***

***Training work based learning coordinators.***

***Employers must be made more aware of the value of a CTE endorsed diploma and be willing to hire students who have achieved such accomplishment over another candidate.***

***Easy access to CTE curriculum and resources for the classroom.***

***Public Perception and recognition within the academic environment.***

***Continuing to emphasize CTE as an innovative, progressive and transformative component of education in New York City.***

***Increase in number of internship sites and funding.***

***We need certified individuals to hire to enable our programs to become CTE certified.***

# *Section 3.3 – Partner Engagement*

## *Section 3.3 – Partner Engagement – key findings*

- In total, 50 schools with CTE programs named at least 1 or more private sector employers; and 55 schools named at least 1 or more nonprofit organizations.
- In total, 149 employers and 166 non-profit organizations are engaged in schools with CTE programs.
- For the majority of employers/nonprofits listed, the level of engagement was rated as ‘very’ or ‘totally’ successful.
- Of these, the majority stated the nature of their relationship was through internships (21%) and guest speakers (16%).
- In total, 43 employers and 52 nonprofits carry out mentoring activities in schools with CTE programs.
- Of those relationships that are based on mentoring, 55% involve one-on-one mentoring with a private sector professional; 58% mentor several times a year; and 65% of mentoring programs are 1-3 years in length.

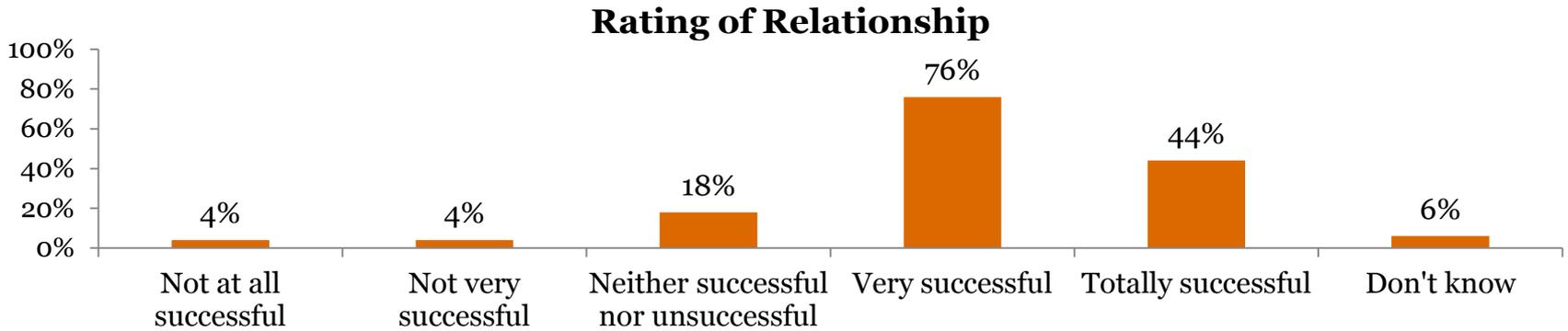
## *Section 3.3 – Partner Engagement – key findings*

- 28% of schools do not track employer/organization engagement and of those who do, the majority track using a manual list (43%).
- 47% of respondents felt that their relationship with employers could be greatly improved. When exploring further the verbatim comments around this area, 53% of responses mentioned increased employer integration as key.
- 73% of respondents said additional financial resources are most important to strengthen CTE programs in the long term.
- Of the CTE program schools, 36% did not agree that ‘CTE is deeply embedded in the culture’ of their school.

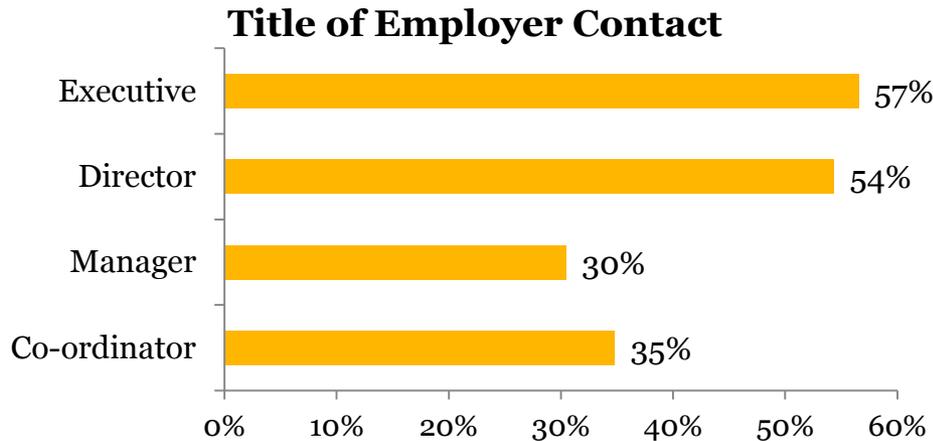
## *Section 3.3 – Partner Engagement – key findings*

- 58% of respondents said that during the 2013-2014 school year there was a gap between the number of internship placements and the desired number of placements, with the average gap being a shortfall of 35 students. The main reason for this was ‘lack of internships available’ (54%).
- Internship selection for the majority of students is based on recommendations (87%) and grades (70%).
- The average gap between the actual number of internship placements and the desired number of internship placements was a shortfall of 35 students (compared to a shortfall of 87 students in CTE dedicated schools).
- Justice Resource Center, Virtual Enterprise and National Academy Foundation (NAF) were the three most frequently mentioned active support services.
- Justice Resource Center was the support service with the highest ranking (83%) for ‘extremely satisfied’ with regards to support provided to schools.

# Level of engagement with private sector employers – Summary tables



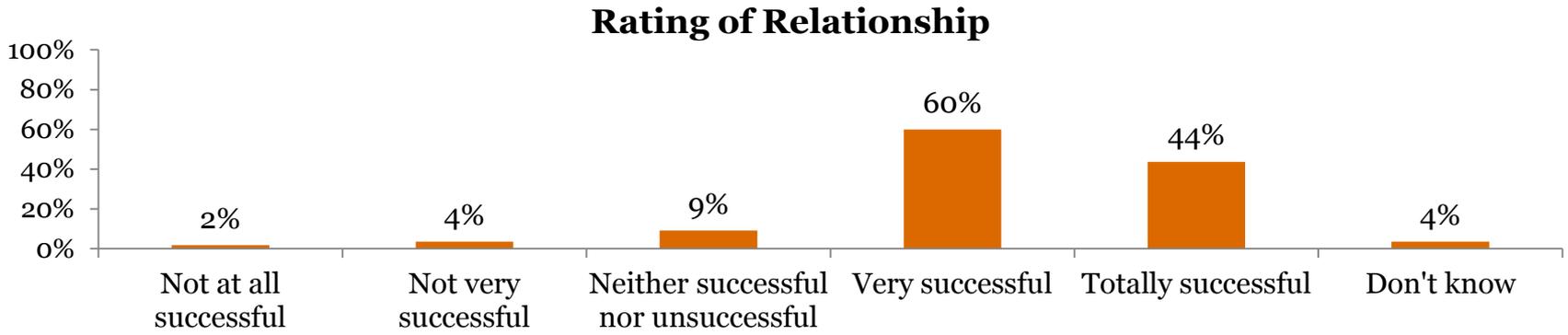
Base: 50  
 Note: This is a multi-response question



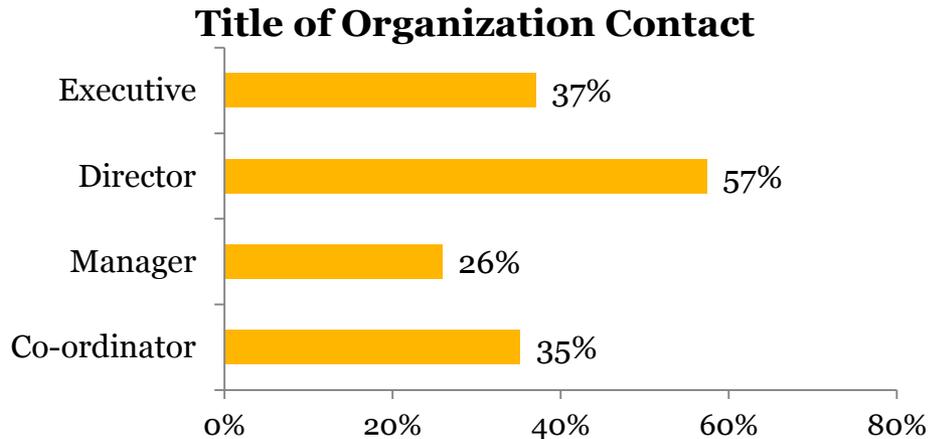
Base: 46

*Employers who are involved range from JPMC, Verizon and Siemens to B&H Photo and The Steinway Court Animal Clinic.*

