The Future of Higher Education Supplementary Materials

Detailed description of methods

We performed a structured literature search using six databases (Academic Search Complete, APA PsycInfo®, ERIC, Google Scholar, PubMed®, and Scopus®) and broad web searches of "grey literature:" stakeholder interviews, conference presentations, and public talks (using Google and DuckDuckGo). Search terms were determined in consultation with research librarians at McGill University, University of California Berkeley, and the Claremont Colleges. Search terms used were: "redesigned" "reimagined" "innovative" "new model" "alternative model" "indigenous model" "science of learning" "barriers" "best practices" "higher education" "post-secondary education" "university" and "college" (and combinations thereof). In a two-stage screening process (see Figure S1), the titles and keywords of each document were used to assess relevance, and then the abstract or summary of each document was read by at least two researchers to confirm relevance to the study.

We performed a disjunctive search rather than a conjunctive search in an effort not to miss any relevant and important papers (that is, we erred on the side of including, increasing the likelihood a Type I error in our initial search) and the screening of titles, keywords, abstracts, and summaries was designed to cull these Type 1 errors. Documents were excluded if the primary focus was: (1) unrelated to our study (e.g., "Historia reimagined: Storytelling and identity in cross-cultural educational development"); (2) outside of undergraduate education (e.g., k-12 schools, graduate programs, special education); (3) limited to a very narrow topic or individual course (e.g., "Reimagining Classical Music Performance Training in Higher Education"); and/or (4) on the political aspects of education in a specific region (e.g., "Re-imagining Kenyan University Education Policy in light of Democratic Citizenship Education"). Papers determined to be low-quality due to lack of scientific rigor were also excluded.

