# A Research Brief on the

Survey of the Shared Design Elements & Emerging Practices of Competency-Based Education Programs





The **Survey of the Shared Design Elements & Emerging Practices of Competency-Based Education Programs** was made possible with support from the Bill & Melinda Gates Foundation and Lumina Foundation and led by a team from Public Agenda. The project was a collaboration among the following organizations:

## **Sponsoring Organizations:**



Thought Partners:





A Research Brief on the Survey of the Shared Design Elements & Emerging Practices of Competency-Based Education Programs:

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# **Characteristics of the Respondent Pool**

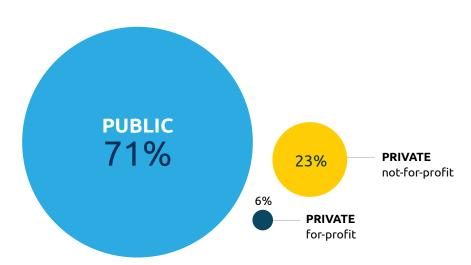
The purpose of the Survey of the Shared Design Elements & Emerging Practices of Competency-Based Education Programs was to gather baseline data from competency-based education (CBE) programs on CBE programs, gauge program levels of adoption of various CBE practices and design elements, and measure how important those elements and practices are to individual programs and how difficult they are to implement. This is the largest-scale survey ever conducted on the state of practice of CBE in higher education in the United States.

The Survey of the Shared Design Elements & Emerging Practices of Competency-Based Education Programs took place from July 8, 2015, to August 7, 2015. It was administered to 754 individuals representing 586 programs. The survey response rate was 24%, with 324 individuals starting the survey and 179 individuals completing the survey. The survey was administered to only individuals known to be designing or delivering a CBE program.

The research was created through a collaboration among several national organizations and with support from the Bill & Melinda Gates Foundation. **Sponsoring Organizations** are the Competency-Based Education Network (C-BEN), American Council on Education (ACE), EDUCAUSE, and the Association of American Colleges and Universities (AAC&U, the *Sponsoring Organization of Integrative Liberal Learning*). Council for Adult and Experiential Learning (CAEL) and Quality Matters serve as **Thought Partners**.

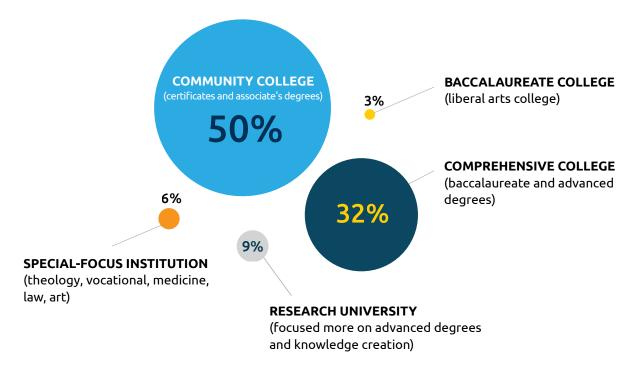
## Figure 1A: Characteristics of the Respondent Pool

#### Public vs. Private Postsecondary Institutions



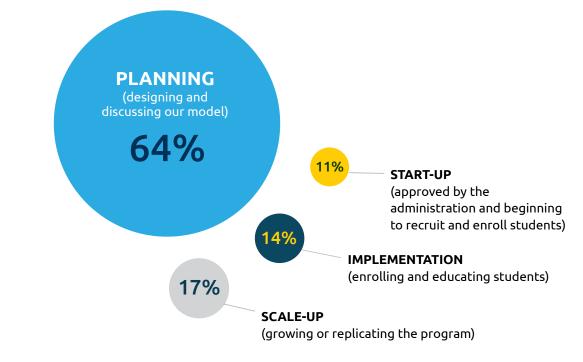
## Figure 1B: Characteristics of the Respondent Pool

**Institution Type** 



## Figure 1C: Characteristics of the Respondent Pool

#### Phase of CBE Program Development by Survey Respondents<sup>1</sup>

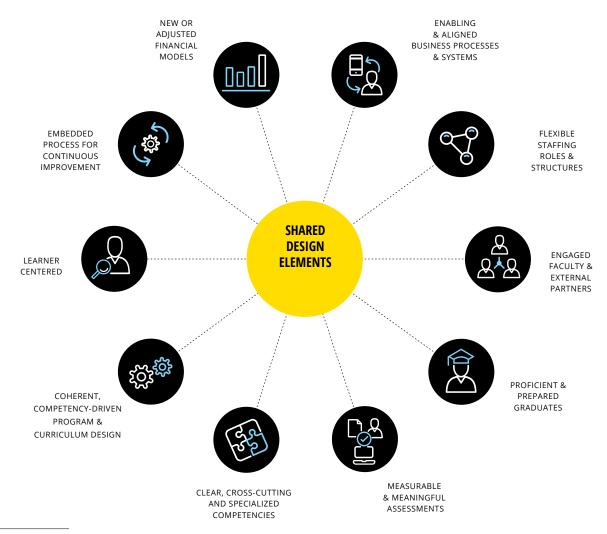


<sup>1</sup> Data adds up to more than 100% given that institutions may have more than one CBE program and therefore could potentially check more than one phase.

# **Shared Design Elements**

The *Shared Design Elements* represent the fullness of a CBE program, from organizational viability to the learning experience (Figure 2). Elements are broad and support diversity in practice. They are dynamic. Thriving CBE programs have all 10 elements in place but put them into practice in different ways. To capture the range of activity, we created a companion list of *Emerging Practices*<sup>2</sup>. Each design element contains a catalog of ways CBE programs carry out that element. The shared design elements can be viewed as permanent pillars of CBE, yet the emerging practices may change over time. New programs will start while others mature. The <u>Shared</u> <u>Design Elements & Emerging Practices</u> can be found on the Competency-Based Education Network (C-BEN) website and a full listing is available in Appendix D.





<sup>2</sup> See Shared Design Elements and Emerging Practices of Competency Based-Education <u>http://www.cbenetwork.org/sites/457/uploaded/files/</u> <u>Shared Design Elements Notebook.pdf</u>

# **Agreement on CBE Design Elements**

As seen in Figure 3, there was nearly universal agreement among the survey respondents on four of the design elements for CBE programs: 1) using "clear, cross-cutting, and specialized competencies," 2) having "measurable and meaningful assessments," 3) creating "proficient and prepared graduates," and 4) being "learner-centered." For each of these top four design elements, 95% or more of the survey respondents strongly agreed that they were needed for a robust and healthy CBE program. The remaining six elements were strongly agreed upon by fewer than 90% of respondents but still reflected a majority opinion, with the least agreedupon element (having "flexible staffing roles and structures") at 67%, slightly more than two-thirds. There was a great deal of agreement by CBE practitioners as to what was considered essential design elements for a robust and healthy CBE program.