# Level of engagement with nonprofit organization(s) – Summary tables



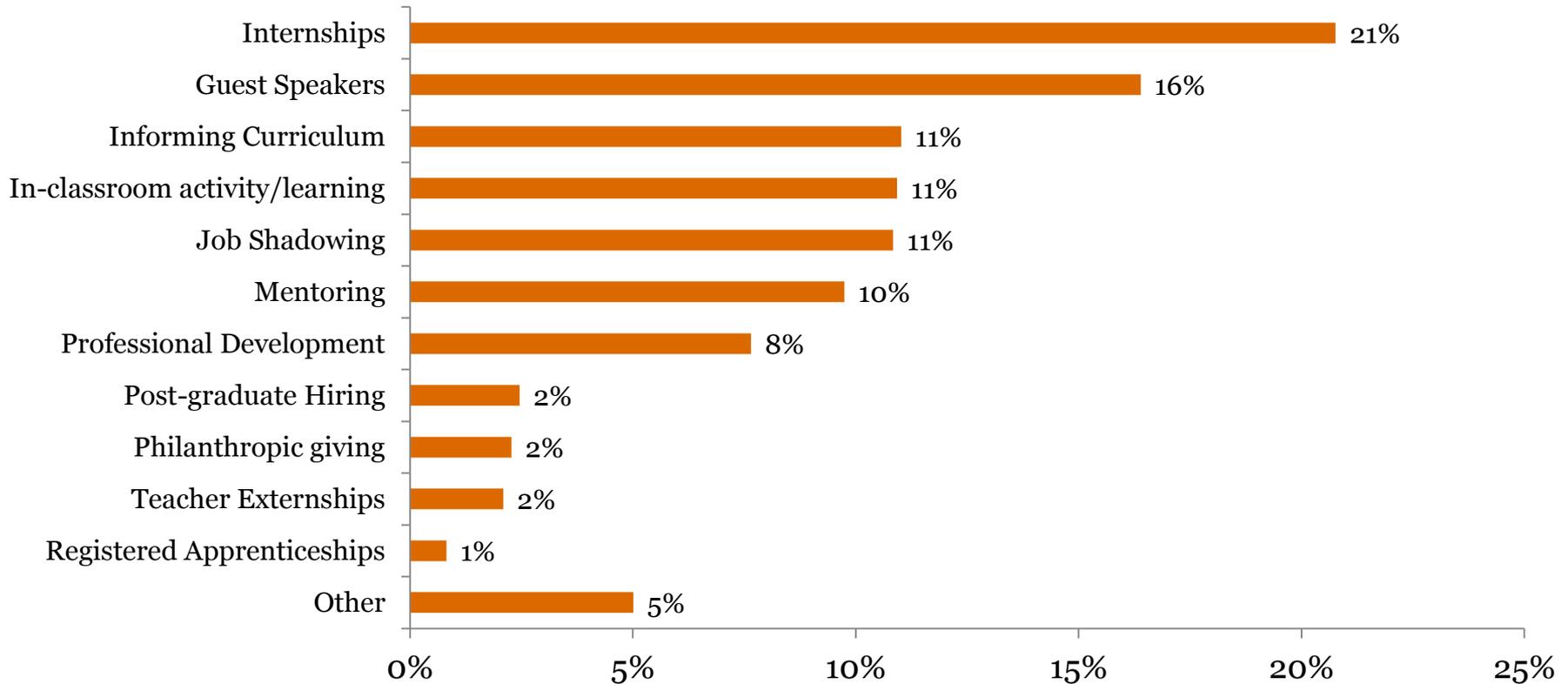
Base: 55  
 Note: This is a multi-response question



Base: 54

*Organizations include New York City Police Department, American Folk Art Museum, Staten Island Zoo and Theatre Development Fund.*

# Employer and non-profit engagement varies widely across programs



Base: 1098 (Note: Multi-response question: Base represents the count of total number of options selected)

Note: Question only asked to those who entered any response at Q1 or Q2. The graph presents the number of times each option was selected across all employers/nonprofit organizations.

Note: 'Other' responses are summarized on slide 87.

## ***Please summarize any other type of relationship you have with these employers/organizations – Verbatim responses***

*Harlem Biospace is creating a summer maker-space program that is available to our students and that we expect to co-facilitate with our staff. Siemens provides significant broad support through time with one employee in particular.*

*These organizations offer their knowledge of the current standards and innovations in technology and proper job attitudes and work ethics employers find desirable.*

*Lincoln Center Education is the founding cultural arts partner for the school.*

*Many of these employers and organizations serve as members of our Advisory Board providing ongoing guidance and review.*

*Some have helped us with press releases to the community to raise awareness about our program.*

*After school activities for students in different subject areas.*

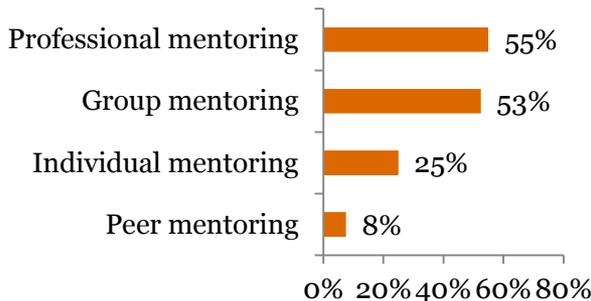
*Many of our organizations have served as panelists for assemblies and college/career fairs. Some have provided internship opportunities.*