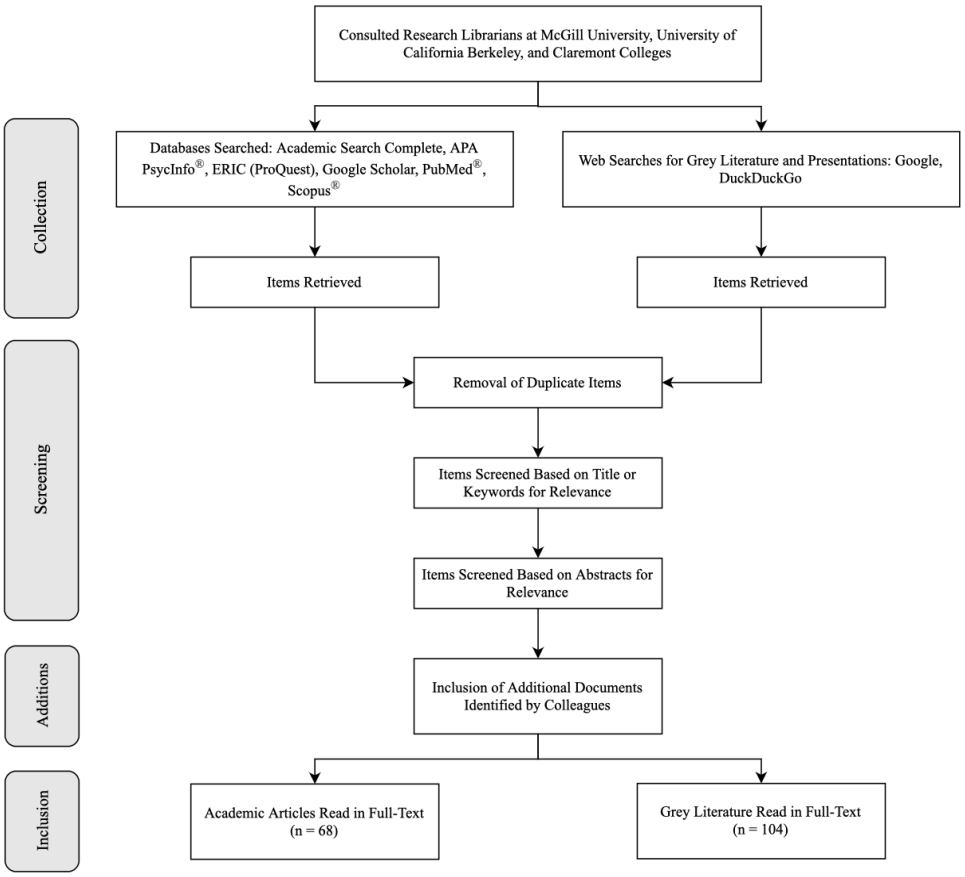

Figure S1. Flowchart of structured literature search

Each of the 172 retained articles was read by at least two team members. At weekly laboratory meetings, the eleven project team members (the seven authors plus four additional laboratory members) met to discuss the articles' content, conclusions, and to consider the strength of evidence on which those conclusions were based. As we worked, we maintained an evolving list of factors and their importance, weighting more heavily those that re-occurred over many papers. From this we sought to extract key concepts necessary for reforming IHEs. This extraction was to some extent subjective; a topic such as rapidly rising costs may have come up as often in an article as, say, the topic of how much money is spent on football stadiums. Through secret ballots and subsequent discussion our group reached consensus on those principles that, based on the literature, were most compellingly critical to the future of higher education.

We then sought to identify IHEs that applied these principles effectively. Broad web searches using the same key terms yielded a list of 33 IHEs applying new and innovative pedagogical methods and models. To narrow the list to a more manageable number and avoid redundancies, the eleven project team members met on five separate occasions to discuss the merits of each IHE. Factors considered in these discussions included years in operation, degrees offered, delivery methods, tuition and financial aid structures, stated visions and missions, populations served, technological innovations, and pedagogical models. Each team member voted for inclusion or exclusion by secret ballot, and the 12 IHEs receiving unanimous "inclusion" votes were retained (Table S1—Evaluation of IHEs).

	Include	Exclude	Maybe	NOTES
Nicola Valley Institute of Technology		X		Indigenous model of education
Quest University	X			Only private university in Canada (much higher tuition); block system
Blue Quills University		X		Distinguishing features not substantively different from Nicola Valley & First Nations combined; less information available
First Nations University	X			Indigenous model of education; First Nations owned and operated
University College of the North		X		Indigenous model of education; distinguishing features not substantively different from Nicola Valley & First Nations combined
New School at Dawson College	X			CEGEP; only Quebec school
Antioch College	X			Very small student body (n=133); focus on experiential learning; accessible; established online program
Paul Quinn College	X			Historically black; urban work-college model; faith-based
Alice Lloyd College		(X)	X	Work-college model; Christian college; not doing anything more or better compared to Paul Quinn
Marlboro College		X		Merged with Emerson in 2020; each distinguishing feature overlaps with at least one other school on our list
Bryn Mawr College	X			High retention/graduation rates; women's college
Olin College of Engineering		(X)	X	Project-based engineering curriculum; may be too new for reliable data
Johnson C. Smith University		X		Historically black college
EcoLeague Alaska Pacific		(X)	X	EcoLeague is a consortium of 6 schools. Include one, but not all 6.

EcoLeague New College of Florida		(X)	X	See above
EcoLeague Dickinson		(X)	X	See above
EcoLeague Prescott		(X)	X	See above
EcoLeague Northland		(X)	X	See above
EcoLeague College of the Atlantic	(X)		X	Part of EcoLeague. Has unique governance involving students and faculty, and clear admissions criteria.
Hampshire College	(X)		X	Research intensive; individualized learning; narrative assessments; came back from the brink of closure; pooled resources with 4 other traditional IHEs to offer additional resources for both academic and social opportunities
Minerva Schools at KGI	X			Small classes; experiential learning; rotation cities; low costs; online learning forum
Colorado College		X		Each distinguishing feature seems to overlap with at least one other school on our list
Arizona State University	X			New American University model; accessibility; recruitment; universal learner approach
Alverno College	X			Narrative assessment; continually updating curriculum and delivery model based on collected data
Dyson Institute of Technology		(X)	X	Dyson or CODE? Not both due to overlap of features; may be too new for reliable data
University of Technology of Sydney	(X)		X	
Dublin institute of technology		(X)	X	
Technical University of Munich		(X)	X	Keep one of these, but not all as distinguishing feature seems to overlap significantly with each other; UTS stands out for accessibility and inclusion
Fulbright University		X		What they are doing is unique in Vietnam, but doesn't stand out compared to our other schools; may be too new for reliable data
CODE University of Applied Sciences		(X)	X	Embedded in start-up environment in Berlin; new model in Europe; job prep; may be too new for reliable data
Zeppelin University		(X)	X	Website is difficult to navigate; information hard to obtain
University of the People		(X)	X	Other than free tuition they are not doing anything distinct from other schools; not clear they are doing it well.
Nottingham Trent University		(X)	X	Each distinguishing feature seems to overlap with at least one other school on our list