## Figure 3: Design Elements for a Robust and Healthy CBE Program

How strongly do CBE programs agree that the following design elements are needed for a robust and healthy CBE program?<sup>3</sup>



<sup>&</sup>lt;sup>3</sup> Percentages represent "strongly agree."

# Importance of Design Element Practices Over Time

**Programs starting up.** The single most agreedupon practice, as seen in Figure 4, was in the "measurable and meaningful assessments" design element, with 94% of the respondents telling us that a corresponding emerging practice ("assessments allow for learners to receive substantive, meaningful feedback that refines the learners' competence") was very important (see Appendix A for the full listing). Another emerging practice in this design element ("rigorous assessments with corresponding clear and valid rubrics consistently measure the demonstration of learning across all learners and multiple contexts") was ranked third, with 89% rating this as very important. CBE program representatives strongly believe that assessment is very important to include when starting a CBE program.

The second most agreed-upon practice, at 90%, reflects the importance of designing programs that recognize that CBE programs must be "equally accessible to anyone admitted into the program, regardless of race, income, or ability status."

The top five practices are rounded out by two practices in the "proficient and prepared graduates" design element, reflecting the importance of this category to CBE program representatives.

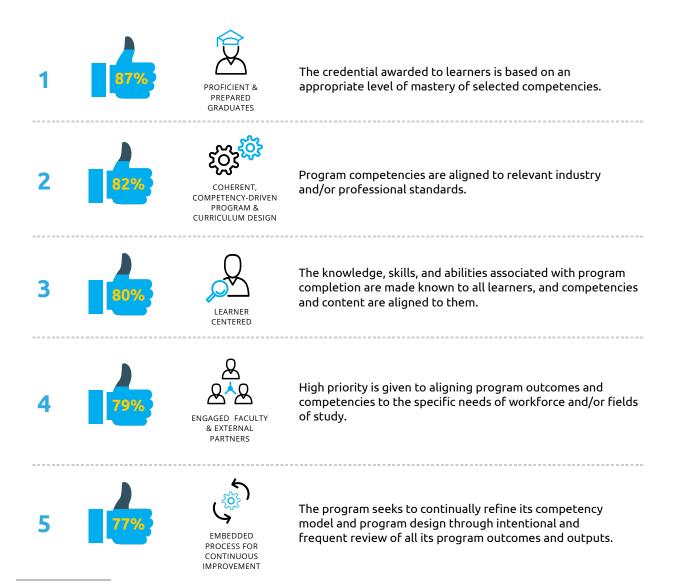
### Figure 4: Top Five Very Important Practices to Include When Starting a CBE Program

#### MEASURABLE 94% & MEANINGFUL ASSESSMENTS Assessments allow for learners to receive substantive, meaningful feedback that refines the learner's competence. 90% LEARNER CENTERED Learning environments and content are equally accessible to anyone admitted into the program, regardless of race, income, or ability status. 89% MEASURABLE & MEANINGFUL ASSESSMENTS Rigorous assessments with corresponding clear and valid rubrics consistently measure the demonstration of learning across all learners and multiple contexts. MEASURABLE 88% & MEANINGFUL ASSESSMENTS The credential awarded to learners is based on an appropriate level of mastery of selected competencies. PROFICIENT & 86% PREPARED GRADUATES External stakeholders have a high degree of confidence that someone with the earned credential is ready for the next stage of education, work and/or life.

#### When starting a CBE program, is it very important to include the following practices?

**Programs with fully adopted elements.** Despite the fact that many CBE program representatives saw practices related to "measurable and meaningful assessments" as very important to CBE programs, these practices are not uniformly fully adopted (see Figure 5). For example, although ensuring that "assessments allow for learners to receive substantive, meaningful feedback that refines the learners' competence" was deemed very important for 94% of the respondents when considering new programs, only 69% had fully adopted such practices in their programs (see Appendix B for the full listing). This might indicate the difficulty of creating measurable and meaningful assessments, rather than a drop in perceived importance once a program is out of the starting phase.

What we do see as elements and practices that have been fully adopted are those at the core of CBE, such as ensuring that "the credential awarded to learners is based on an appropriate level of mastery of selected competencies." Almost nine out of 10 (87%) CBE program representatives report that their programs have fully adopted this practice, placing it at the top of the list of fully adopted practices. Following closely behind was the practice of making sure that the "program competencies are aligned to relevant industry and/or professional standards," at 82%.

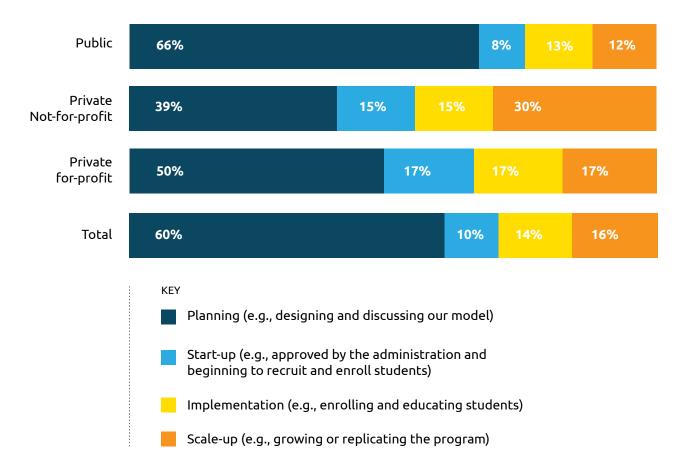


## Figure 5: Top Five Fully Adopted Practices of Existing CBE Programs⁴

<sup>&</sup>lt;sup>4</sup> For a complete list of practices organized by design element, refer to Appendix D.

Public institutions were much more likely than private not-for-profit institutions to be in the planning stage of a CBE program (66% versus 39%), rather than being further along (see Figure 6)<sup>5</sup>. About one-third (30%) of the private not-for-profit institutions had established CBE programs and were scaling up, compared with only 12% of public institutions.

