Higher Education Quality Council of Ontario

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Productivity Implications of a Shift to Competency-Based Education: An environmental scan and review of the relevant literature – Appendix

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Appendix A: Literature Review

The objective of the literature review is to review and synthesize relevant research and grey literature that explores how competency-based education might affect the cost and quality of higher education programs, institutions and systems; to investigate how to enhance the productivity and accountability of public higher education systems and institutions; to consider how empirical analysis might be brought to bear on the questions of costs, efficiency, productivity, and productivity changes; and to identify indicators that can be used to assess the productivity of the CBE programs. The review focussed on literature from 1995 to the present.

Stage: Searching and Pre-screening

Searching online databases and websites

To locate potentially relevant information, *Directions* first conducted a search of 12 online databases:

- Academic Search Complete
- Business Source Complete
- EconLit
- ERIC
- International Political Science Abstracts
- PsycARTICLES
- PsycINFO
- SocINDEX with Full Text
- CBCA Education
- Ingentaconnect
- IDEAS (from York's Scholar's portal)
- Scholar's Portal (The Ontario Scholar's Portal provides a single point of electronic access to published research from a broad range of disciplines, including journals published by Academic Press, Berkeley Electronic Press, Cambridge University Press, Emerald Publishing, Elsevier Science, Kluwer Academic Publishers, Kluwer Law International, Oxford University Press, Project MUSE, Springer-Verlag, and John Wiley & Sons)

Search limiters

In our search we used the following search limiters:
Time period: 1995 - present
Language: English publications only

Search Terms

The following four sets of search terms were used for each database:

Group 1: "competency based" OR "competency-based"

Group 2: "education" OR "program" OR "training" OR "curriculum"

Group 3: "post graduate" OR "post-graduate" OR “graduate” OR “postgraduate” OR “undergraduate” OR “university” OR “postsecondary” OR “college”

Group 4: “Cost” OR “costs” OR “quality” OR "graduation rate" OR "time to completion" OR "completion time" OR “persistence” OR “retention” OR “employment” OR “success” OR “admission” OR "program admission" OR "community engagement" OR "civic engagement" OR "employment rate" OR “productivity” OR “credentials” OR "economics of education" OR “completion” OR “graduation” OR "performance measures" OR "performance outcomes" OR "performance indicators" OR "learning outcomes" OR "learning outcomes assessment" OR “University” AND “productivity” OR “University” AND “cost functions” OR “University” AND “productivity change” OR “university productivity”

Search results

Through the searching of online databases we located 3,154 potentially relevant publications that met our initial inclusion criteria (see Table 8 below). An additional 426 were located through focussed searching of online journals such as *Journal of Higher Education Policy and Management, Higher Education Management and Policy, Institutional Management in Higher Education, Education Economics, Economics of Education Review, International Journal of Educational Management, Journal of Applied Economics, Journal of Industrial Economics,* and *International Journal of Production Economics*. We conducted a supplementary Google search to locate publications not available through online databases. Twenty-five potentially relevant publications were identified. The search of the online databases, Internet and journals resulted in 3,605 potentially relevant publications. Search results for each of the databases were pre-screened using titles and abstracts.

Table 1: Search Results by Database/Source

Database name	# of papers retrieved	# of potentially relevant papers remained after screening of the titles
Academic Search Complete	336	66
Business Source Complete	511	70
EconLit	86	9
ERIC	450	60
International Political Science Abstracts	1	0
PsycARTICLES	23	4
PsycINFO	107	30
SocINDEX with Full Text	47	4
CBCA Education	11	3
Ingentaconnect	469	88
IDEAS/ Scholar's Portal	1,113	96
Database search – Total	3,154	430
Grey literature research (in progress)	25	25
Handsearch of online journals	426	21

Database name	# of papers retrieved	# of potentially relevant papers remained after screening of the titles
Search before duplicate removal TOTAL	**3,605**	**476**
Duplicates removal		220
Final Search Transferred to Keywording		256

Screening

Search results for each of the databases were pre-screened using titles and abstracts.

The titles and abstracts of the 3,605 retained papers (separately for each database) were screened using inclusion/exclusion criteria developed by the review team. Papers were included if:

- the abstract focussed on competency-based education initiatives;
- the setting of interest included universities and colleges;
- the publication date was between 1995 and 2012;
- the publication language was English.

A detailed description of the inclusion/exclusion criteria is presented in Table 9.

Table 2: Inclusion/Exclusion Criteria

Criteria	Description
EXCLUDE publication date pre- 1995	Include only papers published between 1995-2012
EXCLUDE wrong language	Only studies published in English should be included
EXCLUDE not on topic	Reserved for those articles that were completely off topic
EXCLUDE wrong setting	Focus on university or college settings
EXCLUDE wrong outcome	Include papers that focus on competency-based education initiatives
INCLUDE for second screening	Peer reviewed studies that look at competency based education

Out of 3,605 papers, 476 papers met the inclusion criteria. The screening results were combined and the duplicates were removed (n=220). The remaining 256 papers were transferred to keywording.

Stage: Keywording

Keywording identified significant features of each study such as the study's focus and geographic location. The information provided by the keywording allowed reviewers to map the studies, producing a descriptive overview of the landscape of the research. Using frequency analysis, studies were then grouped according to their thematic focus.

256 publications were keyworded to identify the type of program areas addressed by the search results. Each publication was assigned a generic code describing the program area. At this stage an additional 33 studies were removed as duplicates because the article was published prior to 1995 or because the article did not address a postsecondary setting. The remaining 223 studies were grouped in the categories listed in the following Table.

Table 3: Studies by Program Area/Focus

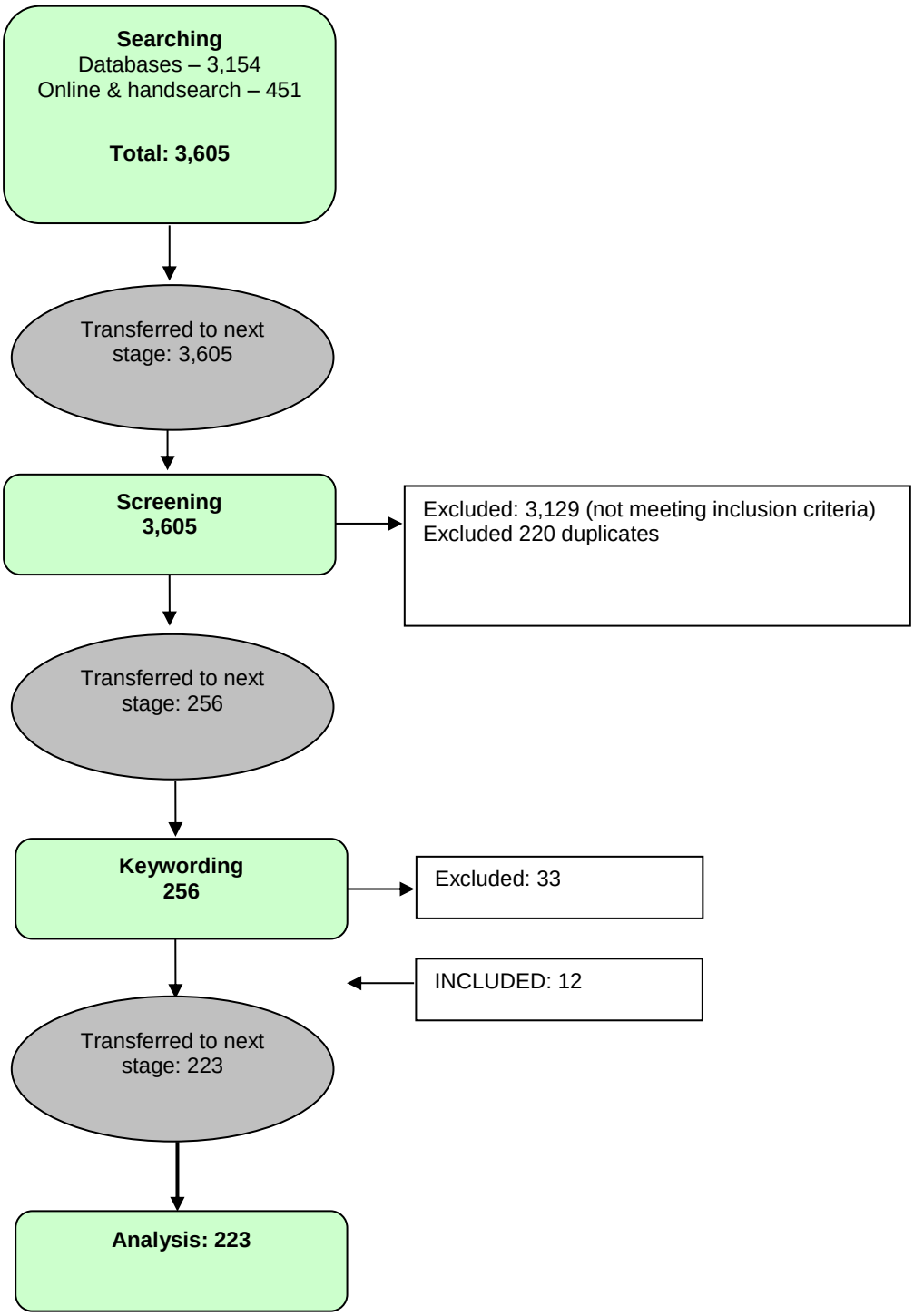
Program area/Focus of the paper	# of studies
Accounting education	5
Business/management education	16
CBE model/issues/benefits (studies that provide an overview of the CBE or discuss issues/benefits of the approach, etc.)	24
Coach education program	1
Educational economics (studies focusing on issues of educational economics, productivity, efficiency, accountability, etc.)	96
Engineering	5
Hairdressing	1
Health/medicine (nursing, occupation therapy, surgery, dental, pathology, psychology, clinical neuropsychology, health management, health promotion, etc.)	51
Information management/information technology	2
Recreation	1
Social work	1
Teacher education	3
Vocational education/training	14

Stage: Review and Synthesis

During the last stage of the review, the full texts of the papers were reviewed by three researchers. Pertinent information was extracted and synthesized from each of the topics. Narrative summaries of the findings were prepared. During the review process, the reference lists of the publications were also examined and additional publications were added to the database. Twelve additional sources were added at this stage of the review.