# Most mentoring is by professionals but frequency is only a few times a year

## Mentoring type



**...provide professional mentoring**

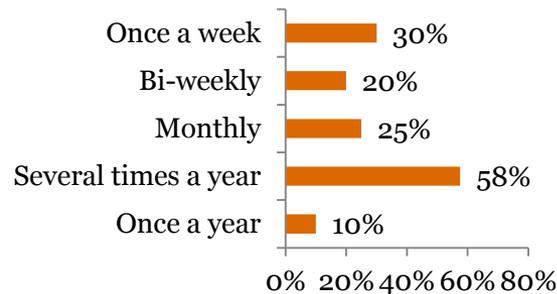


Base: 40

## Frequency of mentoring



**...mentor several times a year**

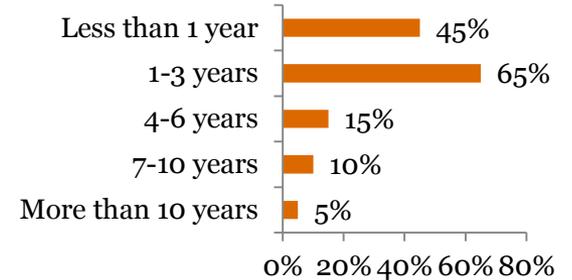


Base: 40

## Length of mentoring program

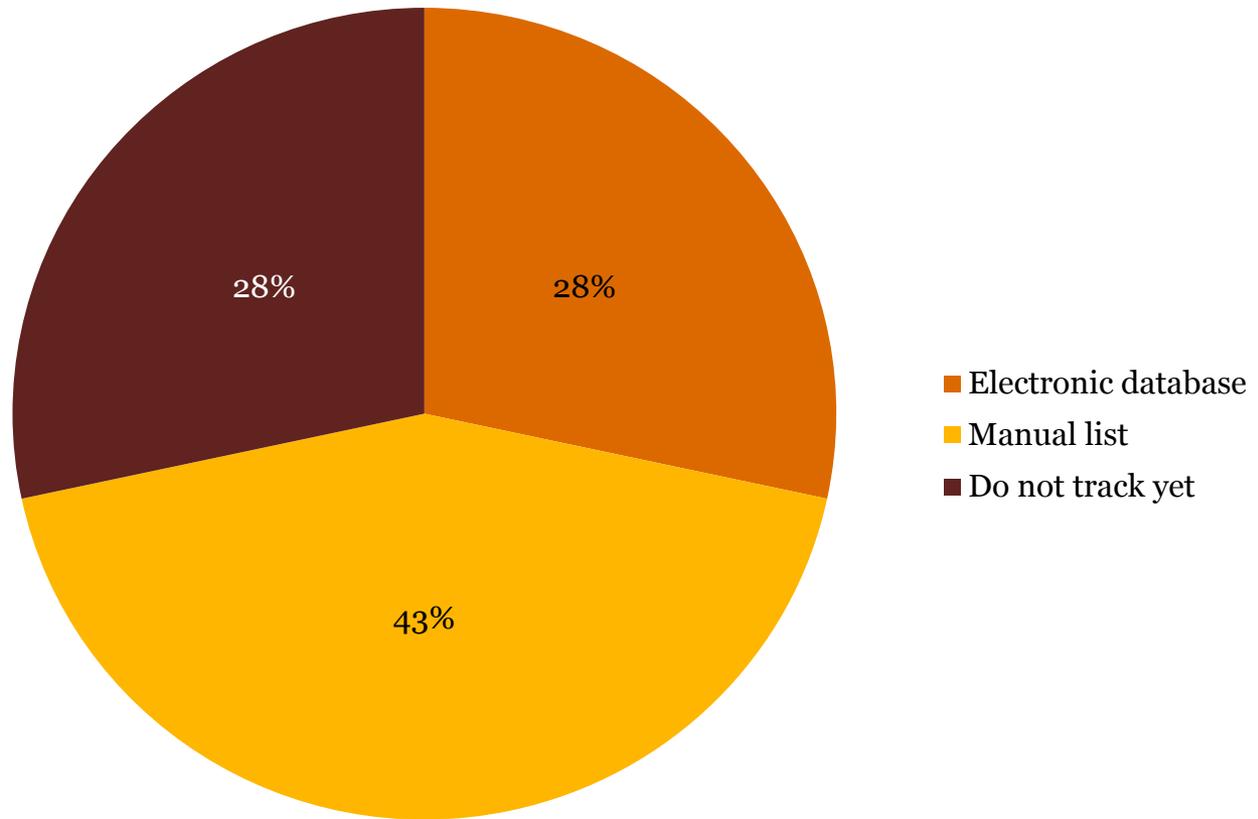


**...of programs are 1-3 years**

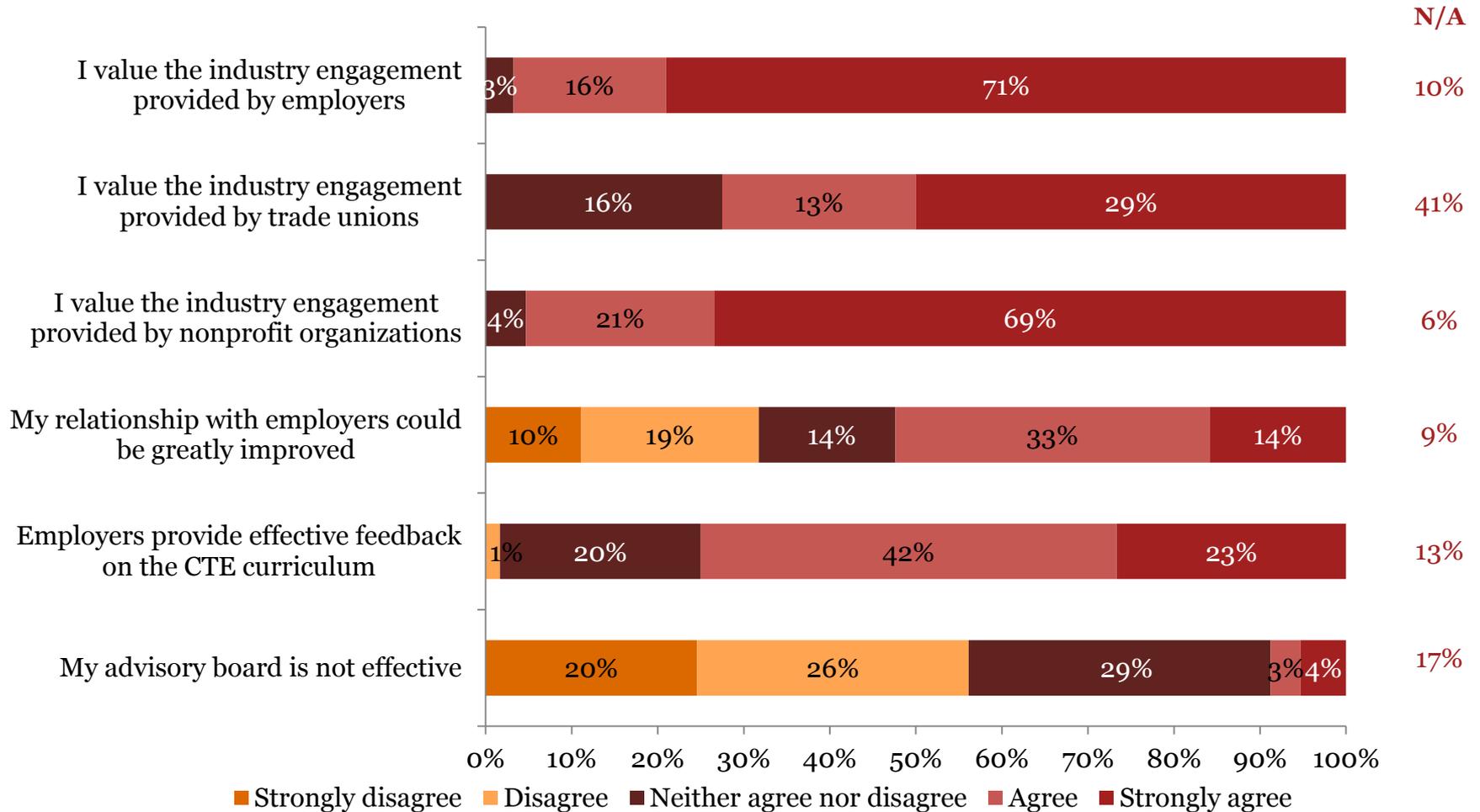


Base: 40

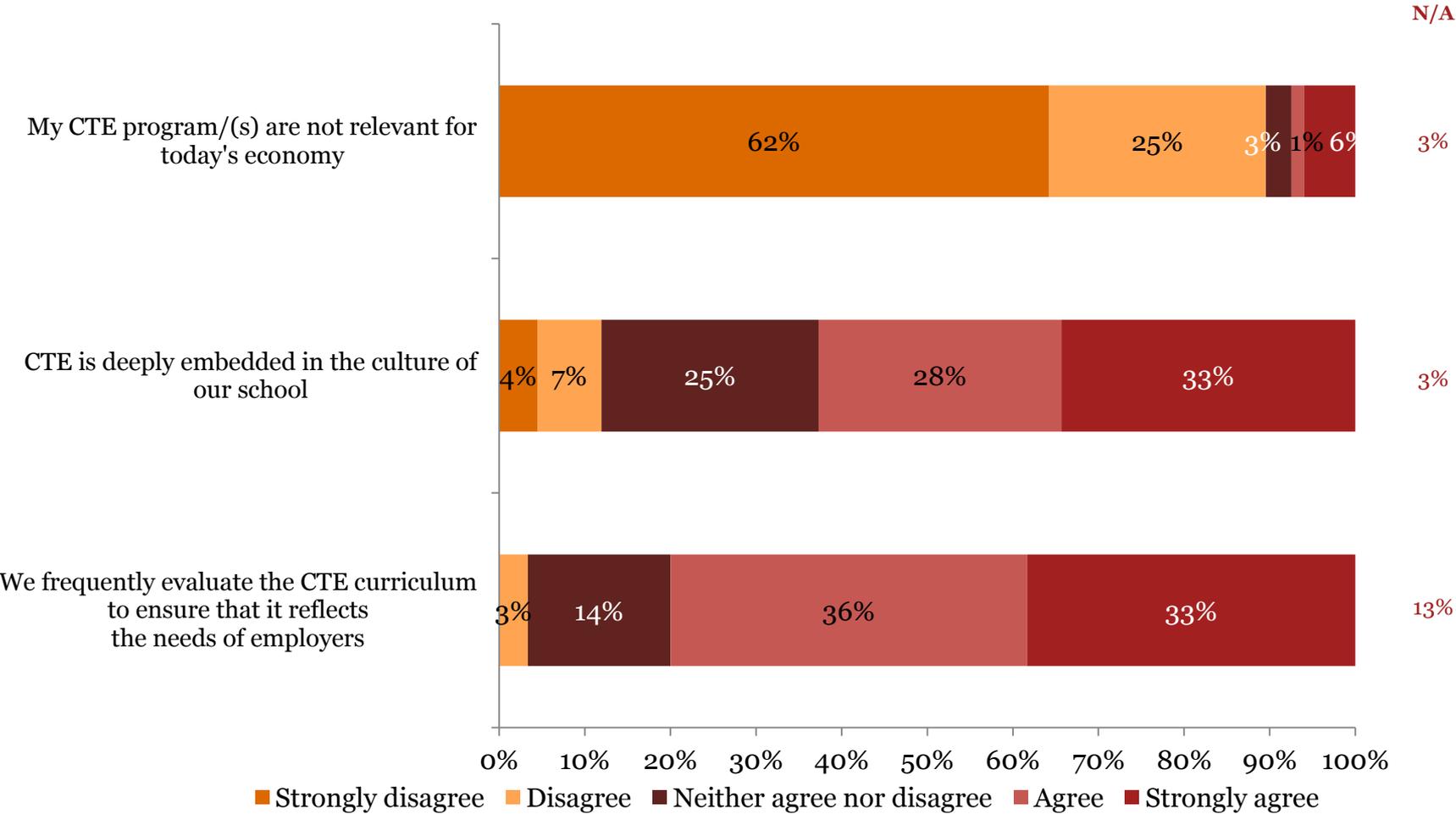
# *Almost half only track employer and non-profit engagement with a manual list*



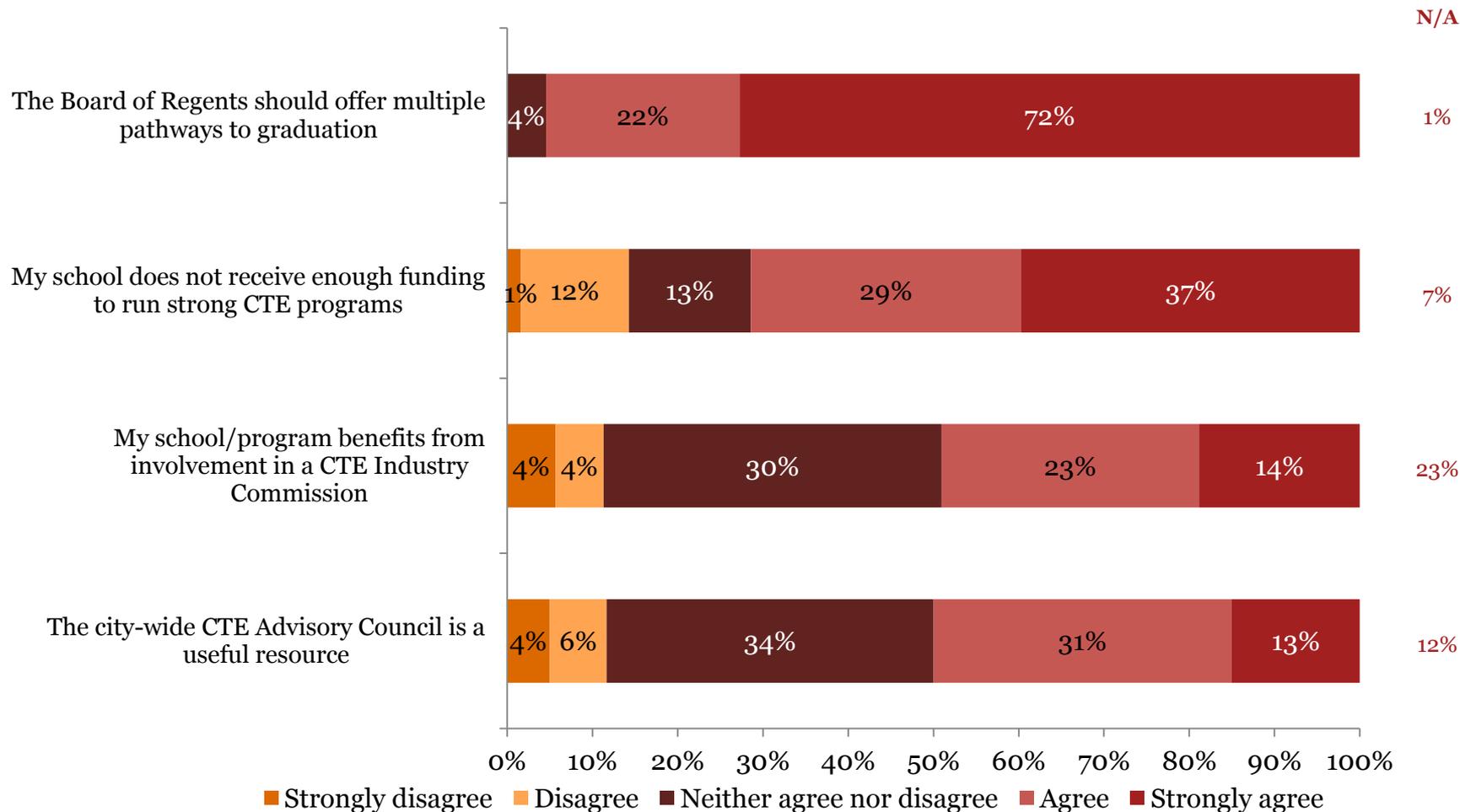
# Industry engagement is valued with some room for improvement