# Figure 6: Institutional Types and CBE Phase of Development<sup>6</sup>



### What describes your institution?

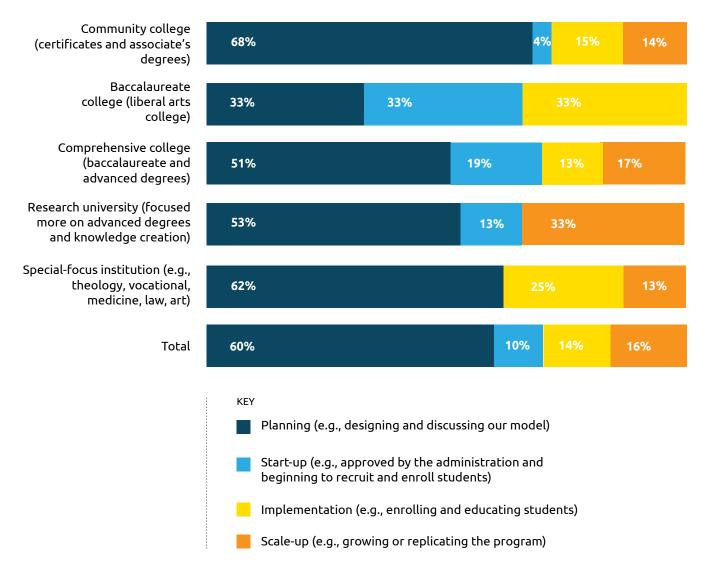
<sup>&</sup>lt;sup>5</sup> Due to the low numbers of for-profit institutions in the database, while we report the findings in the figures, there are not enough for the findings to be reliable, so we do not refer to them in the text.

<sup>&</sup>lt;sup>6</sup> Due to rounding, some totals add up to slightly less or slightly more than 100%.

When looking at the data by institutional classification (see Figure 7), research universities were the most likely to have programs that were scaling up, at 33%, almost twice the rate of the next highest group, comprehensive colleges, at 17%. Community colleges were the most likely to be still in the planning phase, at 68%, as were special-focus institutions, at 62%.

# Figure 7: Institutional Classifications and CBE Phase of Development<sup>7</sup>

## What classification best describes your institution?

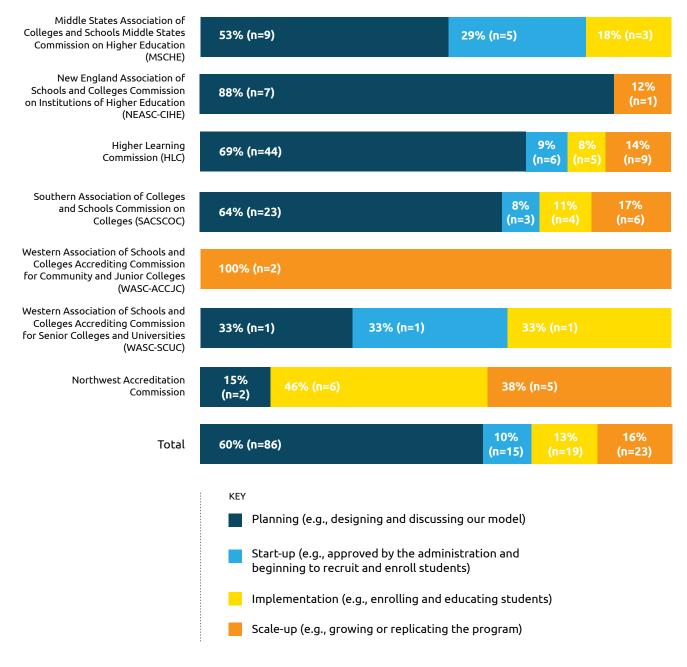


<sup>&</sup>lt;sup>7</sup> Due to rounding, some totals add up to slightly less or slightly more than 100%.

When looking at the data by accrediting agency (see Figure 8), we see that schools being accredited by the Higher Learning Commission (HLC) and Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) represented the bulk of respondents from schools engaging in CBE (i.e., 62 and 34, respectively), and a majority of these schools were in the planning phase (i.e., 69% and 64%, respectively). Additionally, the schools in the Northwest Accreditation Commission were more likely to be scaling up, at 38%, than the schools in other accrediting agencies. New England Association of Schools and Colleges Commission on Institutions of Higher Education (NEASC-CIHE) schools, with 88% still in the planning phase, seemed to be moving the slowest in terms of establishing CBE programs.

### Figure 8: Regional Accreditation and CBE Phase of Development<sup>8</sup>

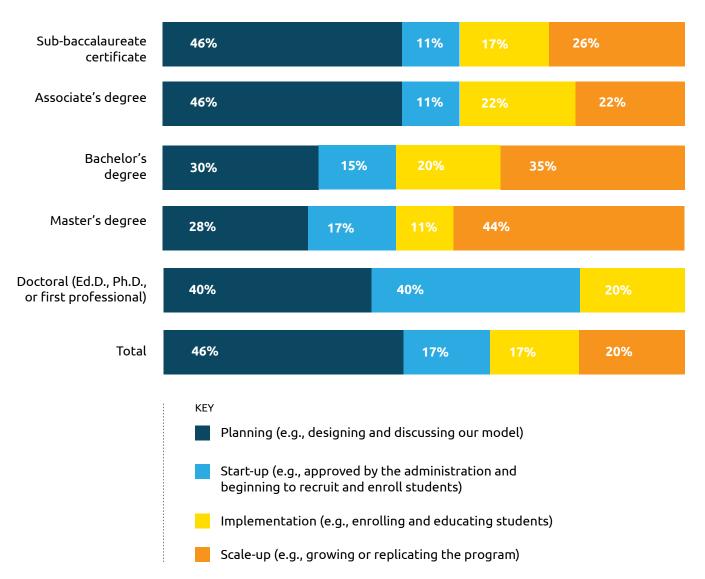
#### What is your regional accrediting agency?



<sup>&</sup>lt;sup>8</sup> Due to rounding, some totals add up to slightly less or slightly more than 100%.

Master's level institutions were the most likely ones to be in the scale-up phase, with 44% at that point in the process (see Figure 9). Bachelor's institutions were the next most likely, at 35%. At either ends of the spectrum, the sub-baccalaureates (46%) and the associate's (46%) were as likely as the doctoral institutions (40%) to be only in the planning stage.

# Figure 9: Institutional Credentials and CBE Phase of Development<sup>9</sup>



#### Institutional Credentials

<sup>&</sup>lt;sup>9</sup> Due to rounding, some totals add up to slightly less or slightly more than 100%.