Figure 1 (below) presents the flow of the literature through the review.

Figure 1: Flow of the Literature through the Review



Appendix B: An Approach to Analyzing the Potential for Productivity Gains

The empirical studies of productivity and efficiency in postsecondary education provide estimates of the potential for gains from economies of scale, technical efficiency, technological change, and so forth. However, empirical studies of production functions and cost functions in postsecondary institutions are conducted at a high level of aggregation. We have not found studies of production functions that link specific programs or pedagogical changes to productivity changes. Likewise, with empirical studies of cost functions we have not found any comprehensive studies that consider efficiencies or cost savings achieved by a particular academic delivery system such as competency-based education. To our knowledge, there are no studies that directly or indirectly examine the productivity of competency-based education (or, for that matter, any other specific method of delivering teaching and learning). However, the framework provided by economic theory offers an approach to evaluating the potential for CBE to lead to gains in efficiency.

The review of the empirical literature suggests several ways in which econometric techniques for studies of production and cost functions could be adopted to explore the potential productivity gains through CBE. One possibility would be to establish sub-groups of institutions based upon the production technology or production techniques used for teaching (first separating universities from other postsecondary institutions, and exploring each separately). Sub-groups would be defined by those institutions that employ a CBE pedagogy and those that do not. Another possibility would be to move down to the department or discipline level rather than the institution; again defining sub-groups as those departments using CBE versus those that do not. This has the advantage that sub-groups may be more homogeneous. Without further investigation it is not possible to know how feasible this is; can enough universities be found, say, to have a sufficiently large sample for the CBE sub-group? Another issue would be to determine whether there would be significant differences among the institutions in a putative sub-group (e.g., differences in size) so that homogeneity within the group could not be assumed.

A second possibility would be a two-stage approach. Here the first step would be an analysis conducted over all institutions, with the second stage using first-stage results to explore whether there are scale or efficiency differences between CBE and non-CBE institutions. Alternatively, the second stage could be to use regression analysis to examine the determinants of efficiency scores. CBE (or proxies for CBE) would be one of the explanatory variables in such an analysis. A third approach might be to take a student perspective (the student as the DMU, as in Johnes' studies). In this case the focus of the analysis is to look to whether there are differences across institutions (CBE versus non-CBE) in the degree to which student performance is strengthened or weakened by the institution. As before, it would require that we be able to identify a sufficiently large sample of CBE institutions.

Studies along any of these lines would require data that is difficult to obtain, especially since much of the data needed is not likely to be in the public domain. There would also be econometric issues to be resolved. A study of this sort is beyond the scope of this report. Our approach is therefore to use the theory of production as a basis for developing a survey and interview instrument to investigate productivity and CBE.

The foundation for the economics of productivity is the production function. The education production function represents the mapping of inputs into outputs. It is an abstraction of the activities through which educational resources such as academic staff, non-academic staff, academic and administrative services, libraries, and so on are transformed into degrees awarded, research performed, and services provided to the wider, external community. In this theoretical construct, the transformation takes place inside a "black box;" resources enter the box as inputs and emerge as outputs, and the actual production processes or activities through which the transformation takes place are ignored.

Keeping with this metaphor of the black box, inside the box are the production processes for each of the outputs, and it is this that needs to be investigated. Of the three (or more) outputs produced by postsecondary institutions, we are interested here in the process for producing university degrees or graduation results (common measures, as noted, of output and performance). Broadly construed, the production of university degrees consists of all those activities from the conception of programs and courses through to the record keeping for student performance. In our terminology, this production process – the delivery of teaching and learning - is an academic delivery system. There are different ways of configuring an academic delivery system, but there are certain activities that would have to take place in any system. These include, but are not limited to:

- Setting the higher-level goals and objectives for programs and courses.
- Determining the curriculum, including such things as determining performance goals, desired outcomes to be achieved by students, and setting the balance between developing generic skills and applied skills.
- Setting the mode of program delivery, including the mix of pedagogies and technologies to be used, or the role of faculty versus students in the delivery of course material. This would also include determination of the time frame for course and/or program completion (and fee schedules).
- Development and implementation of tools for assessing student performance, including setting the criteria for successful completion of the program.
- Providing teaching faculty, including decisions on the composition of the teaching faculty (full-time versus part-time; tenure=stream versus contractually limited).
- Setting an accountability framework, including mechanisms to assure and maintain program quality.
- Providing student support services, including academic support (such as libraries).
- Establishing systems for recruitment, admissions, registration, and student records.

Academic delivery systems will be differentiated in respect of how these various dimensions are realized in one system compared to another, recognizing that differentiation need not be present in all dimensions. As our review of the CBE literature has shown, CBE has a particular configuration of these dimensions, and it differs from, say, more traditional modes of academic delivery. What is called for in order to evaluate the potential for CBE to lead to greater efficiency or productivity is to consider the potential for efficiency gains in each of these dimensions. Moreover, economic theory tells us what to look for. Growth in efficiency will come from four sources: improvements in technical efficiency, improvements in allocative efficiency, improvements in scale efficiency, and technological change. Going further, we have seen that improvements in technical efficiency may arise from institutions adopting best (or better) practices in the use of existing technologies and production techniques/processes, by better practices in organization and administrative processes (see, e.g., (Levin 1997), by adopting practices that improve the quality of the output, other things equal, and by aligning the interests of the institution and its stakeholders (especially government) (Kivistö 2008). Allocative efficiency is achieved when the mix of resources used matches their relative costs. And scale efficiency refers to ray economies of scale, product-specific economies of scale, and economies of scope. We have therefore designed a survey instrument that looks, for various dimensions in the academic delivery system of CBE, for information about the potential for efficiency through CBE (relative to other modes of delivery) and the sources of efficiency gains.

Appendix C: Directions' Survey of Competency-Based Education Programs

Survey of Competency Based Education Programs

The objective of this project is to explore select postsecondary programs that use competency-based education. This project is intended to assist the Higher Education Quality Council of Ontario (HECQO) to better understand how a shift to competency-based education might affect the cost and quality of higher education programs, institutions and systems and to investigate how competency-based education might enhance the productivity of public higher education systems and institutions.

HEQCO has contracted Directions Evidence and Policy Research Group (Directions), an independent research organization, to gather and analyze the information you provide to ensure anonymity and confidentiality.

Your participation is, of course, voluntary. It should take approximately 40 minutes to complete the survey.

If a suggested response is very close to the experience at your institution, even if it's not an exact match, please select it.

Institution and Participant Information

Name of Institution

- Alverno University
- Army-Baylor University
- Brandman University
- Brigham Young University – Idaho
- Delaware County Community College
- DePaul University School for New Learning
- Empire State College
- Excelsior College
- Georgia College
- Hocking College
- Houston Community College – Northwest College
- Indiana University School of Medicine
- Indiana University-Purdue University Indianapolis
- Iowa State University (Agricultural and Biosystems Engineering Department)
- Ivy Tech Community College
- King's College
- Marylhurst University
- Michigan State University
- Mott Community College
- New Century College at George Mason University
- New York Institute of Technology
- Norhteastern Illinois University
- Northern Arizona University

- Portland State University
- Rio Salado College
- Sinclair Community College
- Southern New Hampshire University
- Texas Tech University
- Thomas Jefferson University School of Public Health
- Tusculum College
- University of Georgia Graduate School
- University of Maryland University
- University of Melbourne
- University of Michigan School of Public Health
- University of Washington
- University of Wisconsin Flexible Option
- University of Wisconsin/UW-Green Bay
- Western Governor's University
- Westminster College
- Other

If you work for another institution, please provide the name for your institution

_____

Name of the program

_____

Indicate your position at your Institution

- Dean.
- Director of the Program.
- Program manager.
- Faculty member.
- Other, please specify...

How long have you been performing these responsibilities?

- Less than 1 year.
- 2-5 years.
- 6-10 years.
- More than 10 years.

Program and Curriculum Goals

Which of the following best describes your program?

- Course-credit accumulation leading to a degree, or diploma or credential.
- Competency-based educational activities leading to a degree, diploma or credential.
- A combination of course-credit accumulation and competency based educational activities leading to a degree, diploma, or credential.
- Other, please specify...

How long have you been offering competency-based education programs?

_____

What percentage of all university programs would be classified as competency-based education programs?