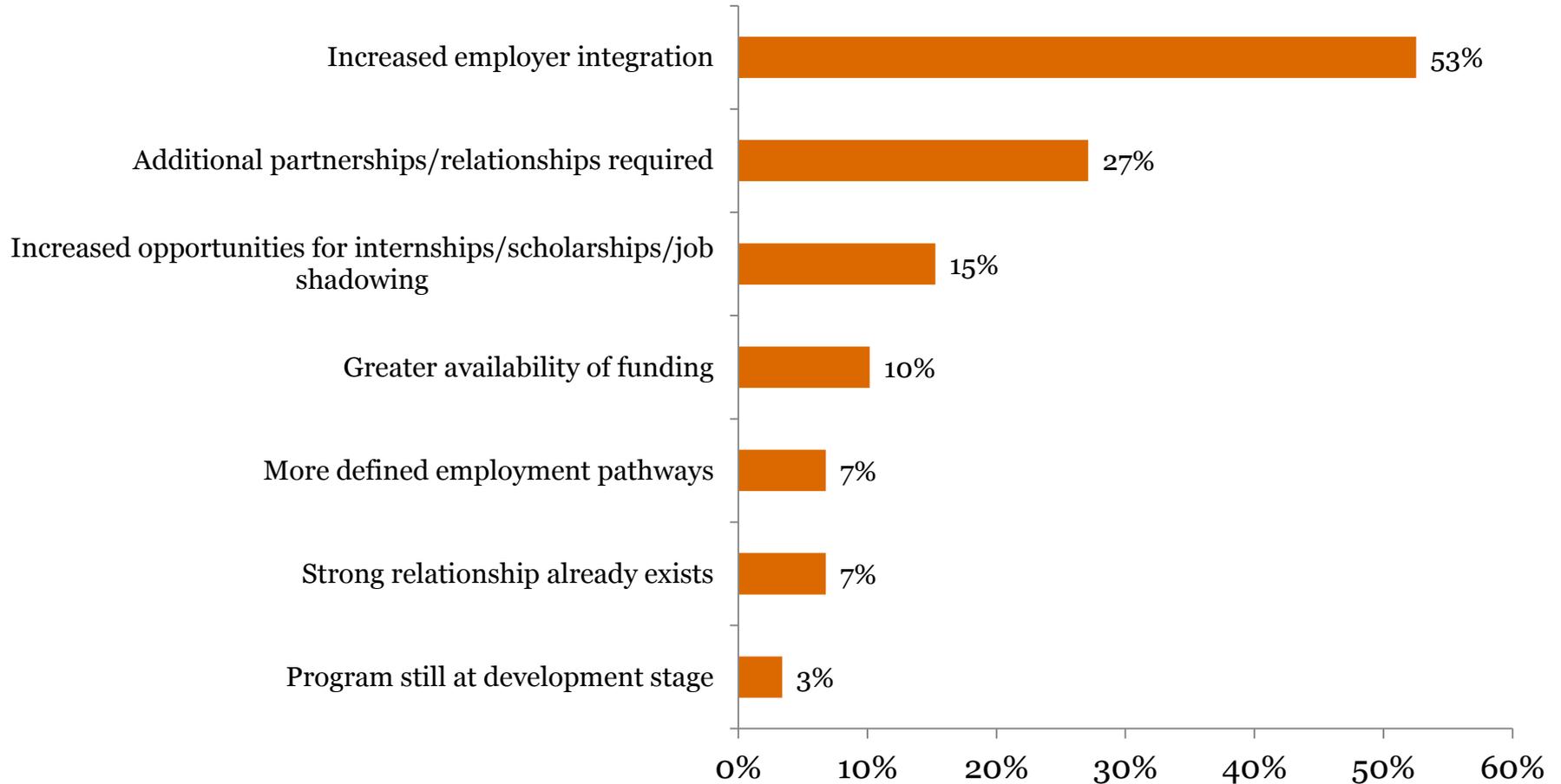
# The CTE curriculum is relevant and updated regularly



# Multiple pathways to graduation and increased funding would go a long way to strengthen programs



# Help in figuring out ways to better integrate employers in the CTE programs is by far the most common request



Base: 59 (Multicoded response)  
CTE Schools Survey  
PwC

## ***How could your relationship with employers be stronger? – Selected comments***

***More frequent interactive meeting where advisory board members can engage in joint collaborative planning.***

***Providing more hands on professional development and programs.***

***Providing more job shadowing.***

***Increased level of communication between the employer and the classroom instructor and Work Based Learning Coordinator.***

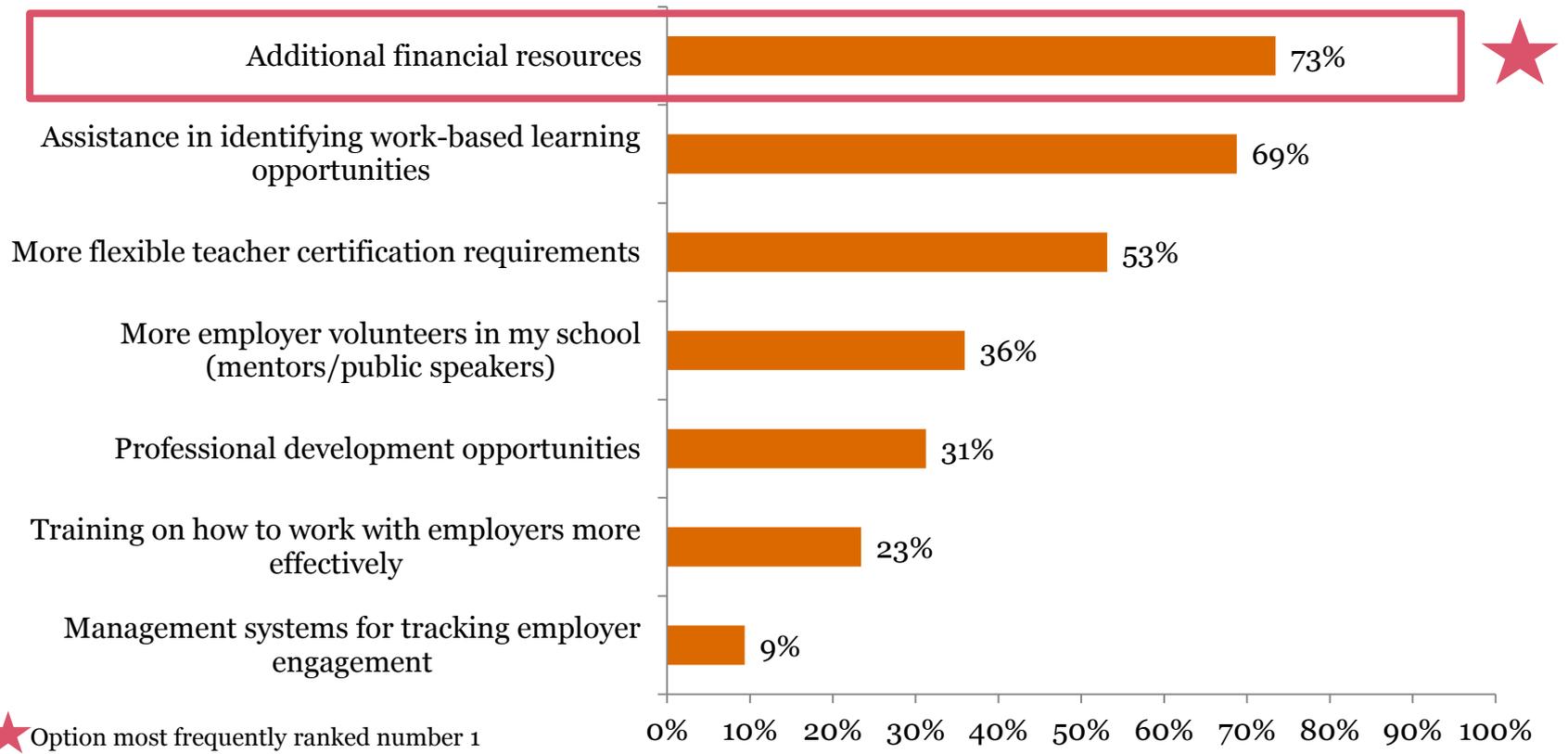
***We need more employers to develop relationships with.***

***Having access to an extensive city-wide database of potential employers and partners could open many more doors for our programs and our students as a whole.***

***Our relationship with employers could be stronger by the development of more opportunities for our students to engage in job shadowing and internship programs during the summer (such as the CTE scholars).***

***We need to create additional relationships that increase the quality and amount of internships and mentoring and align all efforts around CTE.***

# Identifying funding and work-based learning opportunities are challenges for almost all CTE programs



★ Option most frequently ranked number 1

Base: 64

Note: Respondents were asked to rank their THREE most important factors.