The barrier most likely to be encountered was needing "data systems [that] are automated and compatible with one another, eliminating unnecessary frustrations for faculty, staff, and learners," with 39% of respondents reporting such. The only other major barriers encountered by many had to do with financial models. "When designing pricing models, financial aid requirements are prioritized so that learners can access these financial resources" was a more frequently experienced its business processes and systems" was the most likely to be extremely challenging of the remaining program elements.

Also extremely challenging to 34% of the respondents was to ensure that "external stakeholders have a high degree of confidence that someone with the earned credential is ready for the next stage of education, work, and/or life."

Two areas stand out as most likely to be outright barriers to implementing CBE programs: data systems and student financial impact.<sup>10</sup>

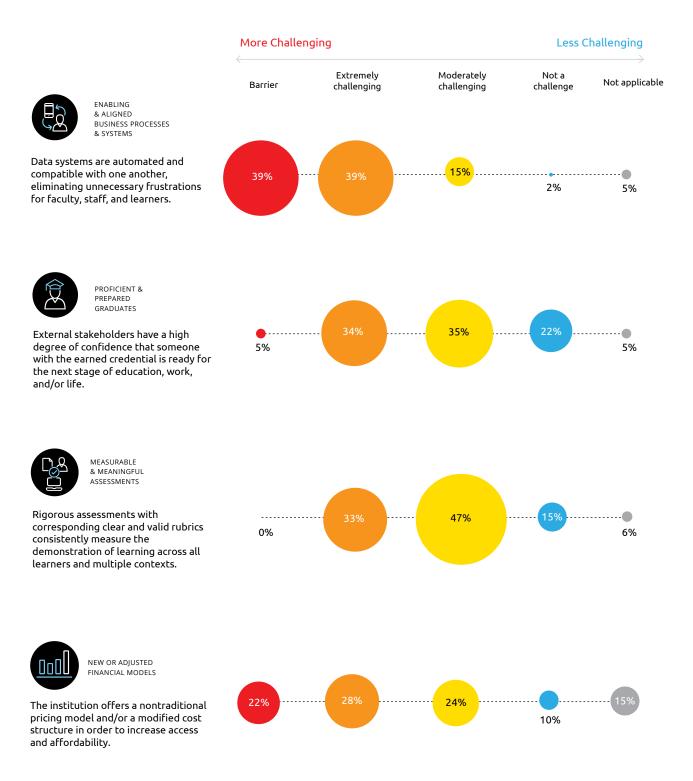
barrier for 23% of the respondents. This was followed closely, at 22%, with those reporting that "the institution offers a nontraditional pricing model and/or a modified cost structure in order to increase access and affordability" as a barrier. Both of these barriers are rooted in resistance to change, one being in how federal student financial aid is tied to the course-hour model and the other being a resistance to systemic financial change and sticking to traditional pricing models.

In looking at extremely challenging areas, with 35% of the respondents answering as such, we found that "learners enjoy dealing with the institution because of the sophisticated integration of technology into Another extremely challenging program factor was related to finances, according to our respondents, with 33% telling us that "the institution offsets program costs through intentionally designed and monitored cost-saving strategies or alternative revenue-generation sources" was extremely challenging.

Some CBE program representatives found assessment to be extremely challenging, with 33% stating that having "rigorous assessments with corresponding clear and valid rubrics consistently measure the demonstration of learning across all learners and multiple contexts" was extremely challenging.

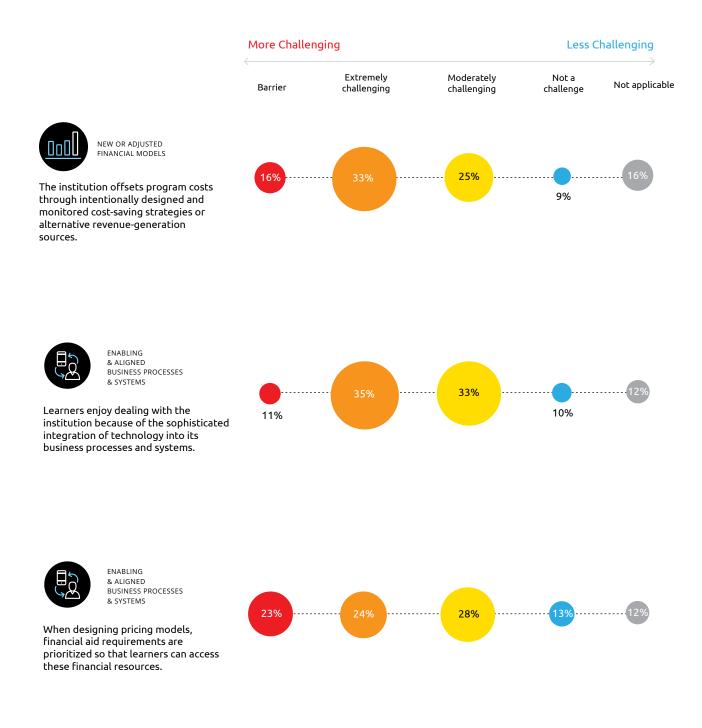
<sup>&</sup>lt;sup>10</sup> See Figure 10 for selected results and Appendix C for the full set of responses.

## Figure 10: Barriers Experienced by CBE Programs



<sup>(</sup>continued on page 16)

## Figure 10<sup>11</sup> (continued)



<sup>&</sup>lt;sup>11</sup> Due to rounding, some totals add up to slightly less or slightly more than 100%.

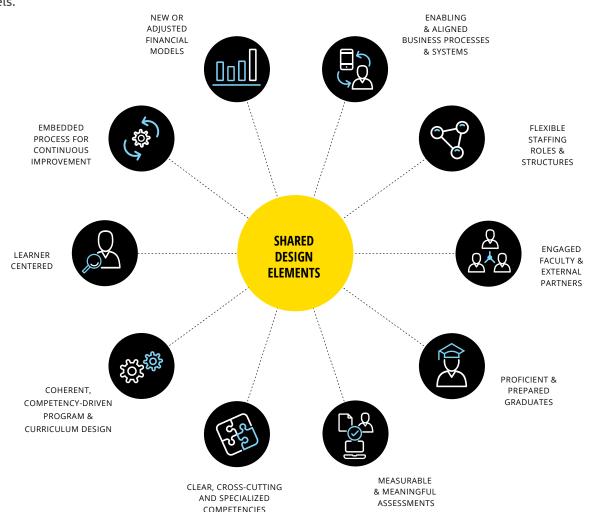
# **Opportunities and Challenges**

It is through these emerging design elements and practices that we have identified promising approaches that CBE program representatives can draw upon to develop healthy, scalable CBE models. Through CBE, learning becomes the focus as opposed to seat time. The findings detailed in this research brief are guideposts for institutions, policymakers, foundations, and students about key features needed for successful CBE program design. The number of CBE programs around the country, and increasingly internationally, is continuing to grow. Research identified in this brief highlights how CBE program representatives feel about what is important for the healthy development of high-quality, scalable models. While CBE has existed at some institutions for more than 40 years, work over the past decade has made a concerted effort to bring together a variety of issues facing CBE programs, namely:

1) What constitutes high-quality program design?