_____

What is the primary medium for delivering your program?

- Face-to-face through classroom instruction.
- Distance learning, which may include online components
- Fully online.
- A blend of face-to-face and online instruction.
- Other, please specify...

Which of the following best describes the primary emphasis of your program? (Select all that apply)

- Acquisition of broad-based general knowledge and critical thinking skills.
- Acquisition of disciplinary knowledge and skills.
- Acquisition of employer or occupation/ profession-specific knowledge and skills.
- Application of disciplinary knowledge and skills.
- Application of employer-specific and/or occupation/ profession-specific knowledge and skills.
- Other, please specify...

How are the objectives of your program described?

- As general goals and learning outcome (e.g., using language well for a variety of purposes).
- As generic competencies (e.g., reading a spread sheet).
- As specific competencies reflecting occupation/profession-specific situations or contexts (e.g., an ability to run an MRI machine).
- Other, please specify...

Which of the following best describes this program?

- There is a competency profile for the program as a whole.
- There is a competency profile for the program as a whole and for each of the experiences or courses included in the program.
- There are competency profiles for each of the experiences or courses in the program, but no competency profile for the program as a whole.
- There are no competency profiles for either the program or for the experiences or courses that make up the program.

How was the competency profile established?

- Faculty and/or administrators in the institution developed the profile.
- Employers and/or professional/trade associations and/or outside experts developed the profile.
- Faculty and/or administrators in the institution and employers/outside experts jointly developed the profile.
- Not applicable.
- Other, please specify...

Who has primary responsibility for determining program content and structure?

- Faculty/administration.
- Employers.
- Faculty/ administration and employers.
- Students.
- Faculty/administration and students.
- Student and employers.
- Faculty/administration, employers and students.
- None of the above.
- Other, please specify...

What is the cycle for review and revision of the competency-based program curriculum?

- Every 2-3 years.
- Every 4-5 years.
- Every 6-7 years.
- No regular cycle for review and revision.
- Other, please specify...

Program Delivery and Instruction

Who normally has responsibility for instruction?

- Full-time faculty only.
- Part-time or adjunct faculty only.
- Most courses taught by full-time faculty and some by part-time faculty.
- Most courses taught by part-time faculty and some by full-time faculty.
- A course instructor or mentor hired just for the course.
- There is no teaching for the course; mentors are available to guide students through the curriculum.

How would you describe the nature of student-faculty interactions?

- Teachers are responsible for presenting the content of the program; students are primarily recipients.
- Teachers stimulate students to formulate learning needs based on self-reflection and, then, use that information to develop learning processes/ experiences for students.
- Students and teachers co-create the learning activities or experiences.

How are incoming students introduced to the learning process in the program?

- There is no orientation in the program.
- Students are provided with program manuals and materials.
- Students participate in an orientation that introduce them to the program.
- An introductory unit in the program introduces students to the program objectives and competencies, and explains how the objective and competencies are linked to professional context.
- Other, please specify...

What assistance from instructors or mentors is available to students? (Select all that apply)

- ☐ Office hours (or other regularly scheduled opportunities for students to meet with instructors).
- ☐ Faculty members hold consultations outside of office hours.
- ☐ Special consultations before and/or after students undertake an assessment.

- ☐ Online consultations and meetings (e.g., e-mail, teleconferencing, video conferencing, social media).
- ☐ Instruction groups led by senior-level students.
- ☐ None.
- ☐ Other, please specify...

What teaching assistance is available to the instructor? (Select all that apply)

- ☐ Tutorial leaders.
- ☐ Graders/markers.
- ☐ Demonstrators (for example, laboratory or studio demonstrators).
- ☐ Mentors/coaches.
- ☐ None.
- ☐ Other, please specify...

What is the minimum number of students per class required for the instructor to hire an assistant?

- ○ Assistants are not available.
- ○ 1-10 students.
- ○ 11-20 students.
- ○ 21-30 students.
- ○ 31-40 students.
- ○ More than 40 students.

The costs for an assistant would be

- ○ Borne by the institution.
- ○ Borne by the instructor.
- ○ Shared between the institution and the instructor.
- ○ Not applicable.
- ○ Other, please specify...

What is the typical number of full time equivalent courses an instructor would teach in a twelve month period?

_____

What is the typical number of students for courses in this program?

- ○ 10 or fewer
- ○ 11-20
- ○ 21-30
- ○ 31-40
- ○ 41-50
- ○ More than 50

If the traditional Carnegie credit hour is not employed how does one schedule course offerings if students are completing sequential courses at different rates?

(Carnegie credit hour is defined as one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week)

- ○ Courses are scheduled to begin at pre-determined times during the year; students need to wait for the course to be available before enrolling.

- Courses are scheduled to begin at pre-determined times during the year, but students may enrol in them at any time after the start date.
- Course are always available and allow for continuous enrolment, students can enrol in a course at any time.
- Directed studies are used for student.
- Other, please specify... _____

If the traditional Carnegie credit hour is not employed and students are completing courses at different times, does this present any challenges for scheduling instructor course-loads?

- Yes
- No
- If there are challenges, please describe how they were met... _____

How are the student fees assessed?

- Per term.
- Per credit.
- Per course.
- Per program.
- Other, please specify... _____

How are fees assessed if a student requires more than one term to achieve competency in a course?

- No additional fees; students pay for the program, regardless of how long it takes then to compete.
- No additional fees; students pay for the course regardless of how long it takes to compete.
- Students must pay fees for each term for which they are registered.
- Other, please specify... _____

With respect to the design, development, and delivery of the curriculum, we are interested in the roles played by the different stakeholders. In the table below, please indicate whether the stakeholders contribute to the activities listed. (Select all that apply.)

	Full-time faculty/ administration	Part-time faculty and/or instructors/ mentors	Employers/ outside experts	Students	Not applicable
Identification of competencies that students need in order to perform professional activities.					
Development of learning outcomes.					
Development of competency profile.					
Development of courses and units for the curriculum.					
Development of teaching materials.					
Course delivery.					
Student orientation.					
Program/course administration or management.					
Evaluation of quality of course/program curriculum and design.					

Student Assessment

In order to successfully complete a course, students must: (Select all that apply.)

- ☐ Attend all the classes.
- ☐ Complete all the assignments.
- ☐ Satisfactorily complete all assessments.
- ☐ Demonstrate minimum proficiency on the competencies.
- ☐ Demonstrate mastery of the competencies.
- ☐ Participate in a work placement.
- ☐ Other, please specify... _____

What types of student assessments are being used? (Select all that apply.)

Written and/or oral examinations.

- ☐ Portfolios.
- ☐ Observations.
- ☐ Performances.
- ☐ Prior learning assessment.
- ☐ Self-evaluations.

- ☐ Employer evaluations.
- ☐ Other, please specify... _____

When are students allowed or required to demonstrate their competence in order to successfully complete the course?

- o At the end of the course.
- o At any time during the course, at the student's instigation.
- o Competencies do not have to be demonstrated to complete a course.
- o Other, please specify... _____

What procedures/rules are applied if a student could not demonstrate a required competency?

- o Student can retake the competency assessment.
- o Student is required to repeat the course, activity or experience designed to develop the competency(ies) the student failed to demonstrate.
- o Student is required to complete an alternate experience, course or activity and complete another competency assessment.
- o Student is required to withdraw from the program.
- o Other, please specify... _____

Students may retake the competency assessment:

- o Once.
- o No more than three times.
- o As many times as they wish.
- o Other, please specify... _____

What measures are established to affirm with employers that the competencies identified for successful completion of the program have been achieved by graduates? (Select all that apply.)

- ☐ Satisfactory completion of all the required courses and course assessments
- ☐ Observations conducted by the employer during workplace visits.
- ☐ Special assessment at the completion of the program.
- ☐ None.
- ☐ Other, please specify... _____

What is the "final" project that students are required to complete for graduation

- o A program competency assessment.
- o Thesis.
- o Research paper.
- o Work or practicum placement.
- o Capstone project.
- o No final project; graduation depends upon successful completion of all courses and course competencies.
- o Other, please specify... _____

Who supervises the "final" project(s) such as thesis or research paper?

- o Full-time faculty.
- o Part-time faculty/ instructors.
- o Employer.

- Faculty from another educational institution.
- Not applicable.
- Other, please specify... _____

With respect to Student Assessment, we are interested in the roles played by the different stakeholders. In the table below, please indicate whether the stakeholders contribute to the activities listed. (Select all that apply.)

	Full-time faculty	Part-time faculty and/or instructors/mentors	Employers/ outside experts	Students	Not applicable
Administration or management of assessment activities.					
Development of program and/ or course evaluation / assessment instruments for students.					
Evaluating student projects.					
Evaluating the student's assessment results.					
Evaluating work placement.					
Pre- and post-assessment advising for students.					
Review and redesign of assessment instruments.					

Does your competency-based education program provide a means by which the program's value-added for the student can be evaluated?

- Yes
- No

If yes, what are the methods used to evaluate value-added?

- Student surveys administered prior to and after program completion.
- Standardized tests administered to students prior to and after program completion.
- Employer assessments.
- Employment profiles provided prior to and after program completion.
- Other, please specify... _____

Faculty and Student Support Services

Thinking about faculty/instructor support services for course delivery, which of the following are provided by the institution to faculty members/instructors/mentors? (Select all that apply.)