CTE Schools Survey

PwC

December 2014

Slide 95

***Most students in CTE programs did not have an internship last year; of those who did, about half were paid.***

### Number of Students with internships



Minimum number of students	Maximum number of students
0	129

Base: 68

### Percent of paid internship placements

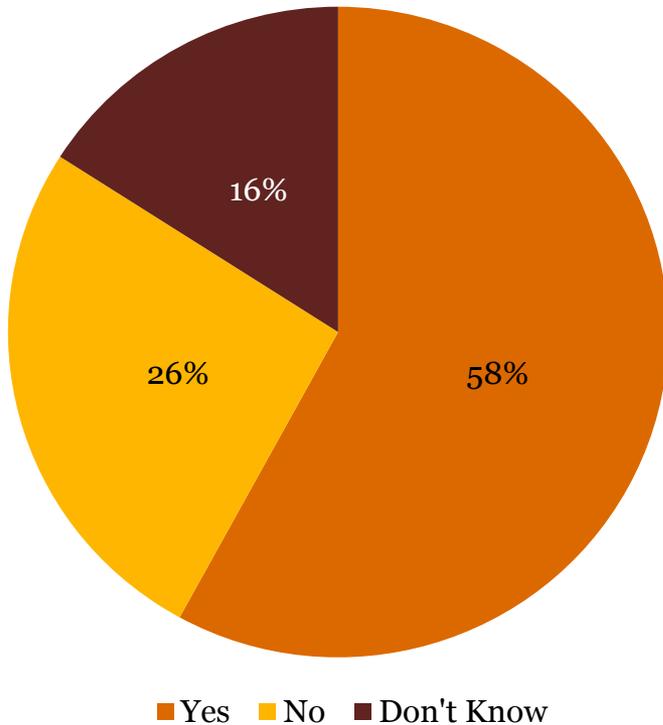


Minimum percent	Maximum percent
0%	100%

Base: 60

Note: Question only asked to those who reported 'number of students' as greater than '0' in Q9a

# Almost two-thirds of CTE programs reported needing more internships than were available.



## Number of placements

Minimum number of placements	Maximum number of placements
1	129

## Desired number

Minimum desired number	Maximum desired number
10	300

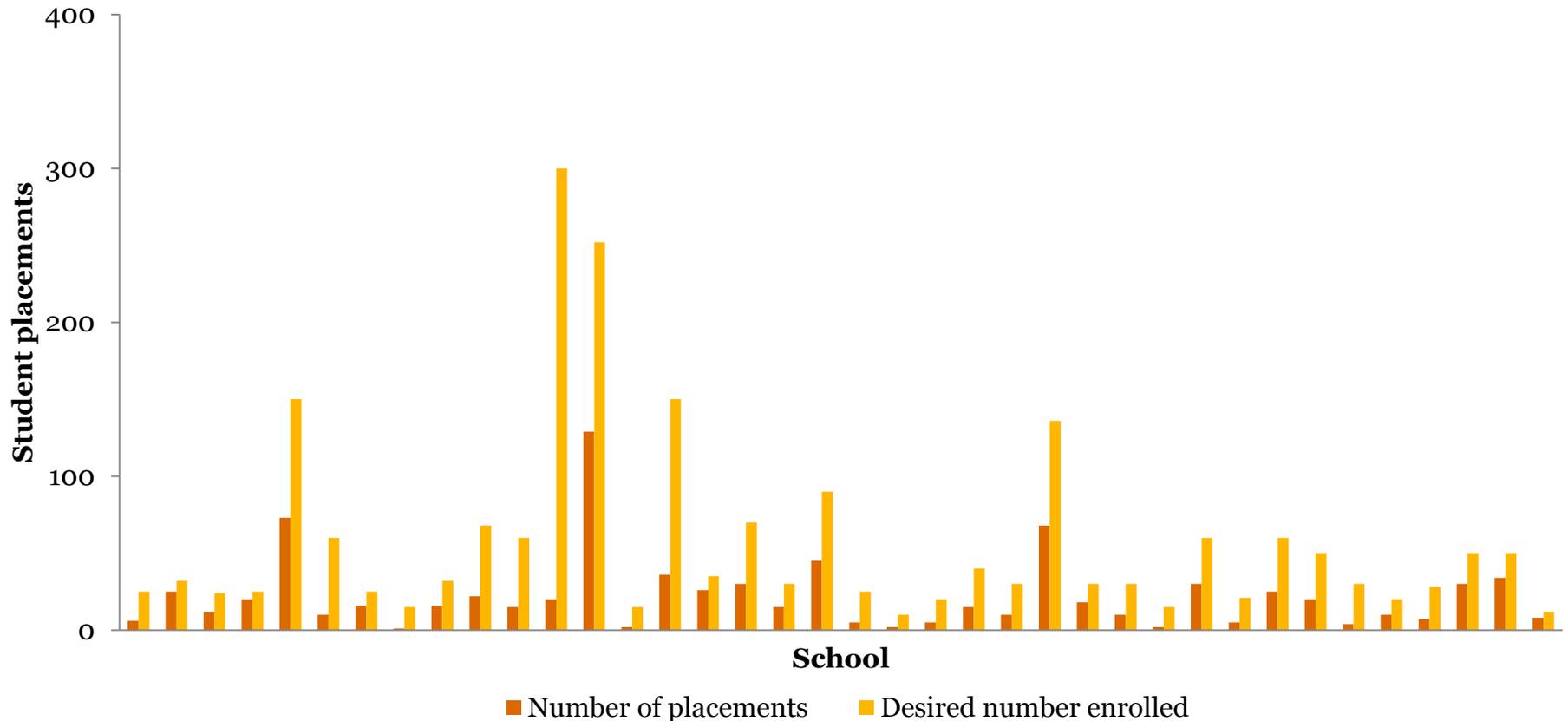
## Average gap

Minimum gap	Maximum gap
-4	-280

Base: 69

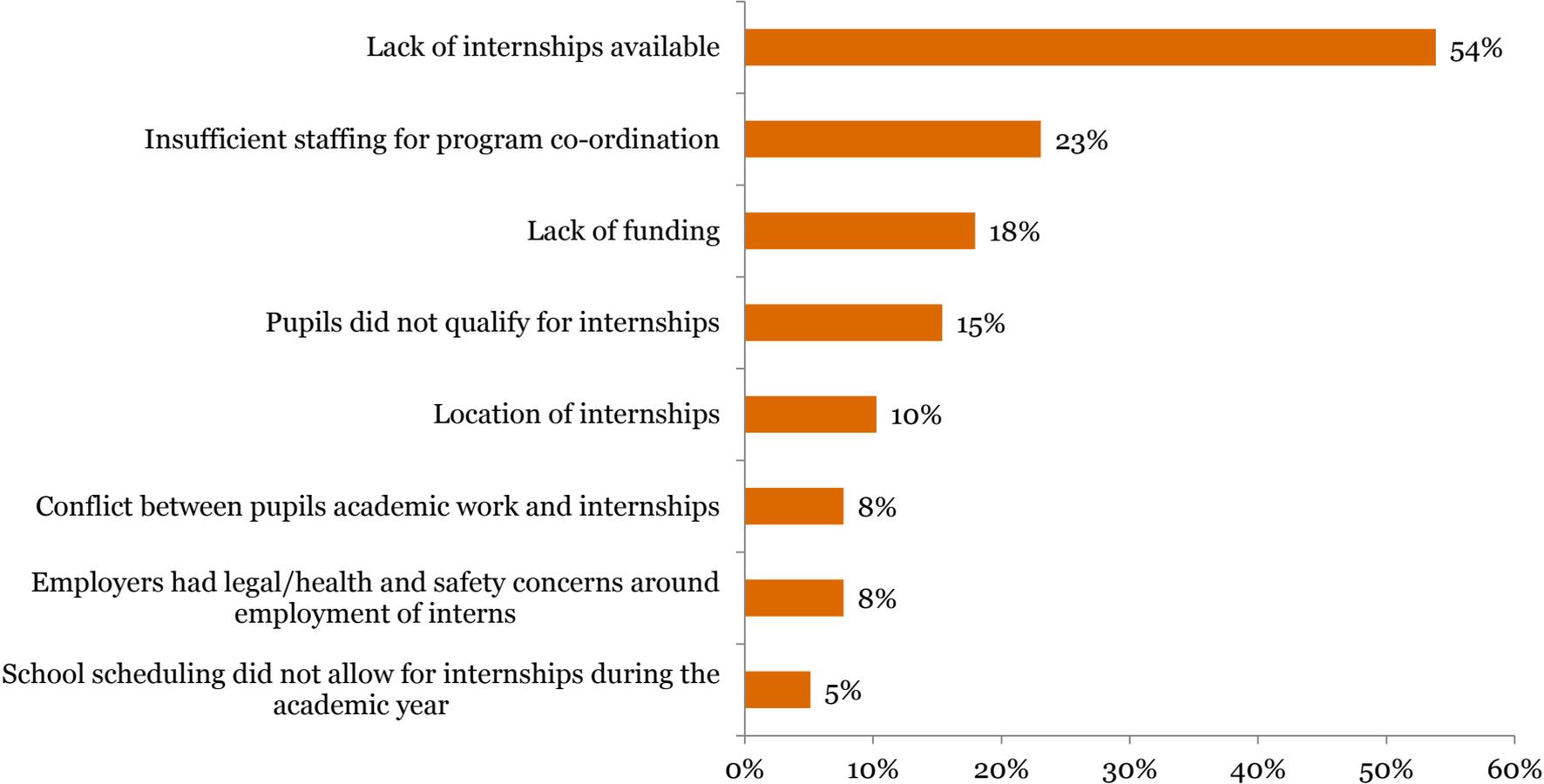
Note: Question only asked to who selected 'Yes' at Q10a  
 Note: Average gap calculated using only those who provided a response to both the number of internship placements and the desired number

# Gap analysis – Number of internship placements vs desired number enrolled – detailed breakdown by school



Note: Question only asked to those who selected 'Yes' at Q10a  
Note: Graph presents data from respondents who provided a response to both the number of internship placements and the desired number.