Table S1. Evaluation of 33 IHEs. See text for procedure. (X) indicates a final decision was made after the IHE originally being placed in the "Maybe" column.

We then developed a rubric (Table S2—Criteria Sheet) to evaluate these 12 exemplary institutions on nine factors (Science of Learning Methods, Career-Prepared Graduates, Financial Accessibility, Indigenous Inclusion, Mental Health Resources, Admissions Transparency, Geographic Accessibility, Attrition and Retention, and Technological Infrastructure) identified as critical through our literature review.

We considered the possibility that some factors might be more relevant than others for reimagining higher education, and so should not be equally weighted in evaluating successes and failures of currently operating institutions. We recognize that any such weighting involves some subjectivity. To minimize this, we consulted widely with colleagues inside and outside of higher education, and the PI assembled a research team representing diverse backgrounds and experiences (although due to longstanding inequities in higher education, our team did not represent the full diversity of the Canadian population at-large because it was limited to individuals enrolled in college and majoring in psychology or a related field). The eleven project team members met on four separate occasions to discuss the importance of each factor. Each team member proposed a weighting factor by secret ballot, and the weights were determined by averaging those scores.

We do not argue that the method was infallible, nor that a different group of researchers would come up with the same weightings. We do, however, feel there is value in being able to rank these 12 institutions from most to least successful (based on our criteria). We emphasize that the difference between the 12th school on the list and the first is small in the larger context of schools worldwide—these are the 12 institutions worldwide that we identified as succeeding mightily along the dimensions that we care about, and that the research literature indicates are critical to removing barriers and creating value for all.

CRITERIA SHEET

A BREAKDOWN OF EACH FACTOR USED FOR EVALUATION AND HOW THE FACTOR IS SCORED TO CREATE A POINT TOTAL FOR UNIVERSITIES.

	LEVEL 1 0x	LEVEL 2 0.5x	LEVEL 3 1x	WEIGHT
Science of Learning Methods	Science of learning principles are contradicted and/or not factored into curriculum and instruction.	Curriculum and instruction include some principles of the science of learning.	Curriculum and instruction are shaped by the science of learning.	15
Career-Prepared Graduates	No career-relevant programs; employment rate below the national average.	Some career-relevant and/or industry partnerships or programs.	Industry partnerships; career-like settings; employment rate above the national average.	14
Financial Accessibility	Graduates have beyond manageable, excessive student debt ($50,000+).	Graduates have manageable student debt ($20,000-$49,999).	Graduates have no or easily manageable student debt ($0-$19,999).	13
Indigenous Inclusion	No or tokenistic institution-led attempts to include Indigenous peoples, methods, or content.	Some inclusion of Indigenous faculty, staff, and students and/or Indigenous methods or content.	Active level-wide involvement of Indigenous peoples; inclusion of Indigenous content/teachings.	12
Mental Health Resources	Lacks proactive resources; student supports are limited, inaccessible, or unavailable.	Little to no proactive resources; available and accessible student supports.	Institutionally-integrated proactive mental health resources, and/or widely accessible student supports.	12
Admissions Transparency	Institution does not report admission criteria and/or statistics on an accessible platform.	Institution reports vague or limited admission criteria and statistics; information may be difficult to obtain.	Institution reports clear admissions criteria and statistics; information is easy to obtain.	10
Geographic Accessibility	Offers in-person instruction at one location; no remote learning options.	Offers some online, distance or hybrid options, and/or has multiple campuses	Offers online and/or distance options to all students.	9
Attrition and Retention	Graduation and/or attrition rates are at least 5% below the national average.	Graduation and/or attrition rates are 5% within the national average.	Graduation and/or attrition rates are at least 5% above the national average.	8
Technological Infrastructure	Lacks robust technological infrastructure and services; no transition to online learning.	Limited technological infrastructure, difficulties transitioning to online learning.	Online services; robust tech infrastructure and technologically advanced labs; smooth COVID response.	7