- ☐ Classroom and teaching space.
- ☐ Offices for course instructors.
- ☐ Offices for mentors and/or teaching assistants.
- ☐ Library resources.
- ☐ Computer labs.
- ☐ Other teaching-technology resources (projectors; laptops; electronic white boards).
- ☐ Teaching materials.
- ☐ Funding for research projects.
- ☐ None of the above.

Which of the following best describes the training and development options provided for competency-based education instructors/faculty in your institution?

- ○ No special training is provided.
- ○ Training is voluntary and at the discretion of the instructor.
- ○ Training is mandatory; every instructor/faculty member has to complete a certain amount of prescribed training.
- ○ Training is optional, but instructors/faculty are encouraged to participate in training opportunities.
- ○ Other, please specify... _____

What is the focus of professional development for faculty/instructors in competency-based education programs? (Select all that apply.)

No special training is needed.

- ☐ Development of competency profiles.
- ☐ Curriculum development.
- ☐ Student assessment methods.
- ☐ Program evaluation.
- ☐ Pedagogy.
- ☐ The use of technology.
- ☐ Other, please specify... _____

How are professional development opportunities made available? (Select all that apply)

- ☐ Funding is provided for faculty to pursue professional development of their choosing.
- ☐ Training opportunities are provided by program/institution; any additional development is not funded by the institution.
- ☐ Faculty can participate in training opportunities offered by outside providers, but funding is provided only if approved by the institution.
- ☐ Faculty can participate in training opportunities offered by outside providers, but funding is provided by the institution.
- ☐ Other, please specify... _____

Which of the following most closely describes the institution's view of faculty research?

- o Faculty are expected to conduct research.
- o Faculty are encouraged, but not required, to conduct research.
- o Faculty are expected to focus on teaching.

Which of the following support services are available to students? (Select all that apply.)

- ☐ Student academic advising.
- ☐ Supervisors or mentors for overseeing program requirements such as theses, research papers, projects.
- ☐ Counselling, including career counselling.
- ☐ Identification of work placement opportunities.
- ☐ Work placement supervision.
- ☐ Library resources.
- ☐ Computer labs.
- ☐ Student learning spaces.
- ☐ Technological support.
- ☐ Other, please specify... _____

What tools are available to provide academic advice to students? (Select all that apply.)

- ☐ Degree audit report.
- ☐ On-line advising.
- ☐ Face-to-face workshops.
- ☐ Face-to-face individual sessions.
- ☐ Mentorship opportunities.
- ☐ Other, please specify... _____

How is the student's learning progress documented? (Select all that apply.)

- ☐ Course grades with transcripts.
- ☐ Course self-evaluations (co-curricular transcript record where they can record their experiences outside of the classroom as well as their reflections on learning).
- ☐ Course or program assessment results.
- ☐ Instructor evaluations in addition to assessment results.
- ☐ No documentation provided.
- ☐ Other, please specify... _____

Administration, resources and funding

Thinking about the development of the courses, curriculum, and assessment components for a typical program, what would you estimate as an average number of hours spent in each of the following activities?

	Less than 5	5-10	11-15	More than 15	Not Applicable
Team or department meetings to determine competency profile.					
Team or department meetings to determine curriculum and program design.					
Team or department meetings to determine assessment design.					
Additional meetings with employers or outside experts to determine and/or affirm competency profile.					
Additional meetings with employers or outside experts to determine and/or affirm curriculum and program design.					
Additional meetings with employers or outside experts to determine and/or affirm assessment design.					
Training/professional development.					
Program assessment and/or redesign.					

Thinking about the course delivery and student assessment components for a typical program, what would you estimate as an average number of hours spent in each of the following activities?

	Less than 5	5-10	11-15	More than 15	Not Applicable
Team or department meetings.					
Course preparation.					
Instruction (online or in-class).					
Mentoring/Advising (online or in-class).					
Monitoring student progress.					
Assessing student performance.					
Work placement organization and supervision.					
Student records and registrarial services.					

For each of the following activities, what proportion of the required funding comes from the sources indicated?

	Regular department or program budget	Central institution budget	Special funding from institution	Funding provided by employers or trade associations	Other external sources
Competency profile development	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable
Curriculum development	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable
Course delivery (including instructor costs)	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable
Student assessment	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable
Program administration and management	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable

	Regular department or program budget	Central institution budget	Special funding from institution	Funding provided by employers or trade associations	Other external sources
Technological support	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable
Support services for faculty	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable
Support services for students	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable
Student records and registrarial support	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable	Less than 10% 10% – 49% 50% – 74% 75% - 100% Not applicable

If applicable, what are the external sources that provide funding. (Select all that apply.)

- ☐ Private donors.
- ☐ Employers.
- ☐ Employer/Trade Associations.
- ☐ Trade unions.
- ☐ Community organizations.
- ☐ Government.
- ☐ Other, please specify... _____

On a scale of 1 – 5, indicate the amount of accountability that each of the following stakeholders expects regarding the goals and/or activities of the institution. (Where 1 = little accountability expected; 5 = high accountability expected.)

	1	2	3	4	5	No accountability expected
Students						
Parents						
Local community						
Faculty/staff						
Central administration						
Board of governors						
Employers						
Accreditation bodies						
Provincial/state government						
National government						

Stakeholders have a variety of tools that may be used to promote accountability by institutions. For each of the stakeholders listed below, for your institution indicate whether each of these tools is available to the particular stakeholder. (Where 0 = not available; 1 = available).

	Students	Parents	Local community	Faculty/ staff	Central administration	Board of governors	Employers	Accreditation bodies	Local government	National government
Requiring periodic reports on institution activities	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1
Requiring periodic reports on institution goals/mission	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1
Influence over program and/or curriculum content	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1
Influence over the size of institution's funding	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1
Influence over the institution's spending	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1

For those accountability tools that are available to stakeholders, indicate on a scale of 1 – 5 how significant each tool is in guiding your institution. (Where 1= the tool is of minor significance; 5= the tool is very significant.)

	Students	Parents	Local community	Faculty/ staff	Central administration	Board of Governors	Employers	Accreditation bodies	Local government	National government
Requiring periodic reports on institution activities	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A
Requiring periodic reports on institution goals/mission	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A
Influence over program and/or curriculum content	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A
Influence over the size of institution's funding	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A
Influence over the institution's spending	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A	1 2 3 4 5 N/A

Competency-Based Education and Productivity

Productivity is the relationship between (quality-adjusted) output and (quality-adjusted) inputs. In education the "output" would be the number of graduates earning a particular type of degree (or diploma or certificate), and the "inputs" would be the various resources used in the teaching/learning process. These would include such resources as faculty, staff, administration, facilities such as classrooms or laboratories, and so on.

We are interested in how competency-based education may affect – either positively or negatively – the efficiency of the teaching and learning activities that are undertaken by institutions.

We have identified 10 ways in which introducing a new mode of teaching such as competency-based education might lead to an improvement in efficiency and productivity. A gain in productivity might arise from:

- **Allowing new, previously untried, technologies to be introduced into the institution.**
- **Allowing better use of existing – known – technologies or techniques. Allowing the institution to emulate best-practice methods that are found in other institutions. Allowing the institution to substitute less costly resources into the teaching/learning process.**
- **Allowing the institution to make more effective use of their current resources. Higher quality graduates, with no change in the resources used. Improvements in the accountability tools. Improvements in the administration, organization, and management of the teaching/learning processes.**
- **Allowing the institution to take advantage of potential economies of scale that result from larger size.**
- **Spreading costs by diversifying the range of degrees/diplomas/certificates offered.**

Further, we have decomposed the teaching/learning processes into six main categories of activities: (1) program planning and curriculum development; (2) program delivery (i. e., modes of instruction); (3) student assessment; (4) student services and support; (5) academic program administration and management; and (6) facilities planning and use.

For each of these 6 activities we are interested in whether employing a competency-based delivery model for education, compared to more traditional or standard delivery models, allows your institution to exploit any of the 10 possible sources of productivity.