# There is a severe lack of internships available to students in CTE programs



Base: 39 (Multicoded response)  
CTE Schools Survey  
PwC

## ***Why was there a gap between the numbers of internship placements and desired number of internship placements? – Verbatim responses***

***There were not enough opportunities for our students. The person who is supposed to be my work based coordinator is still waiting on his CTE license from the state.***

***There is not enough time to recruit more employers. Students have difficulty managing school work and internships that have a long travelling time.***

***Lack of available internships and WBL partners.***

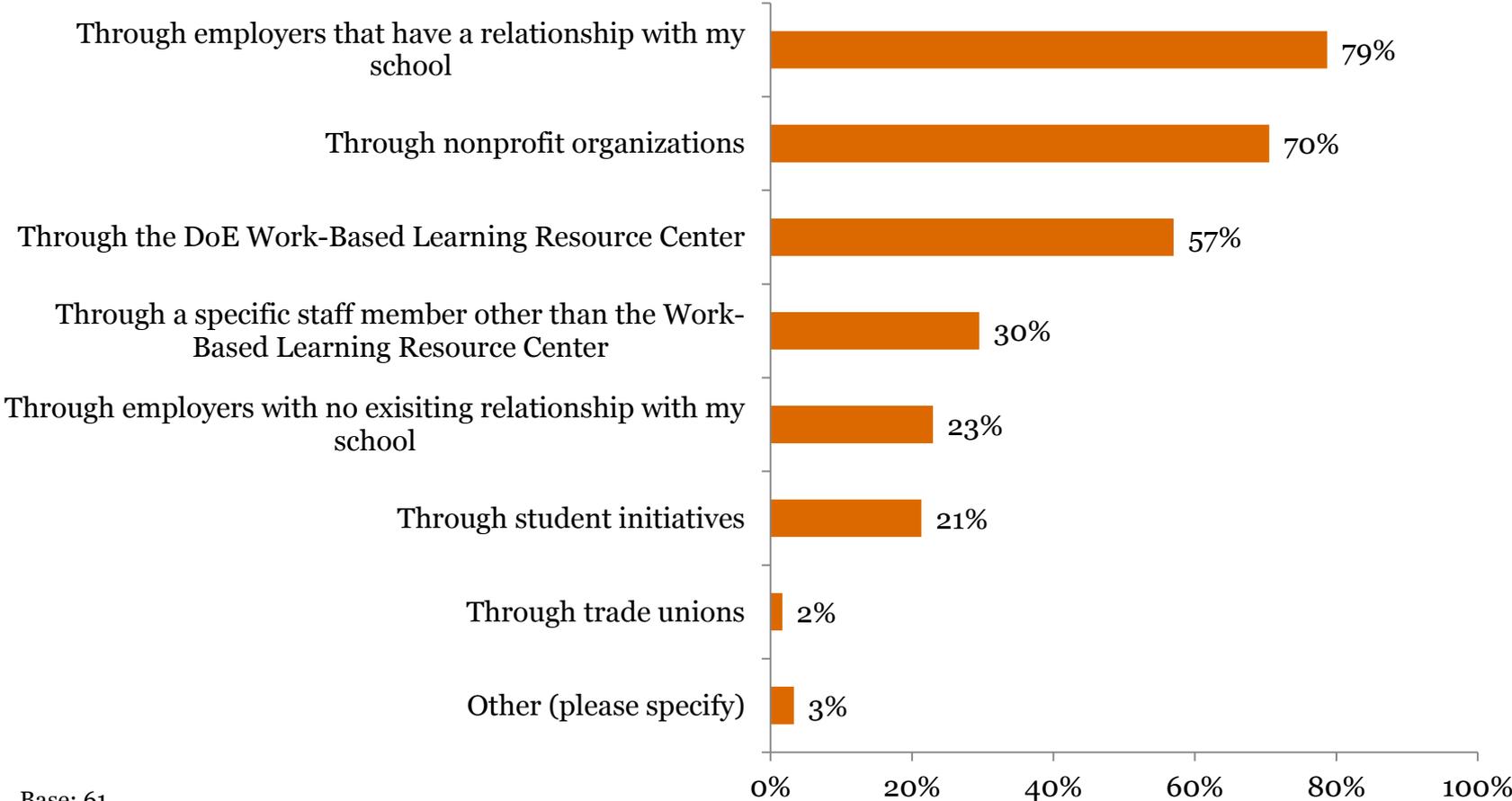
***There was no one person as the coordinator to reach out to companies for internships.***

***We have not created enough relationships to create enough internship opportunities for students who were interested. We also do not have adequate staff to create those relationships, organize the opportunities and the efforts of students interested in participating in them.***

***We did not have enough employers the students were interested in.***

***I do not have enough funding for a work based learning coordinator. This makes it very difficult to organize the work around work based learning.***

# There is no one single way to find internships

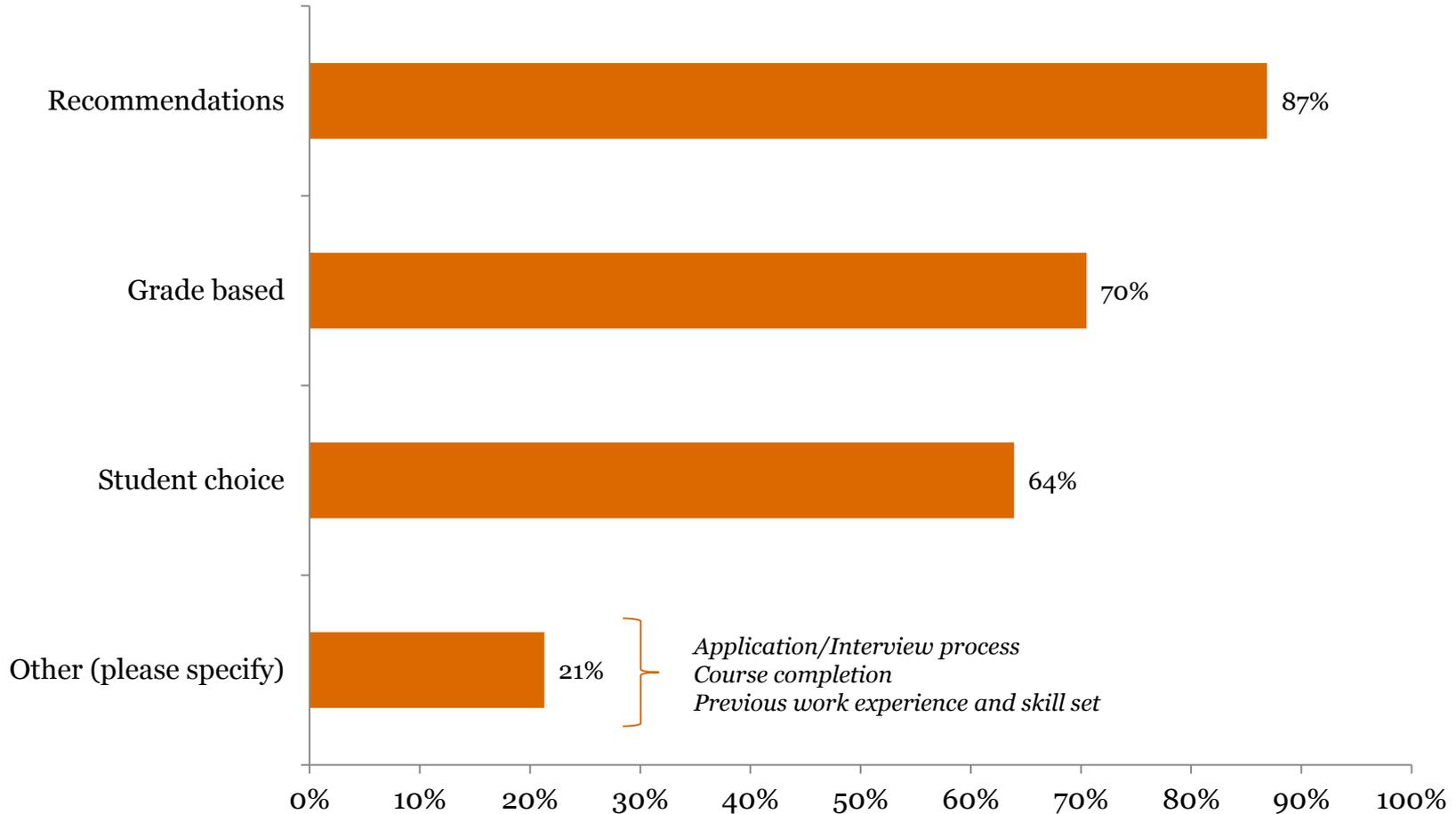


Base: 61

Note: Question only asked to those who entered 'number of students' as greater than '0' at Q9a