Table S2. Rubric for evaluating IHEs

Our ranking and weighting system is described here:

1) Science of Learning: 15/100 points. We gave this factor the highest weight because the fundamental job of colleges and universities is to educate students—to learn the skills and mindsets necessary to become better citizens, and to succeed in the workplace. The science of learning informs educators and faculty about how to facilitate effective student learning, but few institutions of higher education are paying attention.

2) Career-Prepared Graduates: 14/100 points. With increasing globalization, digitization, and the growth of artificial intelligence and "smart systems," the 21st century graduate will need to be a life-long learner, able to teach themselves what they need to know, and to update their knowledge as new information becomes available. This requires very different preparation than the general education expected of college graduates 50 or 100 years ago; students must develop the skills necessary to adapt to the constantly changing global and emerging digital economy to prepare for careers that don't even exist yet.

3) Financial Accessibility: 13/100 points. Finances are one of the tallest barriers for students aiming to access higher education, particularly due to the increasing average tuition and costs of attending college. The cost-benefit analysis of pursuing higher education can leave students wondering: is this degree worth the cost?

4) Indigenous Inclusion (tie): 12/100 points. This factor is no less important than the previous ones but uniquely among those on the list, it is covered by legislation (cited in the report). Any reimagining of the future of higher education must create space for meaningful inclusion of Indigenous cultures, languages, practices, and knowledge(s). Approaches for inclusion must not be tokenistic and shallow; instead, we must pursue genuine reconciliation and collaboration with Indigenous voices, with the goal of integrating Indigenous knowledge(s) as part of the institutional fabric of higher education and causing no further harm.

5) Mental Health Resources (tie): 12/100 points. Higher education is failing to implement mental health infrastructure in a way that students can access and benefit from. Competitive curricula design and inaccessibility of health resources lead to adverse effects on student mental health. Higher education institutions must prioritize student health to maximize student success.

6) Admissions Transparency: 10/100 points. Students are not privy to the evaluation process of admissions, and therefore struggle to gain access to higher education. Clearer expectations of students can be communicated through transparency in application, admittance, and acceptance processes.

7) Geographic Accessibility: 9/100 points. Many rural communities lack access to good quality higher education due to lack of transportation services, on-campus housing, and online degree options. While these services are expanding, many universities and colleges are still inaccessible for those who are not mobile or who have other responsibilities (e.g., work, children). Higher

education must be accessible to any and every community so that all individuals can access education.

8) Attrition and Retention: 8/100 points. One measure of success that colleges and universities use is the proportion of students who complete their training within *x* years of matriculation, or its complement, the number of students who drop out. These data are messy—someone who drops out after 2 days may be counted the same as someone who completes all but one final exam; students who drop out for health or financial reasons may be counted the same as students who have come to believe that they are wasting their time. Importantly, the statistic does not capture students who transfer out of one institution and complete at another. Despite these problems, we felt the metric deserved inclusion because it is what most institutions (and many rating sites) use to compare their success to others.

9) Technological Infrastructure: 7/100 points. In response to the COVID-19 pandemic, most universities transitioned to remote and distance learning, leveraging technology for learning and teaching with widely varying degrees of success. With widespread digital proficiency and accessibility, technological infrastructure is not as representative of university and student success as the other factors listed above. Nonetheless, it is important that institutions have robust technological tools available to students, faculty, and staff, to enhance the facilitation of curricula and student experience.

For each factor we created a three-point evaluation rubric; these were applied to each IHE by two authors, and disagreements were worked out through discussion or appeal to a third author. A score of 1 on the rubric indicates the IHE did not overcome the barrier, 2 indicates moderate or mixed results, and 3 indicates a successful solution. We translated those scores into proportion multiples of the total available score for that factor (shown in the top row), yielding final multiples of 0, 0.5 and 1.0 corresponding to rubric values of 1, 2, and 3 respectively. In cases of missing data, the proportion multiple was imputed by the mean across all factors for a given institution. Table S3 presents the evaluation factors in order from most relevant to least relevant by consensus of the authors, and assigned weights corresponding with a total sum of 100. Each institutional total is ranked relative to all included IHEs, and stands alone as a score out of 100.