With respect to <u>program planning and curriculum development</u>, to what extent does competency-based education allow you to:

	Not at all	Very little	Somewhat	A lot	Competency-based education has a negative effect
Use new technologies					
Make better use of existing technologies					
Emulate best practice methods					
Use less expensive inputs					
Make more effective use of existing resources					
Improve quality of the graduates					
Improve accountability					
Improve the management of the course delivery					
Achieve scale economies					
Achieve economies through diversification					

With respect to <u>program delivery</u>, to what extent does competency-based education allow you to:

	Not at all	Very little	Somewhat	A lot	Competency-based education has a negative effect
Use new technologies					
Make better use of existing technologies					
Emulate best practice methods					
Use less expensive inputs					
Make more effective use of existing resources					
Improve quality of the graduates					
Improve accountability					
Improve the management of the course delivery					
Achieve scale economies					
Achieve economies through diversification					

With respect to <u>student assessment</u>, to what extent does competency-based education allow you to:

	Not at all	Very little	Somewhat	A lot	Competency-based education has a negative effect
Use new technologies					
Make better use of existing technologies					
Emulate best practice methods					
Use less expensive inputs					
Make more effective use of existing resources					
Improve quality of the graduates					
Improve accountability					
Improve the management of the course delivery					
Achieve scale economies					
Achieve economies through diversification					

With respect to <u>student support and services</u>, to what extent does competency-based education allow you to:

	Not at all	Very little	Somewhat	A lot	Competency-based education has a negative effect
Use new technologies					
Make better use of existing technologies					
Emulate best practice methods					
Use less expensive inputs					
Make more effective use of existing resources					
Improve quality of the graduates					
Improve accountability					
Improve the management of the course delivery					
Achieve scale economies					
Achieve economies through diversification					

With respect to <u>academic administration and management</u>, to what extent does competency-based education allow you to:

	Not at all	Very little	Somewhat	A lot	Competency-based education has a negative effect
Use new technologies					
Make better use of existing technologies					
Emulate best practice methods					
Use less expensive inputs					
Make more effective use of existing resources					
Improve quality of the graduates					
Improve accountability					
Improve the management of the course delivery					
Achieve scale economies					
Achieve economies through diversification					

With respect to facilities planning and use, to what extent does competency-based education allow you to:

	Not at all	Very little	Somewhat	A lot	Competency-based education has a negative effect
Use new technologies					
Make better use of existing technologies					
Emulate best practice methods					
Use less expensive inputs					
Make more ore effective use of existing resources					
Improve quality of the graduates					
Improve accountability					
Improve the management of the course delivery					
Achieve scale economies					
Achieve economies through diversification					

Costs

We are interested in comparing the costs of mounting and running a competency-based education program with the costs for mounting and running a traditional type of program. We distinguish among three broad types of costs that may be incurred with the introduction of any new academic program, whether it is competency-based, traditional, or a hybrid. Central overhead costs: those associated with any additional central (institution-wide) infrastructure and activities (e.g., physical plant; libraries; management systems; IT systems) that might be required.

Program-specific overhead costs: those associated with the initial development and start-up of a new program. Program operating costs: those associated with the on-going operation of the program.

In the next series of questions we ask you to indicate whether a new competency-based education program entails particular types of costs and how such costs would compare to a program that was not in the competency-based mode.

Central Overhead Costs

With respect to central overhead costs, please indicate for the student services and support whether additional resources associated with infrastructure/activities are required when a new competency-based education program (CBE) is mounted and, if so, how the total costs of a new CBE program would compare to a non-CBE program.

	No additional resources required	CBE significantly lower	CBE somewhat lower	CBE about the same	CBE somewhat higher	CBE significantly higher
Library services/resources						
Course-ware support (computer labs, IT services)						
Central advising and counselling services						
Financial aid systems						

With respect to central overhead costs, please indicate for the facilities planning and management whether additional resources associated with infrastructure/activities are required when a new competency-based education program (CBE) is mounted and, if so, how the total costs of a new CBE program would compare to a non-CBE program.

	No additional resources required	CBE significantly lower	CBE somewhat lower	CBE about the same	CBE somewhat higher	CBE significantly higher
Physical space						

With respect to central overhead costs, please indicate for the administration and management whether additional resources associated with infrastructure/activities are required when a new competency-based education program (CBE) is mounted and, if so, how the total costs of a new CBE program would compare to a non-CBE program.

	No additional resources required	CBE significantly lower	CBE somewhat lower	CBE about the same	CBE somewhat higher	CBE significantly higher
Enrolment tracking and management						
Financial systems and management						
Registrarial systems (including timetabling, space allocation, student records)						
Recruitment and Admissions (including transfer credit assessment)						
Reporting (to government; accreditation bodies; community)						

Program-Specific Overhead Costs

With respect to program-specific overhead costs, please indicate for program planning and curriculum development whether additional resources associated with infrastructure/activities are required when a competency-based education program (CBE) is mounted and, if so, how the total costs of a CBE program would compare to a non-CBE program.

	No additional resources required	CBE significantly lower	CBE somewhat lower	CBE about the same	CBE somewhat higher	CBE significantly higher
Program and course design and development						
Creation/development of course materials (including web design, syllabus, instructional materials)						

With respect to program-specific overhead costs, please indicate for program delivery whether additional resources associated with infrastructure/activities are required when a competency-based education program (CBE) is mounted and, if so, how the total costs of a CBE program would compare to a non-CBE program.

	No additional resources required	CBE significantly lower	CBE somewhat lower	CBE about the same	CBE somewhat higher	CBE significantly higher
Provision of course materials						
Instructor time (including time spent for communications such as online discussions, email correspondence)						
Direct instructor costs						
Course management and student supervision						
Instructor training and professional development						
IT (network start-up and maintenance, data security, user support services)						

With respect to program-specific overhead costs, please indicate for <u>student assessment</u> whether additional resources associated with infrastructure/activities are required when a competency-based education program (CBE) is mounted and, if so, how the total costs of a CBE program would compare to a non-CBE program.

	No additional resources required	CBE significantly lower	CBE somewhat lower	CBE about the same	CBE somewhat higher	CBE significantly higher
Design and development of assessment materials						

With respect to program-specific overhead costs, please indicate for <u>student services and support</u> whether additional resources associated with infrastructure/activities are required when a competency-based education program (CBE) is mounted and, if so, how the total costs of a CBE program would compare to a non-CBE program.

	No additional resources required	CBE significantly lower	CBE somewhat lower	CBE about the same	CBE somewhat higher	CBE significantly higher
Library services/resources						
Course-ware support (computer labs, IT services)						
Advising and counselling						
Program-specific financial aid systems						

With respect to program-specific overhead costs, please indicate for <u>facilities planning and management</u> whether additional resources associated with infrastructure/activities are required when a competency-based education program (CBE) is mounted and, if so, how the total costs of a CBE program would compare to a non-CBE program.

	No additional resources required	CBE significantly lower	CBE somewhat lower	CBE about the same	CBE aomewhat higher	CBE significantly higher
Physical space						

Program Operating Costs

With respect to program operating costs, please indicate for program planning and curriculum development whether additional resources associated with infrastructure/activities are required when a competency-based education program (CBE) is mounted and, if so, how the marginal cost per student of a CBE program would compare to a non-CBE program.

	No additional resources required	CBE significantly lower	CBE somewhat lower	CBE about the same	CBE somewhat higher	CBE significantly higher
Course maintenance (e.g., revising materials; course redesign)						

With respect to program operating costs, please indicate for program delivery whether additional resources associated with infrastructure/activities are required when a competency-based education program (CBE) is mounted and, if so, how the marginal cost per student of a CBE program would compare to a non-CBE program.

	No additional resources required	CBE significantly lower	CBE somewhat lower	CBE about the same	CBE somewhat higher	CBE significantly higher
Provision of course materials						
Instructor time (including time spent for communications such as online discussions, email correspondence)						
Direct instructor costs						
Course management and student supervision						
Instructor training and professional development						
IT (network maintenance, data security, user support services)						

With respect to program operating costs, please indicate for <u>student assessment</u> whether additional resources associated with infrastructure/activities are required when a competency-based education program (CBE) is mounted and, if so, how the marginal cost per student of a CBE program would compare to a non-CBE program.

	No additional resources required	CBE significantly lower	CBE somewhat lower	CBE about the same	CBE somewhat higher	CBE significantly higher
Delivery and monitoring of assessment materials						
Marking						

With respect to program operating costs, please indicate for <u>student services and support</u> whether additional resources associated with infrastructure/activities are required when a competency-based education program (CBE) is mounted and, if so, how the marginal cost per student of a CBE program would compare to a non-CBE program.

	No additional resources required	CBE significantly lower	CBE somewhat lower	CBE about the same	CBE somewhat higher	CBE significantly higher
Library services/resources						
Course-ware support (computer labs, IT services)						
Advising and counselling						
Financial aid						

With respect to program operating costs, please indicate for <u>program administration and management</u> whether additional resources associated with infrastructure/activities are required when a competency-based education program (CBE) is mounted and, if so, how the marginal cost per student of a CBE program would compare to a non-CBE program.

	No additional resources required	CBE significantly lower	CBE somewhat lower	CBE about the same	CBE somewhat higher	CBE significantly higher
Enrolment tracking and management						
Financial systems and management						
Registrarial systems (including timetabling, space allocation, student records)						
Recruitment and Admissions (including transfer credit assessment)						
Reporting (to government; accreditation bodies; community)						

With respect to program operating costs, please indicate for <u>facilities planning and management</u> whether additional resources associated with infrastructure/activities are required when a competency-based education program (CBE) is mounted and, if so, how the marginal cost per student of a CBE program would compare to a non-CBE program.