2) What does valid and reliable assessment look like?

3) What are the business processes and systems needed to support scalable programs?



# Appendix A: Importance of Emerging Practices when Starting a CBE Program

Shared Design Element	Emerging Practice	When starting a CBE program, it is very important to include the following practices
Measurable and Meaningful Assessments	Assessments allow for learners to receive substantive, meaningful feedback that refines the learners' competence.	94%
Learner-Centered	Learning environments and content are equally accessible to anyone admitted into the program, regardless of race, income, or ability status.	90%
Measurable and Meaningful Assessments	Rigorous assessments with corresponding clear and valid rubrics consistently measure the demonstration of learning across all learners and multiple contexts.	89%
Proficient and Prepared Graduates	The credential awarded to learners is based on an appropriate level of mastery of selected competencies.	88%
Proficient and Prepared Graduates	External stakeholders have a high degree of confidence that someone with the earned credential is ready for the next stage of education, work, and/or life.	86%
Engaged Faculty and Partners	High priority is given to aligning program outcomes and competencies to the specific needs of workforce and/or fields of study.	85%
Coherent, Competency-Driven Program and Curriculum Design	Program competencies are aligned to relevant industry and/or professional standards.	85%
Learner-Centered	The knowledge, skills, and abilities associated with program completion are made known to all learners, and competencies and content are aligned to them.	85%
Clear, Cross-Cutting, and Specialized Competencies	Competencies are a blend of theory and practice, focused on the knowledge, skills, behaviors, and attitudes needed for a particular level and field of study (i.e., advanced standing in a business management program).	84%

Shared Design Element	Emerging Practice	When starting a CBE program, it is very important to include the following practices
Flexible Staffing Roles and Structures	Learners' interactions with faculty are meaningful, substantive, and sustained and instigated by both learners and faculty members.	84%
Measurable and Meaningful Assessments	The assessment process includes frequent informal and formal assessments, through both formative and summative assessment tools.	84%
Embedded Process for Continuous Improvement	The program seeks to continually refine its competency model and program design through intentional and frequent review of all its program outcomes and outputs.	83%
Learner-Centered	Learning opportunities are intentionally built to challenge and engage learners.	81%
Coherent, Competency-Driven Program and Curriculum Design	As learners complete the program, they know how all activities directly correspond to the development of required competencies.	78%
Proficient and Prepared Graduates	Learners receive transcripts that reflect their demonstration of learning in a credible manner that is easy for others to understand and utilize.	78%
Coherent, Competency-Driven Program and Curriculum Design	The curriculum and its related competencies are sequenced to allow for deeper levels of learning and growth.	75%
Measurable and Meaningful Assessments	Assessments focus on the demonstration of learning in multiple and novel settings to mimic real-world situations.	74%
Engaged Faculty and Partners	Learners are provided with real-world learning, training, and assessment opportunities, facilitated in partnership with internal and external stakeholders.	74%
Enabling and Aligned Business Processes and Systems	Data systems are automated and compatible with one another, eliminating unnecessary frustrations for faculty, staff, and learners.	73%

Shared Design Element	Emerging Practice	When starting a CBE program, it is very important to include the following practices
Learner-Centered	Learning environments are designed to support learner engagement at different times of day and in different physical locations.	73%
Embedded Process for Continuous Improvement	Learners have the opportunity to share substantive and regular feedback that is listened to and acted upon by faculty and staff.	72%
Coherent, Competency-Driven Program and Curriculum Design	The curriculum requires learners to develop and demonstrate competencies in multiple and varied forms.	70%
Clear, Cross-Cutting, and Specialized Competencies	The program competencies are based on externally established, credible standards and/or norms (i.e., Degree Qualifications Profile).	69%
New or Adjusted Business and Financial Models	When designing pricing models, financial aid requirements are prioritized so that learners can access these financial resources.	69%
Proficient and Prepared Graduates	Learners' progress toward program completion is measured solely through the demonstrated learning of required competencies.	65%
Embedded Process for Continuous Improvement	The faculty, staff, and learners benefit from a learning environment that values and provides a safe and structured space for innovation at multiple levels.	65%
Embedded Process for Continuous Improvement	Learners know the goals and measures of the program and can quickly assess the quality of a program by its transparent performance benchmarks.	65%
Coherent, Competency-Driven Program and Curriculum Design	Learners know the competencies required to earn a credential and can choose the most appropriate learning pathway to the offered credential.	64%
Learner-Centered	Technologies are used to enhance and enable program components for the learner.	63%

Shared Design Element	Emerging Practice	When starting a CBE program, it is very important to include the following practices
Clear, Cross-Cutting, and Specialized Competencies	The program blends competencies specific to the academic discipline with those required by anyone with the credential type.	60%
Engaged Faculty and Partners	Faculty and/or staff proactively engage employers, alumni, and community leaders in substantive ways; this includes engagement in program design, evaluation, and validation of the effectiveness of select competencies and graduates' preparedness.	57%
Learner-Centered	The pace and organization of learning adapt to the learners' needs, performances, and interests.	56%
Learner-Centered	Learners have choice and decision-making power over when, how, and where learning happens.	55%
Enabling and Aligned Business Processes and Systems	When selecting new vendors and technology services, stakeholder input is prioritized, as is the level to which innovative programming will be supported.	55%
Engaged Faculty and Partners	Utilizing preexisting governance structures, the faculty actively design and deliver the program, curriculum, and assessments.	52%
Flexible Staffing Roles and Structures	Through a disaggregated and/or adjusted staffing model, faculty can engage with learners in ways that highlight each faculty member's individual talents.	49%
Enabling and Aligned Business Processes and Systems	Learners enjoy dealing with the institution because of the sophisticated integration of technology into its business processes and systems.	47%
Clear, Cross-Cutting, and Specialized Competencies	Competencies taught in one discipline are consistent with and integrated into other disciplines, allowing learners to see the relevance of competencies in different contexts.	46%