The infographic presented in Figure S2 provides an overview of our findings.

Academic Institution	Science of Learning	Career Preparation	Financial Accessibility	Indigenous Inclusion	Mental Health	Admissions Transparency	Geographic Accessibility	Attrition, Retention	Technological Infrastructure	Total	Rank
Weighting ***(point value)***	***15***	***14***	***13***	***12***	***12***	***10***	***9***	***8***	***7***	***100***	
University Technology Sydney	1x	1x	**1x***	1x	1x	1x	1x	1x	1x	100	1
Minerva University	1x	1x	1x	0.5x	1x	1x	1x	1x	1x	94.0	2
First Nations University	0.5x	1x	1x	1x	1x	1x	1x	**.88x***	0.5x	88.0	3
Paul Quinn College	1x	1x	1x	0x	1x	1x	1x	0.5x	1x	84.0	4
College of the Atlantic	1x	1x	1x	0.5x	1x	1x	0x	1x	0.5x	81.5	5
Hampshire College	1x	1x	1x	0.5x	0.5x	1x	0.5x	0.5x	1x	79.5	6
New School	1x	1x	1x	0.5x	0.5x	1x	0x	1x	1x	79.0	7
Antioch College	1x	1x	1x	0.5x	0x	1x	0.5x	1x	1x	77.5	8
Arizona State University	1x	1x	1x	0.5x	0.5x	1x	1x	0.5x	1x	74.0	9
Bryn Mawr	1x	1x	0.5x	0.5x	0.5x	0.5x	0x	1x	1x	68.5	10
Quest University	1x	1x	0.5x	0x	0.5x	0.5x	0x	1x	0.5x	58.0	11
Alverno College	1x	1x	0.5x	0x	0x	1x	0.5x	0x	0.5x	54.5	12

Table S3. IHEs scored and ranked by weighted evaluation factors. **Missing data were calculated by the mean per row (school).*