	No additional resources required	CBE significantly lower	CBE somewhat lower	CBE about the same	CBE somewhat higher	CBE significantly higher
Space planning						
Space allocation						

Appendix D: Core Functions and Responsibilities of Full-Time Faculty – Course Mentor, Western Governors University

- Provide expertise in the content area.
- Respond to student inquiries about content, course of study, learning resource, or assessment.
- Maintain current and active knowledge in the expertise area in order to bring examples and ideas to students.
- Communicate professionally, relate well, and share a passion for the content in an effort to motivate a diverse group of students.
- Coach students to competency development by asking open-ended questions, brainstorming next steps, and maintaining accountability.
- Provide additional resources to students based on content expertise, while maintaining the students' responsibility for task competency.
- Empower students to develop competency by sharing a passion for the subject.
- Provide relevant information on student tasks based on feedback from graders.
- Monitor and manage a dynamic learning community.
- Respond to student questions within discussion threads in a timely manner.
- Update assessment announcements and live webinar schedule as necessary.
- Post university announcements including holidays, unique changes and vacations.
- Respond to student questions generated through "Ask a mentor" in the learning community in a timely manner.
- Upload and maintain links to recorded webinars (both with audio and as Powerpoints)
- Remove inappropriate student posts in a timely manner.
- Utilize technology-based teaching platforms to aid students in the development of competencies.
- Bring the course of study to life with engaging live webinars or relevant recorded webinars that enhance expected competencies.
- Provide a recorded "Getting Started" session for each course.
- Provide a classroom environment conducive to learning and teaching using features in Adobe.
- Organize concepts in a logical and understandable sequence, utilizing examples and student interaction to facilitate learning
- Utilize innovative teaching techniques in order to meet student needs.
- Be proficient using Microsoft Office Suite (Word, Excel, and Powerpoint) to create course deliverables (i.e. presentations, study guides, and spreadsheets).
- Provide personalized outreach to at-risk students in a way that fosters development of competencies.
- Use TaskStream reports to target students who have had a task sent back for revision.
- Assist students with the task revision process by clarifying evaluator comments, clarifying task directions, directing students to learning resources, and teaching the skills needed to develop appropriate competency.
- Collaborate with student mentors on strategies for supporting individual students.
- Use failed first attempts to identify at-risk students.
- Provide competency-based study plans for students attempting second, third, and fourth attempts.
- Promote student success by showing flexibility in style, method, and communication.
- Assess individual student needs and provide honest feedback about next steps.
- Provide follow up calls or emails to students to summarize conversations.
- Establish and maintain office hours for student questions and consultation through phone, email, and IM.

- Encourage a culture of learning that values mutual responsibility and respect, lifelong learning and ethics as well as personal and professional development.
- Routinely correlate concepts in the learning community with the course of study content.
- Collaborate with other professionals within the university to promote a positive atmosphere in a student-focused environment.
- Use knowledge of assessment to suggest revisions of course of study to product development.
- Identify gaps between student needs and existing resources and services; generate creative resolutions.
- Communicate with positive regard, respect, and solution-focus with members of other departments.
- Maintain knowledge of other departments/services such as Well Connect, Center for Writing Excellence, Career Services, etc. in order to connect students when appropriate.
- Serve on university committees and/or task forces to assist in achieving strategic goals.
- Engage other departments to solve complex issues students may encounter, outside content.
- Maintain appropriate notes and records to document attendance and contact with students; maintain confidentiality, according to law.
- Develop and maintain constructive and cooperative working relationships with others.
- Be available to assist in training new mentors as needed.
- Maintain scholarly and professional expertise through professional development.
- Maintain subscriptions to professional journals and memberships in professional associations most relevant to one's area of expertise.
- Participate in professional conferences as an attendee and/or as a presenter.
- Attend and actively participate in training opportunities provided in online and in person settings.
- Maintain the certifications, licenses or other professional credentials that were required for the position at the time of hiring.
- Actively seek out opportunities to meet with faculty of other institutions who share your area of expertise.
- Balance content delivery with exceptional student service.
- Provide prompt and courteous service, including keeping all scheduled appointments; in emergencies, give students appropriate and timely notice.
- Return all calls or emails within 4 business hours; Provide resolution or update student about progress on resolution of issue within 24 hours.
- Facilitate student interaction with other departments or personnel when needed to ensure the students get support and service.
- Provide honest feedback and recommendations while listening with an empathetic ear, explaining unwritten rules, acknowledging disappointments, and celebrating triumphs.
- Develop a teaching style that is individualized to student needs while also emphasizing real-world application of content.
- Work with difficult people in a positive and proactive manner.
- Clarify misconceptions by communicating the WGU mission and structure; provide a rationale behind policies.
- Perform other duties as assigned.
- Maintain a non-traditional schedule with a minimum of ten (10) hours per week outside the hours of 9 to 5 (in the employee's home time zone).
- Plan vacation days in advance and collaborate with team members for adequate coverage.
- Attend WGU academic meetings on a time table and at a geographic location determined by management, usually twice a year.
- Embrace change proactively.
- Keep up-to-date technically and apply new knowledge to job responsibilities.

- Contribute to the wider WGU community by participating in collaboration opportunities, including focus groups and the Mentor Development Community.

PERFORMANCE MEASUREMENTS

- Effective mentoring of students with a professional approach and knowledge of the competency-based model.
- Positive working relationship with student mentors, course mentors and students.
- Response time to students and university employees is appropriate and aligned with the university goal.
- Maintain reports of student progress ensuring that reports and documents are neat, accurate, and completed timely.
- Calls and inquiries are courteously and professionally resolved or referred.
- The university's professional reputation is maintained.
- Management is appropriately informed of area activities and of any significant problems.

Required Experience

Minimum Qualifications: Education: A doctorate degree in education.

Experience/Expertise: Experience providing student support and instruction; demonstrated ability to work with struggling or at-risk learners.

Hard/technical skills: Able to utilize phone, email, Internet, instant message, Microsoft office suite, and technology based delivery systems.

Soft skills: Leadership; communication; independent self-starter/self-manager; understanding and appreciation of competency-based education; proficiency in oral and written English communication; track record for effective coaching and communication skills within a diverse population; and demonstrated professionalism that displays effective judgment and professional integrity.

Other: Able to pass a criminal background check. Must be lawfully employable in the United States either by virtue of citizenship or by permanent residency via a green card.

Preferred Qualifications: Experience working with adult learners and distance learning environments preferred; experience with APA formatting preferred.

Job Location: Work from home, United States

Appendix E: Core Responsibilities and Functions of Student Mentors, Western Governors University

- Providing direct, comprehensive program guidance to assigned students (normally 80-100 students)
- Managing students' academic progress according to university policies
- Scheduling students' use of learning resources and degree assessments
- Maintaining appropriate documentation of all academic transactions
- Maintaining regular communication with students according to university protocol
- Being well versed in Microsoft Outlook Suite Products, specifically Outlook Calendar
- ESSENTIAL FUNCTIONS AND RESPONSIBILITIES
- Facilitates sections of the introductory course, Education Without Boundaries, which is required of all new students
- Assists students in their educational planning and progress from initial enrollment to graduation
- Evaluates student learning styles, skills, deficiencies and goals; assists students in the development of Degree Plans; identifies appropriate learning resources for them to use; and facilitates their use of those resources
- Monitors student academic progress, communicating with each student at least every two weeks; s/he intervenes as necessary to assist those students having difficulty, and completes required university reports on their academic status
- Assists students in career planning within the boundaries of his or her expertise, and directs students to planning resources in other areas as appropriate
- Serves as the student's advocate in resolving matters of academic difficulty, misunderstanding or confusion
- Oversees development of the student's capstone or final project, convenes and chairs where applicable the final project committee, verifies the completion of all academic requirements, and initiates the graduation process

PERFORMANCE MEASUREMENTS

- Student success (as measured by % of students on OTP—a measurement of courses completed within the term)
- Student success (as measured by number of program graduates)
- Student retention (as measured by % of students retained 7 months, 13 months, 19 months, 25 months and 3 years)
- Student satisfaction (as measured by approved survey responses administered to program participants)
- College rank (using Z score report)
- Other measures, as agreed upon

Required Skills

- Strong customer service orientation and extraordinary communication skills.
- Technologically competent, specifically with online programs, tracking and communication technology.
- A remarkable talent for organization is a requirement.
- Must be able to spend significant time working at a computer.
- Must be able to spend significant time on the telephone.
- Must have good Microsoft Office skills and strong Internet capabilities.
- Must be able to communicate at a high level, verbally and in writing.
- Excellent collaboration skills.
- Ability to work as a member of a team.
- Experience with integrated technology systems and tools.
- Expertise in one or more fields covered by the competencies required in college programs.
- Position works from home, but must be available for travel in support of college requirements.

Appendix F: Alverno College Criteria for Academic Rank

CRITERIA FOR ACADEMIC RANK
(from the Alverno Educator's Handbook)

CRITERIA AND INTERPRETIVE STATEMENT FOR BEGINNING ASSISTANT PROFESSOR

Teaches Effectively

- develops understanding of ability-based curriculum and assessment
- ***teaches for appropriate abilities in disciplinary context***
- provides direction, clarity, and structure for students
- provides timely and helpful feedback
- is available for and respectful of students
- communicates enthusiasm for one's discipline

Beginning Assistant Professors are expected to bring disciplinary expertise and a concern for students to their teaching. They develop in their understanding of the ability- based curriculum and the implications for pedagogy. They provide direction for students and develop an understanding of the curriculum and assessment processes.

Works Responsibly in the College Community

- ***participates in required meetings and workshops***
- collaborates effectively with other faculty and staff
- uses formal and informal feedback to improve performance
- implements departmental, divisional, and institutional goals
- explores opportunities for individual contributions
- identifies, refines, and acts on individual faculty development goals

Beginning Assistant Professors work collaboratively with others as they implement department, divisional, and institutional goals. Through collaboration, they discover how their expertise and talent contribute to the common enterprise. As they develop their own individual goals, they explore how these goals might provide opportunities for contributions to the institution.