Shared Design Element	Emerging Practice	When starting a CBE program, it is very important to include the following practices
New or Adjusted Business and Financial Models	Learners can save money through new pricing models and cost structures that align to the program structure and schedule.	41%
New or Adjusted Business and Financial Models	The institution offers a nontraditional pricing model and/or a modified cost structure in order to increase access and affordability.	40%
New or Adjusted Business and Financial Models	The institution offsets program costs through intentionally designed and monitored cost- saving strategies or alternative revenue- generation sources.	36%
Coherent, Competency-Driven Program and Curriculum Design	Learners can customize and modify the curriculum to fit individual needs and aspirations.	30%

# Appendix B: Percentage of CBE Programs Fully Adopting Emerging Practices

Shared Design Element	Emerging Practice	The percentage of CBE program(s) that have fully adopted each stated practice	
Proficient and Prepared Graduates	The credential awarded to learners is based on an appropriate level of mastery of selected competencies.	87%	
Coherent, Competency-Driven Program and Curriculum Design	Program competencies are aligned to relevant industry and/or professional standards.	82%	
Learner-Centered	The knowledge, skills, and abilities associated with program completion are made known to all learners, and competencies and content are aligned to them.	80%	
Engaged Faculty and Partners	High priority is given to aligning program outcomes and competencies to the specific needs of workforce and/or fields of study.	79%	
Embedded Process for Continuous Improvement	The program seeks to continually refine its competency model and program design through intentional and frequent review of all its program outcomes and outputs.	77%	
Learner-Centered	Learning environments are designed to support learner engagement at different times of day and in different physical locations.	74%	
Learner-Centered	Learning opportunities are intentionally built to challenge and engage learners.	74%	
Measurable and Meaningful Assessments	informal and formal assessments, through both		
Learner-Centered	Learning environments and content are equally accessible to anyone admitted into the program, regardless of race, income, or ability status.	72%	
Flexible Staffing Roles and Structures	Learners' interactions with faculty are meaningful, substantive, and sustained and instigated by both learners and faculty members.	70%	
Proficient and Prepared Graduates	Learners' progress toward program completion is measured solely through the demonstrated learning of required competencies.	70%	

Shared Design Element	Emerging Practice	The percentage of CBE program(s) that have fully adopted each stated practice
Coherent, Competency-Driven Program and Curriculum Design	As learners complete the program, they know how all activities directly correspond to the development of required competencies.	69%
Measurable and Meaningful Assessments	Assessments allow for learners to receive substantive, meaningful feedback that refines the learners' competence.	69%
Proficient and Prepared Graduates	Learners receive transcripts that reflect their demonstration of learning in a credible manner that is easy for others to understand and utilize.	68%
Measurable and Meaningful Assessments	Rigorous assessments with corresponding clear and valid rubrics consistently measure the demonstration of learning across all learners and multiple contexts.	67%
Clear, Cross-Cutting, and Specialized Competencies	externally established credible standards and/or	
Coherent, Competency-Driven Program and Curriculum Design	The curriculum requires learners to develop and demonstrate competencies in multiple and varied forms.	64%
Embedded Process for Continuous Improvement	substantive and regular feedback that is listened	
Learner-Centered	Technologies are used to enhance and enable program components for the learner.	62%
Clear, Cross-Cutting, and Specialized Competencies	The program blends competencies specific to the academic discipline with those required by anyone with the credential type.	61%
Engaged Faculty and Partners	Utilizing preexisting governance structures, the faculty actively design and deliver the program, curriculum, and assessments.	61%
Clear, Cross-Cutting, and Specialized Competencies	Competencies are a blend of theory and practice, focused on the knowledge, skills, behaviors, and attitudes needed for a particular level and field of study (i.e., advanced standing in a business management program).	60%
Coherent, Competency-Driven Program and Curriculum Design	The curriculum and its related competencies are sequenced to allow for deeper levels of learning and growth.	59%

Shared Design Element	Emerging Practice	The percentage of CBE program(s) that have fully adopted each stated practice
New or Adjusted Business and Financial Models	When designing pricing models, financial aid requirements are prioritized so that learners can access these financial resources.	57%
Measurable and Meaningful Assessments	Assessments focus on the demonstration of learning in multiple and novel settings to mimic real-world situations.	56%
Learner-Centered	Learners have choice and decision-making power over when, how, and where learning happens.	54%
Embedded Process for Continuous Improvement	The faculty, staff, and learners benefit from a learning environment that values and provides a safe and structured space for innovation at multiple levels.	54%
Embedded Process for Continuous Improvement	Learners know the goals and measures of the program and can quickly assess the quality of a program by its transparent performance benchmarks.	54%
Proficient and Prepared Graduates	External stakeholders have a high degree of confidence that someone with the earned credential is ready for the next stage of education, work, and/or life.	53%
Flexible Staffing Roles and Structures	Through a disaggregated and/or adjusted staffing model, faculty can engage with learners in ways that highlight each faculty member's individual talents.	53%
New or Adjusted Business and Financial Models	Learners can save money through new pricing models and cost structures that align to the program structure and schedule.	51%
Enabling and Aligned Business Processes and Systems	When selecting new vendors and technology services, stakeholder input is prioritized, as is the level to which innovative programming will be supported.	49%
Engaged Faculty and Partners	Faculty and/or staff proactively engage employers, alumni, and community leaders in substantive ways; this includes engagement in program design, evaluation, and validation of the effectiveness of select competencies and graduates' preparedness.	48%

Shared Design Element	Emerging Practice	The percentage of CBE program(s) that have fully adopted each stated practice
Clear, Cross-Cutting, and Specialized Competencies	Competencies taught in one discipline are consistent with and integrated into other disciplines, allowing learners to see the relevance of competencies in different contexts.	46%
New or Adjusted Business and Financial Models	The institution offers a nontraditional pricing model and/or a modified cost structure in order to increase access and affordability.	46%
Coherent, Competency-Driven Program and Curriculum Design	Learners know the competencies required to earn a credential and can choose the most appropriate learning pathway to the offered credential.	45%
Engaged Faculty and Partners	Learners are provided with real-world learning, training, and assessment opportunities, facilitated in partnership with internal and external stakeholders.	44%
Learner-Centered	The pace and organization of learning adapt to the learners' needs, performances, and interests.	37%
Enabling and Aligned Business Processes and Systems	Learners enjoy dealing with the institution because of the sophisticated integration of technology into its business processes and systems.	35%
New or Adjusted Business and Financial Models	The institution offsets program costs through intentionally designed and monitored cost-saving strategies or alternative revenue-generation sources.	33%
Enabling and Aligned Business Processes and Systems	Data systems are automated and compatible with one another, eliminating unnecessary frustrations for faculty, staff, and learners.	29%
Coherent, Competency-Driven Program and Curriculum Design	Learners can customize and modify the curriculum to fit individual needs and aspirations.	28%