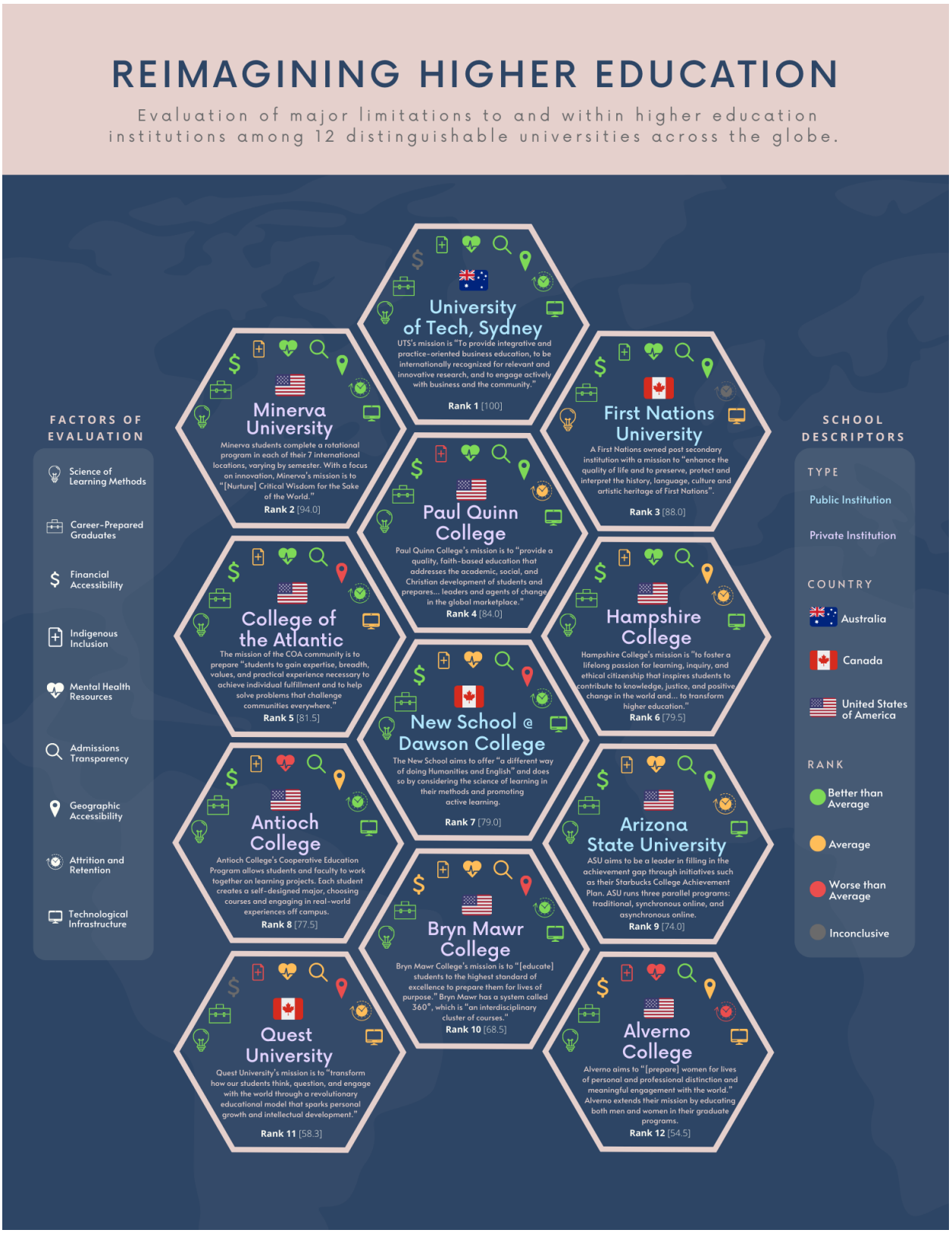

Figure S2. Overview of findings.

Defining excessive debt

A number of sources have attempted to define how much student debt is too much with answers varying widely. According to Statistics Canada, small student can be defined as less than $10,000 and large debt as greater than $25,000. The Social Research and Demonstration Corporation (SRDC) defines manageable debt in a number of ways. For Canadian earners at the 50th percentile for income, the maximum debt would not exceed $16,622 with 5.5% interest rate according to the "rule of thumb 8 percent" definition. The over-indebtedness definition of manageable student debt requires that individuals not spend more than 25 percent of gross income on credit commitments. The threshold for student debt under this definition would be the difference between 25 percent of gross income and Statistics Canada's estimated average consumer debt load. For Canadian earners at the 50th percentile for income, the maximum debt then would not exceed $33,000 with 5.5% interest rate. A third threshold definition is maximum discretionary income available for debt repayment with respect to Low Income Cut Offs. The maximum monthly "discretionary income" available for debt repayment for the 50th income percentile is $2,404. Alternatively, the maximum "discretionary income" available for debt repayment at each income percentile could be calculated as the difference between disposable income and the Moderate Standard of Living. Using this formula, the maximum monthly "discretionary income" available for debt repayment for the 50th income percentile is $1,294. Respondents in the SRDC study indicated that debt in the amount of $20,000 did not seem unreasonable for a student after completing their studies, but that amounts above $40,000~$50,000 become much more unreasonable for a student to manage. Respondents were from consumer credit or credit counselling organizations; private sector lenders including banks and credit unions; student counselling and support; academic experts in student financial aid; and credit bureaus.

Considering all this information together, we defined easily manageable debt as <$20,000, manageable debt as $20,000-49,999, and excessive debt as >$50,000.

Detailed descriptions of exemplary IHEs

University of Technology Sydney (UTS) is a public research university in Sydney, Australia. Its mission is "to provide integrative and practice-oriented business education, to be internationally recognized for relevant and innovative research, and to engage actively with business and the community." Courses are closely aligned with industry needs to prepare students for future careers. Faculty are explicitly taught to integrate the best of online and face-to-face teaching methods, and students are encouraged to review material before coming to each class. UTS keeps up with both technological and pedagogical innovations to prepare students for the workforce through their Learning Futures Program.