Develops Scholarship

- ***formalizes plan for continuing education or degree completion***
- identifies scholarly activities/research areas in discipline in relation to teaching
- develops connections with professional community

Beginning Assistant Professors continue to develop professionally. If they have not completed their formal education, degree completion becomes a priority. They should be involved in scholarly activities or systematic study that continues development in their disciplines and explores the principles of education, especially in relation to the understanding of the ability-based curriculum.

Serves the Wider Community

- identifies possible areas of service
- ***participates in outreach activities***

Beginning Assistant Professors identify ways in which they may contribute to the wider community in outreach activities. These might include involvement in civic activities or participation in professional organizations

CRITERIA AND INTERPRETIVE STATEMENT FOR EXPERIENCED ASSISTANT PROFESSOR

Teaches Effectively

- ***creates learning experiences and assessments that reflect integration of discipline and generic abilities***
- organizes learning experiences that assist students to achieve outcomes
- provides feedback directed toward specific abilities and individual need
- responds to students in a variety of settings with sensitivity to background and learning style
- generates student enthusiasm for learning
- refines teaching practice based on self assessment and feedback

Experienced Assistant Professors develop a more comprehensive view of the curriculum that they are able to incorporate in their teaching. They expand their awareness of students and their learning needs. They integrate feedback from peers and students in their teaching and assessment practices.

Works Responsibly in the College Community

- makes significant conceptual contributions
- ***initiates collaboration with other faculty and staff***
- enacts individual faculty development plan
- makes workable relationship between individual goals
- makes workable relationship between goals of department, division, or institution
- makes contributions that influence the institution in the department, division, and beyond

Experienced Assistant Professors are actively trying out roles and making choices about their teaching careers and how their careers will develop in the institution. They take more initiative and begin to find their distinctive contribution to the college community.

Develops Scholarship

- ***makes progress in continuing education or degree completion***
- pursues scholarly activity that integrates disciplinary area and teaching
- participates in broader professional community

Experienced Assistant Professors maintain their disciplinary expertise while developing as professional educators. Completion of the terminal degree is expected. They pursue scholarly activities that enrich their teaching practices.

Serves the Wider Community

contributes actively to the wider community

Experienced Assistant Professors focus their involvements in selected civic activities and/or professional organizations.

CRITERIA AND INTERPRETIVE STATEMENT FOR ASSOCIATE PROFESSOR

Teaches Effectively

- ***integrates disciplinary/professional learning and teaching experience to shape teaching practice***
- applies developmental frameworks and learning theory to teaching practice
- organizes learning experience to allow for flexibility in responding to students
- engages in dialogue about teaching in the higher education community

Associate Professors use an integrated approach in their practice. They combine frameworks from the curriculum and their disciplines with developmental learning theories. They respond resourcefully to unanticipated learning situations. They are flexible in using different modes of assessment and can adapt and individualize their instruction. They actively serve as resources to other teachers.

Works Responsibly in the College Community

- provides leadership in developing curriculum and teaching effectiveness
- develops institutional role through significant contributions
- creates strategies to enhance effective collaboration in the institution
- pursues opportunities to improve the quality of teaching and learning across the institution

Associate Professors provide leadership in a variety of settings. They develop a distinctive role in the institution by making significant individual and collaborative contributions. They develop strategies to enhance the performance of others with whom they work.

Develops Scholarship

- ***holds terminal degree***
- pursues specialized research that integrates disciplinary area and teaching
- ***applies specialized scholarly research to improvement of***

Associate Professors pursue progressively more specialized research and systematic study that combines a disciplinary perspective with teaching. Their scholarship leads to better teaching and to curriculum development.

teaching and curriculum development in the institution

- makes contributions to broader professional community

Serves the Wider Community

- renders distinctive service to the wider community

Associate Professors focus their involvement in civic activities and/or professional organizations. They purposefully select opportunities that capitalize on their strengths.

CRITERIA AND INTERPRETIVE STATEMENT FOR FULL PROFESSOR

Teaches Effectively

- ***expands scope of scholarship to include new areas/other disciplines to inform student-centered teaching practice***
- takes leadership in developing materials, presentations, etc., that address significant curriculum concerns
- influences professional dialogue about teaching scholarship in the higher education community

Professors continue to demonstrate the kind of integration expected at the Associate Professor level while extending the range of perspectives they integrate. They take leadership in exploring the teaching enterprise both within their disciplines and across disciplines. The results of their scholarship are seen in teaching practices within and outside the institution. They provide direction in identifying and addressing significant teaching concerns.

Works Responsibly in the College Community

- ***provides distinctive leadership in the institution***
- assists others to develop in leadership roles
- takes leadership in encouraging research that improves the quality of learning in the institution

Professors build on the leadership they provided as Associate Professors. Their leadership takes on a wider scope as they assist others to move into leadership roles.

- ***holds terminal degree***
- engages in substantive scholarly/research activity that contributes to higher education

Professors expand the range of their scholarly activity, engaging in substantive work that contributes to higher education. They provide leadership in fostering scholarly activity that improves the quality of teaching.

Serves the Wider Community

- provides substantive service and leadership in the wider community

Professors extend their leadership role into the wider community through substantive service in civic/professional organizations.

CRITERIA AND INTERPRETIVE STATEMENT FOR INSTRUCTOR (Category I-Part-time)
Teaches Effectively

- ***integrates ability-based curriculum and assessment methods into teaching***
- teaches for appropriate abilities in disciplinary context
- provides direction, clarity, and structure for students
- is available for and respectful of students
- communicates enthusiasm for one's discipline

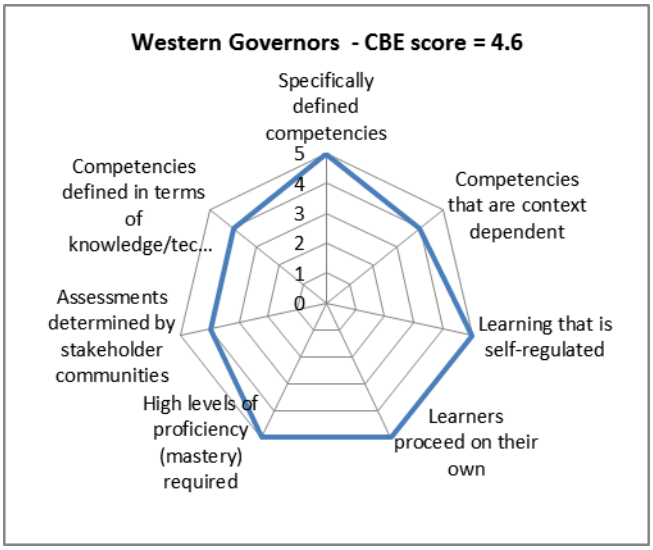
Instructors are expected to bring disciplinary expertise and a concern for students to their teaching. They develop an understanding of the ability-based curriculum and the assessment process. They use principles of pedagogy to provide direction for students.

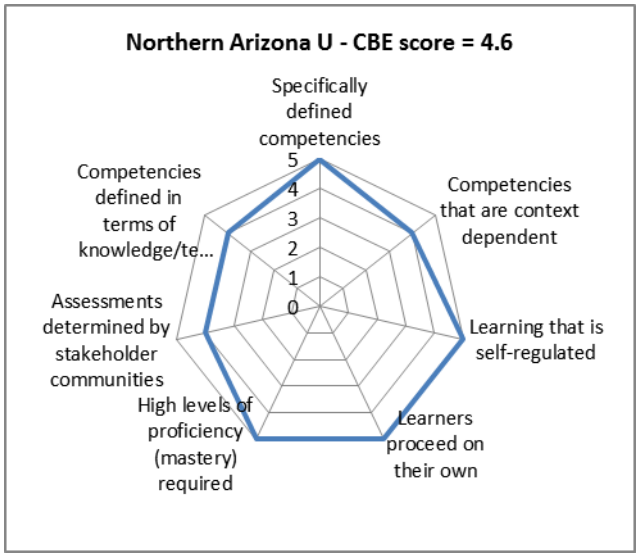
Works Responsibly in the College Community

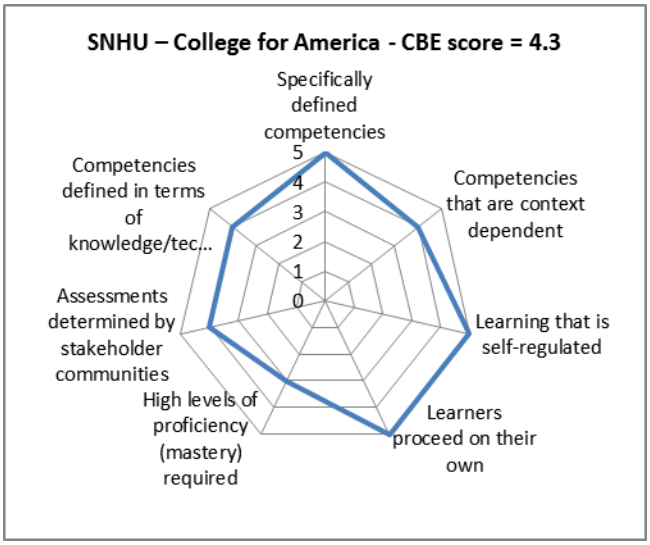
- ***collaborates effectively with other faculty and staff***
- uses formal and informal feedback to improve performance
- supports departmental, divisional, and institutional goals
- fulfills required departmental assignments