# Appendix C: Barriers to CBE Emerging Practices<sup>12</sup>

Shared Design Element	Emerging Practice	Barrier	Extremely challenging	Moderately challenging	Not a challenge	Not applicable
Coherent, Competency- Driven Program and Curriculum Design	As learners complete the program, they know how all activities directly correspond to the development of required competencies.	0%	8%	57%	29%	6%
Measurable and Meaningful Assessments	Assessments allow for learners to receive substantive, meaningful feedback that refines the learners' competence.	0%	17%	44%	34%	5%
Measurable and Meaningful Assessments	Assessments focus on the demonstration of learning in multiple and novel settings to mimic real-world situations.	2%	28%	52%	14%	5%
Clear, Cross- Cutting, and Specialized Competencies	Competencies are a blend of theory and practice, focused on the knowledge, skills, behaviors, and attitudes needed for a particular level and field of study (i.e., advanced standing in a business management program).	2%	23%	36%	34%	5%
Clear, Cross- Cutting, and Specialized Competencies	Competencies taught in one discipline are consistent with and integrated into other disciplines, allowing learners to see the relevance of competencies in different contexts.	7%	29%	39%	15%	10%
Enabling and Aligned Business Processes and Systems	Data systems are automated and compatible with one another, eliminating unnecessary frustrations for faculty, staff, and learners.	39%	39%	15%	2%	5%
Proficient and Prepared Graduates	External stakeholders have a high degree of confidence that someone with the earned credential is ready for the next stage of education, work, and/or life.	5%	34%	35%	22%	5%

Shared Design Element	Emerging Practice	Barrier	Extremely challenging	Moderately challenging	Not a challenge	Not applicable
Engaged Faculty and Partners	High priority is given to aligning program outcomes and competencies to the specific needs of workforce and/or fields of study.	1%	16%	44%	34%	5%
Flexible Staffing Roles and Structures	Learners' interactions with faculty are meaningful, substantive, and sustained and instigated by both learners and faculty members.	2%	16%	46%	30%	6%
Engaged Faculty and Partners	Learners are provided with real-world learning, training, and assessment opportunities, facilitated in partnership with internal and external stakeholders.	1%	26%	44%	22%	7%
Learner- Centered	Learners have choice and decision-making power over when, how, and where learning happens.	1%	21%	50%	23%	5%
Proficient and Prepared Graduates	Learners' progress toward program completion is measured solely through the demonstrated learning of required competencies.	6%	19%	43%	26%	7%
Learner- Centered	Learning environments and content are equally accessible to anyone admitted into the program, regardless of race, income, or ability status.	2%	10%	30%	51%	6%
Learner- Centered	Learning environments are designed to support learner engagement at different times of day and in different physical locations.	3%	17%	36%	36%	7%
Learner- Centered	Learning opportunities are intentionally built to challenge and engage learners.	2%	12%	37%	43%	6%
Coherent, Competency- Driven Program and Curriculum Design	Program competencies are aligned to relevant industry and/or professional standards.	1%	8%	35%	51%	5%

Shared Design Element	Emerging Practice	Barrier	Extremely challenging	Moderately challenging	Not a challenge	Not applicable
Measurable and Meaningful Assessments	Rigorous assessments with corresponding clear and valid rubrics consistently measure the demonstration of learning across all learners and multiple contexts.	0%	33%	47%	15%	6%
Learner- Centered	Technologies are used to enhance and enable program components.	11%	21%	49%	14%	5%
Measurable and Meaningful Assessments	The assessment process includes frequent informal and formal assessments, through both formative and summative assessment tools.	1%	13%	59%	22%	5%
Proficient and Prepared Graduates	The credential awarded to learners is based on an appropriate level of mastery of selected competencies.	2%	12%	38%	41%	7%
Coherent, Competency- Driven Program and Curriculum Design	The curriculum and its related competencies are sequenced to allow for deeper levels of learning and growth.	1%	15%	44%	33%	7%
Coherent, Competency- Driven Program and Curriculum Design	The curriculum requires learners to develop and demonstrate competencies in multiple and varied forms.	1%	14%	55%	24%	6%
Engaged Faculty and Partners	Faculty and/or staff proactively engage employers, alumni, and community leaders in substantive ways; this includes engagement in program design, evaluation, and validation of the effectiveness of select competencies and graduates' preparedness.	2%	27%	46%	19%	6%

Shared Design Element	Emerging Practice	Barrier	Extremely challenging	Moderately challenging	Not a challenge	Not applicable
Embedded Process for Continuous Improvement	The faculty, staff, and learners benefit from a learning environment that values and provides a safe and structured space for innovation at multiple levels.	2%	21%	47%	22%	7%
New or Adjusted Business and Financial Models	The institution offers a nontraditional pricing model and/or a modified cost structure in order to increase access and affordability.	22%	28%	24%	10%	15%
New or Adjusted Business and Financial Models	The institution offsets program costs through intentionally designed and monitored cost-saving strategies or alternative revenue-generation sources.	16%	33%	25%	9%	16%
Embedded Process for Continuous Improvement	The program seeks to continually refine its competency model and program design through intentional and frequent review of all its program outcomes and outputs.	1%	17%	47%	30%	5%
Learner- Centered	The knowledge, skills, and abilities associated with program completion are made known to all learners, and competencies and content are aligned to them.	0%	9%	38%	48%	5%
Coherent, Competency- Driven Program and Curriculum Design	Learners can customize and modify the curriculum to fit individual needs and aspirations.	5%	28%	35%	14%	19%
New or Adjusted Business and Financial Models	Learners can save money through new pricing models and cost structures that align to the program structure and schedule.	17%	23%	29%	17%	15%