Note: This is a multi-response question

# Students must have strong recommendations and grade in order to be placed in an internship



Base: 61

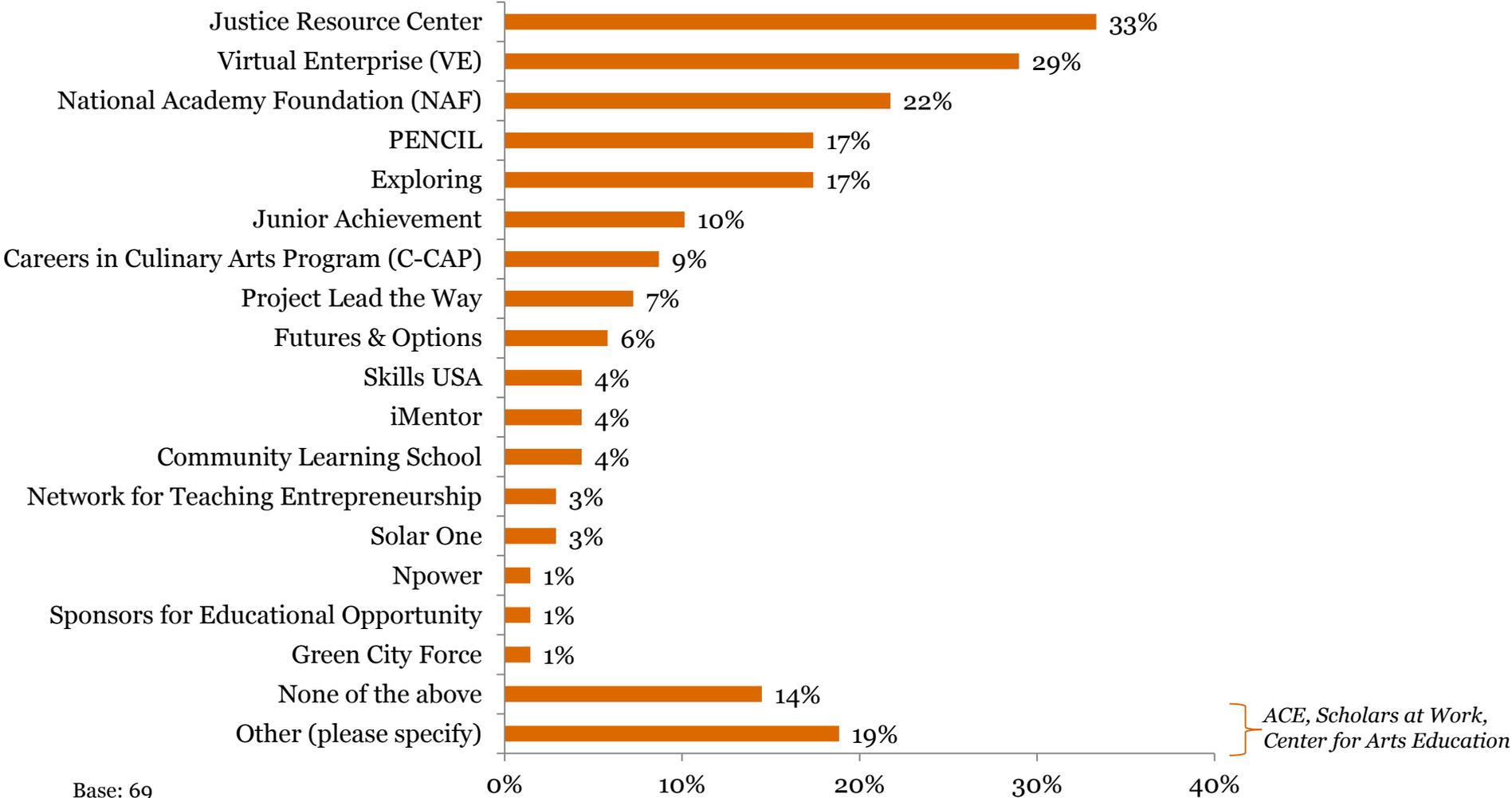
Note: Question only asked to those who entered 'number of students' as greater than '0' at Q9a

Note: This is a multi-response question

CTE Schools Survey

PwC

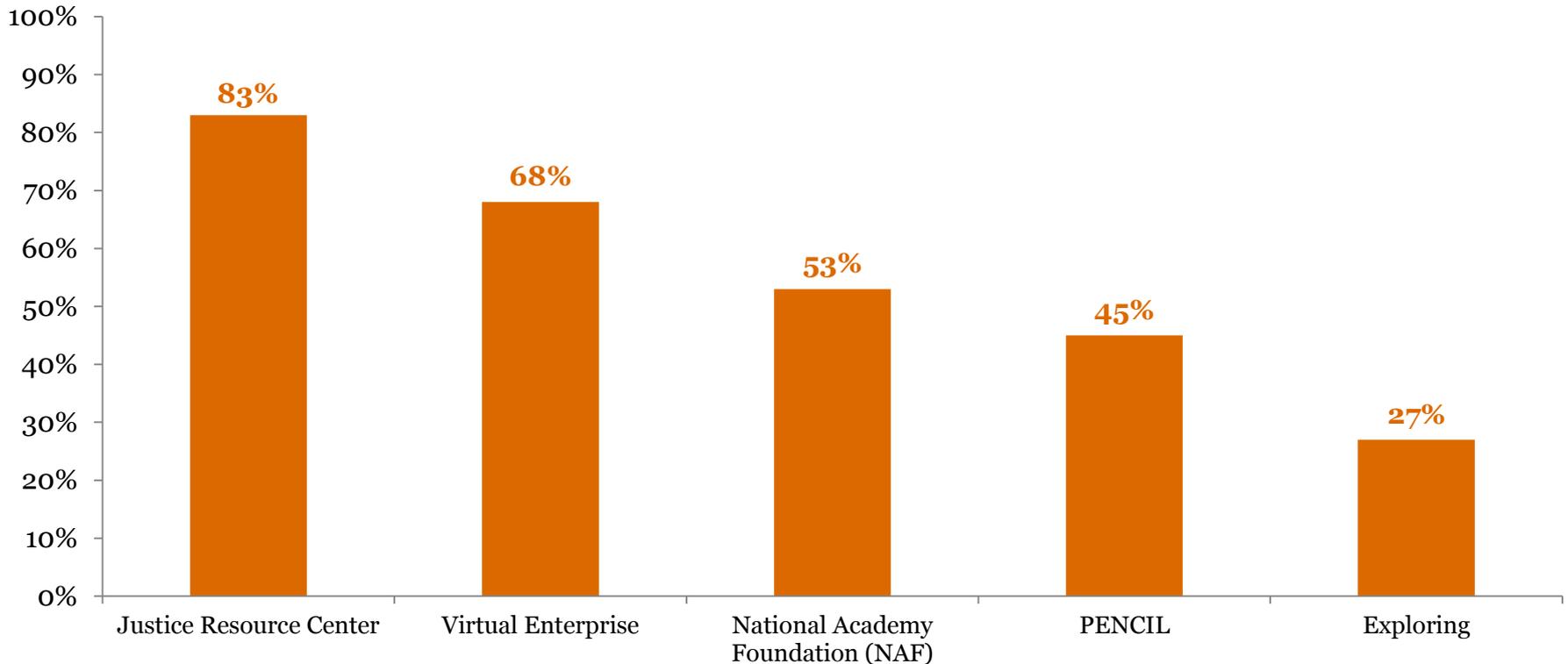
# There is a wide variety of support services in place



ACE, Scholars at Work, Center for Arts Education

Base: 69  
Note: This is a multi-response question  
CTE Schools Survey  
PwC

# *Of the most common support services, most CTE programs are extremely satisfied.*



Note: Only support services with a base of 10 or more respondents have been shown on the chart

Note: Question only asked to those who selected any response apart from 'None of the above' at Q13

Note: The graph shows % of 'Extremely Satisfied' responses and bars are ordered based on frequency selected

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# *Section 3.4 – Additional Observations*

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# *Impact of Work Based Learning Coordinators*

- A greater percentage of those schools that have a work-based learning coordinator have a relationship with a post-secondary institution (94% vs 81%).
- Of those schools who have a work-based learning coordinator, 21% said they have a relationship with employers/organizations that involves internships, compared to only 12% of schools who do not have a WBLC.
- In terms of tracking employer/non-profit engagement over time, 42% of schools who do not have a WBLC do not track yet, compared to only 22% of schools who do have a WBLC. And of those who do track, only 26% of schools who do not have a WBLC track using an electronic database compared to 38% of schools who do have a WBLC.\*
- When asked to what extent they agree with certain statements, one of the most noticeable differences between those have a WBLC and those that don't is that 77% of those who have a WBLC agree(net) that 'CTE is deeply embedded in the culture of our school' compared to only 57% of those who don't have a WBLC.

\* Low base size so urge caution when reporting.