Appendix G: Dimensional Ranking for CBE scores

Figure 2: The Dimensional Rankings of the Case Studies







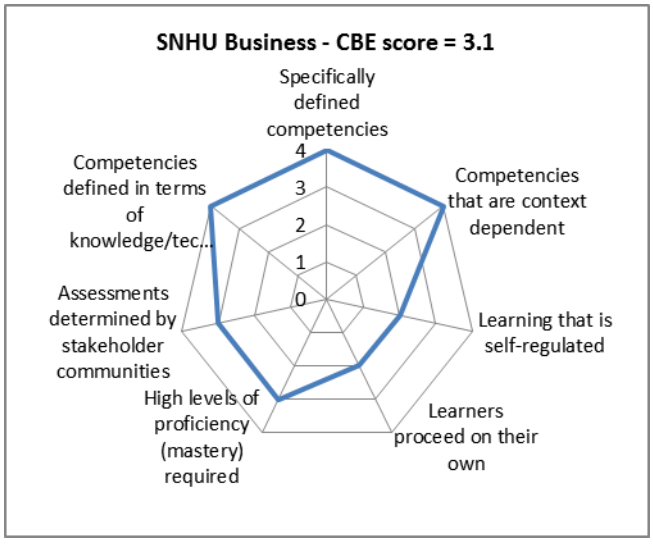


Figure 2: The Dimensional Rankings of the Case Studies (cont.)

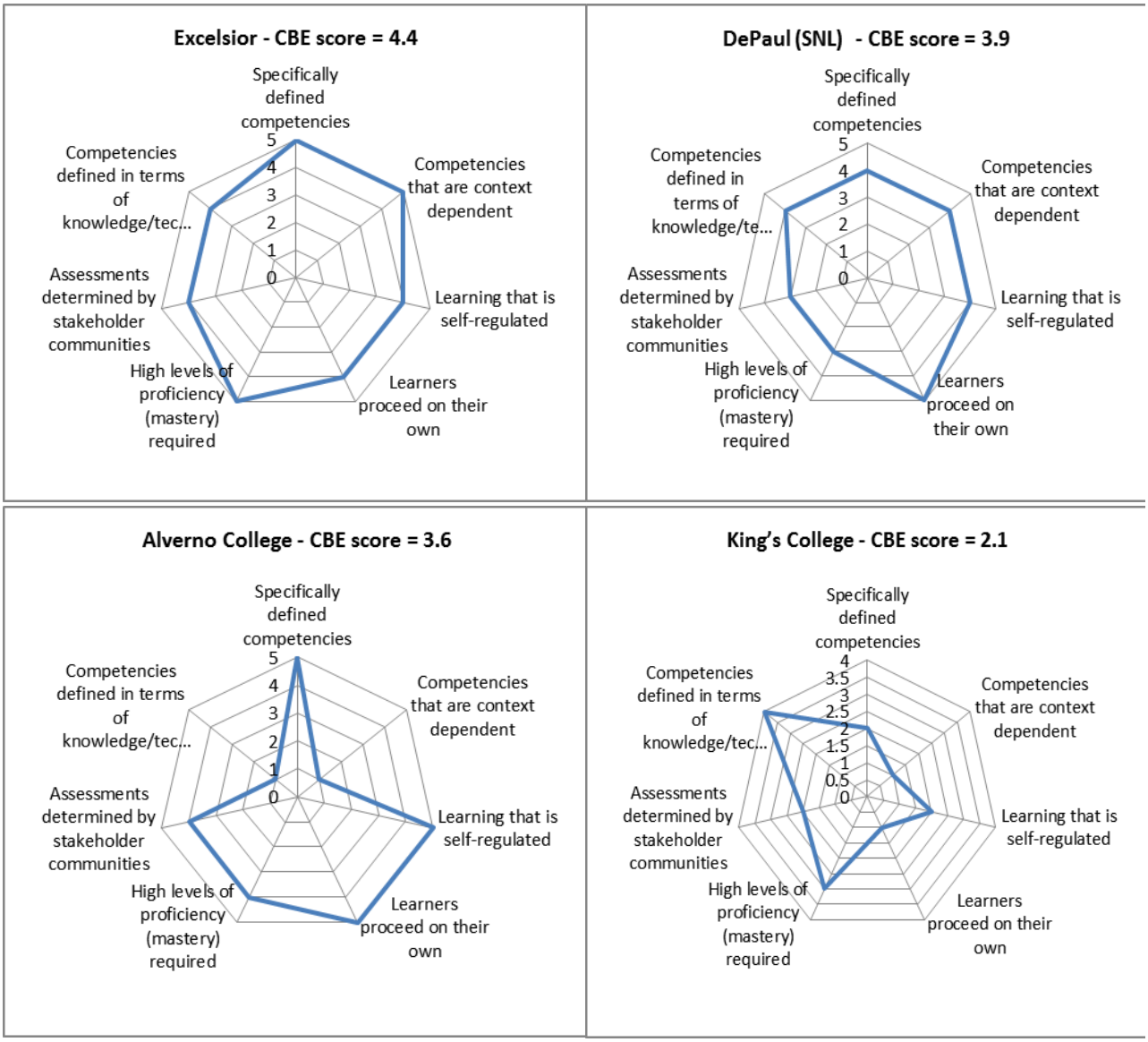
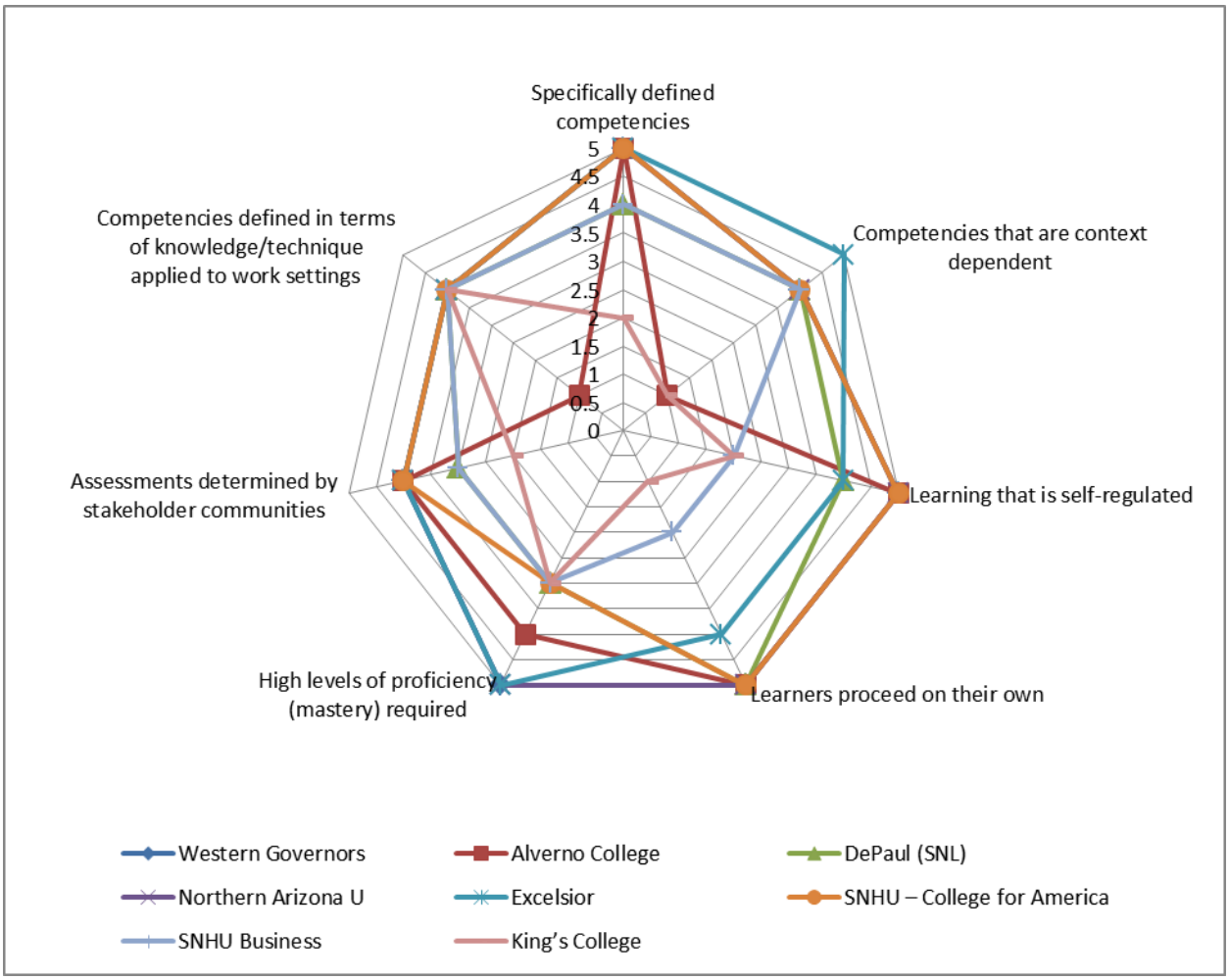


Figure 3: Comparison of the Dimensional Rankings



Higher Education Quality Council of Ontario

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