Shared Design Element	Emerging Practice	Barrier	Extremely challenging	Moderately challenging	Not a challenge	Not applicable
Enabling and Aligned Business Processes and Systems	Learners enjoy dealing with the institution because of the sophisticated integration of technology into its business processes and systems.	11%	35%	33%	10%	12%
Embedded Process for Continuous Improvement	Learners have the opportunity to share substantive and regular feedback that is listened to and acted upon by faculty and staff.	1%	19%	41%	34%	5%
Coherent, Competency- Driven Program and Curriculum Design	Learners know the competencies required to earn a credential and can choose the most appropriate learning pathway to the offered credential.	2%	25%	38%	26%	8%
Embedded Process for Continuous Improvement	Learners know the goals and measures of the program and can quickly assess the quality of a program by its transparent performance benchmarks.	3%	20%	48%	23%	8%
Proficient and Prepared Graduates	Learners receive transcripts that reflect their demonstration of learning in a credible manner that is easy for others to understand and utilize.	11%	29%	29%	20%	12%
Learner- Centered	The pace and organization of learning adapt to the learners' needs, performances, and interests.	6%	28%	42%	16%	7%
Clear, Cross- Cutting, and Specialized Competencies	The program blends competencies specific to the academic discipline with those required by anyone with the credential type.	1%	6%	53%	29%	11%
Clear, Cross- Cutting, and Specialized Competencies	The program competencies are based on externally established, credible standards and/or norms (i.e., Degree Qualifications Profile).	0%	6%	40%	46%	7%

Shared Design Element	Emerging Practice	Barrier	Extremely challenging	Moderately challenging	Not a challenge	Not applicable
Flexible Staffing Roles and Structures	Through a disaggregated and/or adjusted staffing model, faculty can engage with learners in ways that highlight each faculty member's individual talents.	7%	25%	36%	19%	13%
Engaged Faculty and Partners	Utilizing preexisting governance structures, the faculty actively design and deliver the program, curriculum, and assessments.	4%	24%	43%	18%	12%
Enabling and Aligned Business Processes and Systems	When designing pricing models, financial aid requirements are prioritized so that learners can access these financial resources.	23%	24%	28%	13%	12%

<sup>&</sup>lt;sup>12</sup> Due to rounding, some totals add up to slightly less or slightly more than 100%.

#### Learner Centered

- a) Personalized and experiential learning and supports
- b) Challenging and engaging learning opportunities (i.e., work- and project-based learning)
- c) Socially and culturally responsive learning environments
- d) Learner agency and choice
- e) Flexibility in when, where and how learning happens
- f) Use of technology enables and enhances the learning experience
- g) Clear and credential-appropriate expectations, requirements and learning outcomes

#### **Coherent, Competency-Driven Program and Curriculum Design**

- a) Alignment to national norms or other credible standards (i.e., Degree Qualifications Profile)
- b) Curriculum includes multiple and varied opportunities to develop and demonstrate select competencies
- c) Curriculum is clearly articulate and predictable, with multiple learning pathways for learners to accomplish a range of learning opportunities
- d) Curriculum sequence reflects different stages of learning and growth
- e) Curriculum design is flexible enough to accommodate personalization and modification
- f) Program requirements and anticipated learner outcomes correspond to selected competencies

#### **Clear, Cross-Cutting and Specialized Competencies**

- a) Competencies sourced from national norms or other credible standards (i.e., Degree Qualifications Profile)
- b) Competencies Include critical theory, knowledge, skills, behaviors and attitudes for the education level and related fields of study or work
- c) Competencies connect to and build on each other to support the demonstration and transfer of learning in multiple and novel contexts
- d) Competencies are specialized (field specific) or cross-cutting (i.e., problem solving, critical thinking)

#### Measurable and Meaningful Assessments

- a) Assessments measure learning and transfer of learning into multiple and novel contexts
- b) Assessments are frequent, informal and formal, formative and summative
- c) Assessments are rigorous with clear and valid measures
- d) Assessments provide real-time feedback for reflection and refinement

#### **Proficient and Prepared Graduates**

- a) Progress to graduation is determined by the learner's development and demonstration of selected competencies
- b) Credential reflects an appropriate level of mastery of selected competencies
- c) Credential signals the learner's readiness for the next stage of education, work or life
- d) Transcripts are credible and reliable reports that accurately reflect the learner's level of mastery of selected competencies

#### **Engaged Faculty and External Partners**

- a) Faculty drive design and delivery of program, curriculum and assessment
- b) Employers, alumni and community leaders are informed and involved in appropriate ways
- c) External partnerships provide real life learning, training and assessment opportunities
- d) Aligned program outcomes and field or workforce needs

#### **Flexible Staffing Roles and Structures**

- a) Staff and faculty roles and responsibilities maximize talent and time
- b) Staffing structures enable skillful planning and execution
- c) Learner's interactions with staff and faculty are meaningful, substantive and sustained

#### **Enabling and Aligned Business Processes and Systems**

- a) Business processes and technology enable aspects of program design (i.e., online classes)
- b) Technology and data systems align to program structure and needs
- c) Data systems are automated or compatible with each other
- d) Process for vendor and product selection prioritizes program alignment and support

#### **New and Adjusted Financial Models**

- a) Pricing models and cost structures align to the program structure and schedule (i.e., subscription or flat rate)
- b) Pricing models and cost structures prioritize access and equity and comply with any financial aid requirements
- c) Flexible or alternate revenue sources offset program costs

#### **Embedded Process for Continuous Improvement**

- a) Articulated and transparent program goals and measures of program quality serve as performance benchmarks
- b) Ongoing attention to evaluation and continuous improvement built into program design and delivery of curriculum
- c) Safe and structured spaces for innovation created and supported at multiple levels
- d) Processes in place to listen to and learn from the learner

The Survey of the Shared Design Elements & Emerging Practices of Competency-Based Education Programs and the accompanying Research Brief on the Survey of the Shared Design Elements & Emerging Practices of Competency-Based Education Programs was created through an uncommonly collaborative process and the research brief was prepared by Erin Knepler, Associate Director of Higher Education and Workforce Programs, Public Agenda, with input and direction from Stephanie Malia Krauss, senior fellow with the Forum for Youth Investment, Alison Kadlec, Director of Higher Education and Workforce Programs, Public Agenda, and Charla Long, consultant to Public Agenda and principal, Go Long Consulting. Additionally, special thanks to Tom Weko, Analyst in the Education and Training Policy Division, education Directorate, OECD (formally of American Institutes for Research) and Matthew Soldner, Senior Researcher, American Institutes for Research (AIR), for their feedback and guidance on the design of the survey instrument.

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