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# ***Impact of Work Based Learning Coordinators (con't)***

- Both groups are in agreement that they require ‘assistance in identifying work-based learning opportunities’, however those with a WBLC are more likely to say they need ‘additional financial resources’ and those without a WBLC feel more ‘teacher certification requirements’ are important.
- Interestingly, 58% of those who have a WBLC said there was a gap between the numbers of internship placements and desired number, compared to 50% of those who do not have a WBLC.
- In terms of the career placement and support services offered to students, those schools without a WBLC are much less likely to offer ‘resume development’, ‘interview preparation’ and ‘career counseling’.
- When asked what is the most important change that could be made to enhance CTE, 25% of those who do not have a WBLC mentioned ‘teacher certification process’ in comparison to only 11% of those who have a WBLC. (*verbatim coding*) \*

\* Low base size so urge caution when reporting.

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## ***Inadequate Funding as a Top Priority - Observations***

- Those who ranked inadequate funding were more likely to strongly agree with the statement ‘CTE is deeply embedded in the culture of our school’.
- When asked how their relationship with employers could be stronger, top responses for both groups were around ‘increased employer integration’ and that ‘additional partnerships/relationships’ were required. Furthermore, when looking at differences between the two groups, those who ranked inadequate funding were more likely to mention ‘increased opportunities/internships/scholarships/job shadowing’. (*verbatim coding*)\*
- When asked why there was a gap between the number of internship placements and desired number, both groups were in agreement that ‘lack of internships available’ was the key issue. Those that ranked inadequate funding however, were much more likely to mention ‘insufficient staffing for program coordination’ in their comment. (*verbatim coding*)\*

\* Low base size so urge caution when reporting.

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## ***Inadequate Funding as a Top Priority – Observations (con't)***

- When asked to what extent they agree with certain statements, some of the most noticeable differences between those who did and didn't rank inadequate funding are the following:

64% of those who ranked inadequate funding strongly agreed that 'The skills CTE students are learning are relevant to today's workplace', compared to only 38% of those who didn't rank it.

- Finally, those who ranked inadequate funding were more likely to agree that 'students in my school are employable following graduation'.

# *Appendix*

## ***Additional Detail on Internships from NYC DOE – not based on survey results***

- Based on rough estimates, DOE estimates that CTE students currently have access to at least **4,600** internships per year. (School numbers are self-reported, and may be incomplete or slightly inflated).

<b>Supplemental Internship Fund:</b>	<b>1,436</b>
<b>OPSR-managed – programs with CTE focus:</b>	<b>~400</b>
<b>School-managed – little or no Office of Post Secondary Readiness involvement:</b>	
• <b>Unpaid internships:</b>	<b>2,129</b>
• <b>Student paid from the school budget:</b>	<b>159</b>
• <b>Student paid by host or external partner:</b>	<b>480</b>
<b>Total</b>	<b>4,604</b>

- The Supplementary Internship Fund (SIF) is the primary source for paid CTE internships, with site development and training plans managed by schools. The Work-Based Learning Resource Center provides instructional support, funds and back-office support for payroll.

	<b># of Students</b>	<b>Median Hours / Student</b>	<b>Avg # of weeks</b>	<b>Max # of weeks</b>	<b>Avg Hours / Week</b>	<b>Max Hours / Week</b>
<b>SY 13-14</b>	1,057	150	14	29	11.25	15
<b>Summer 2014</b>	599	136	5.5	6	22	30

## ***Additional Detail on Internships from NYC DOE – not based on survey results (con't)***

- Average length of SIF-funded internships:

	2-6 weeks	2-3 months	4-6 months	6-8 months
# of interns	171	356	436	94

- Beyond OPSR, 94 schools with CTE programs reported the following additional opportunities obtained independently from OPSR:
  - Unpaid internships: 2,129
  - Paid from the school budget: 159
  - Funded by host organization or external partner: 480

# ***Additional Detail on Internships from NYC DOE – not based on survey results (con’t)***

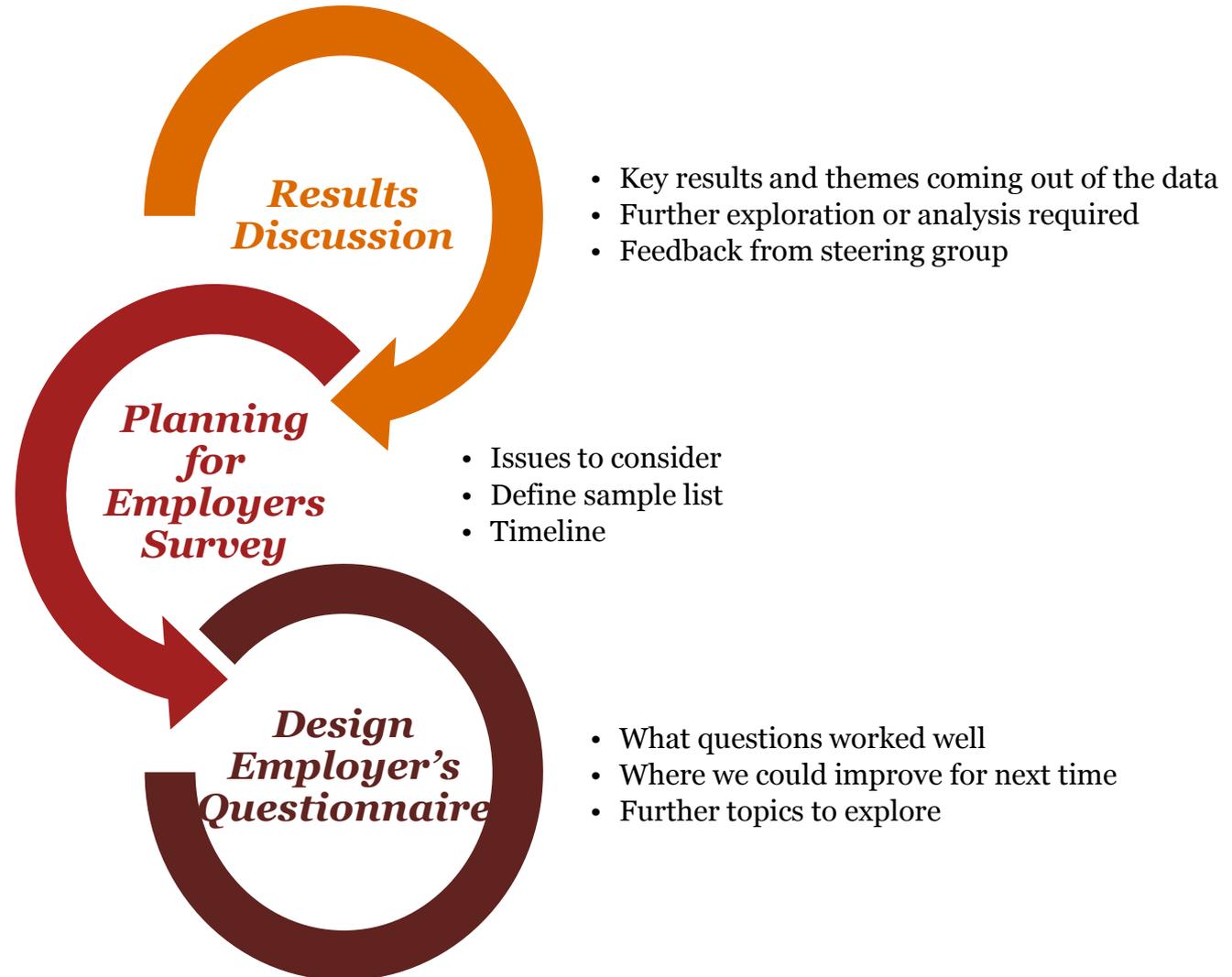
- Beyond the Supplemental Internship Fund, OPSR offers 7 additional CTE-focused internship programs, serving approximately 420 students per year:

<b>Program</b>	<b>Partner / Funding Source</b>	<b>Students served</b>	<b># of Schools Participating</b>	<b>Paid or Unpaid ?</b>	<b>Duration</b>	<b>Industry Focus</b>
<b>CTE Summer Scholars</b>	Private Grant / Bank of America	120 students / year	6	Paid	6 weeks – summer	IT and Media / Graphics
<b>Virtual Enterprise</b>	Private Grant / JP Morgan	40 students / year	18	Paid	5-8 weeks – summer	Government and Public Administration, Marketing, Sales, and Service, Business, Management, and Administration, Information Technology, Finance, Education and Training
<b>Scholars at Work</b>	Tax Levy / Government Grants; partner with NYC Department of Small Business Services	100-125 students / year	17	Paid	16 weeks – school year	Transportation, Distribution, and Logistics, Business, Management, and Administration, Information Technology, Architecture and Construction
<b>Careers through Culinary Arts Program (C-CAP)</b>	Private Grant, donations from individuals, corporations and foundation	90 students / year	15	Paid	5-8 weeks – summer	Hospitality: Restaurants, Corporate and Institutional Dining
<b>Justice Sonia Sotomayor and Celina Judicial Internship</b>	Federal Courts (facilitated by Justice Resource Center)	15 students / year	15	Unpaid	5-8 weeks – summer	Government and Public Administration, Law and Public Safety
<b>Judge Miller Essay Contest Internship</b>	Law Journal & Office of Court Administrators, NY State Unified Court System (facilitated by Justice Resource Center)	10 students / year	25-30	Unpaid	1 month or less	Government and Public Administration, Law and Public Safety
<b>Thurgood Marshall Summer internship</b>	City Bar / host law firms (facilitated by Justice Resource Center)	20 students / year	35	Paid	5-8 weeks (2 months) – summer	Law and Public Safety

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# *Next steps*

# Next Steps



# Timeline

2015 timeline	Date
Planning / questionnaire design for Employers Survey	First week of January
Employers survey launch	Last week of January
Reporting discussion workshop / Review of Employers survey	Mid March

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