Minerva University is a private university headquartered in San Francisco, California. Students complete a rotational program in six additional locations over eight semesters to promote firsthand cultural understanding (as of this writing, the cities are Seoul, Hyderabad, Berlin, Buenos Aires, London, and Taipei). The rotational program is highly encouraged, but optional; students may choose to complete some or all semesters online from anywhere in the world. Minerva's mission is to nurture

"Critical Wisdom for the Sake of the World." In operation since 2014, Minerva has done something radically different by rethinking the system of higher education from the ground up—building an entirely new curriculum, pedagogy, and education delivery system—using student outcomes as the lodestar in designing the institution. To our knowledge, Minerva is the only institution of its kind and the only one to use the science of learning systematically in all aspects of the curriculum. Their model is designed to keep tuition costs low, with tuition and fees less than a third of what peer institutions charge, despite being the most highly selective undergraduate program in the United States. Minerva's curriculum is rooted in both nontraditional and traditional structures, where students can design their own courses and capstone projects but are informed and guided by professors.

First Nations University, in Regina, Saskatchewan is a unique Canadian public university specializing in Indigenous knowledge, providing post-secondary education for both Indigenous and non-Indigenous students within a culturally supportive environment. It is First Nations owned and operated, with a mission to "enhance the quality of life and to preserve, protect and interpret the history, language, culture and artistic heritage of First Nations." FNU encourages the use of traditional Indigenous methodologies and pedagogical practices (that often overlap with the science of learning) for academic programs and delivery options. FNU also partners with communities to develop and deliver programs to build student leadership and capacity. Students can attend classes on one of three campuses or remain in their own communities, while taking classes online.

Paul Quinn College is a private, historically Black liberal-arts college in Texas. Their work-college model integrates work into students' college experience to reduce tuition costs while developing career-relevant skills. Their mission is to "provide a quality, faith-based education that addresses the academic, social, and Christian development of students and prepares them to be servant leaders and agents of change in the global marketplace." In addition to tuition being below the national average, 92% of students receive financial aid. Students can choose from two low-cost ways to learn in the Urban Scholars Program: a hybrid campus-based experience, and a fully remote option with even lower tuition and fees. Both options include engaging classes using Minerva University's proprietary active learning Forum™.

College of the Atlantic is a private liberal arts college in Bar Harbor, Maine, dedicated to the study of human ecology. The mission of COA is to "encourage, prepare, and expect students to gain expertise, breadth, values, and practical experience necessary to achieve individual fulfillment and to help solve problems that challenge communities everywhere." At COA, students design their own major within the vast boundaries of human ecology. With transparent admissions requirements and a stable mission, COA focuses on including the student body in administrative processes as well as foundational committees. COA's relatively small size of around 350 allows students and faculty alike to engage in an intimate learning experience to help propel environmental studies.

Hampshire College is a private liberal arts college in Amherst, Massachusetts founded in 1965 as an experiment in alternative education. It is part of the Five College Consortium that also includes Amherst College, Mount Holyoke College, Smith College, and UMass Amherst, offering cross-registration, access to a 9 million volume shared library, and transportation among all campuses.

Hampshire is unique among these five, known for its alternative curriculum, self-directed academic concentrations, progressive politics, and its focus on portfolios and narrative evaluations. Their mission is "to foster a lifelong passion for learning, inquiry, and ethical citizenship that inspires students to contribute to knowledge, justice, and positive change in the world and, by doing so, to transform higher education." Hampshire College describes itself as "experimenting" rather than "experimental," to highlight the continually changing nature of its curriculum. From its inception, the curriculum has emphasized project work over courses with students taking an active role in designing their own concentrations and projects based on individual interests. The course of study is divided into three "divisions" rather than traditional grade-years. Students move from one division to the next based on a portfolio review (including narrative feedback from all courses, final papers or projects), community engaged learning, other meaningful work, and a retrospective. In Division I students explore and work across multiple disciplines, while Division II consists of a self-designed concentration. In their final Division, students design and complete an advanced independent study project addressing a complex set of questions, concepts, and skills under the supervision of a faculty committee.

Antioch College is a small, private liberal arts college in Yellow Springs, Ohio with 133 undergraduates. Antioch forms a collaborative community in which students and faculty work together on learning projects, and everyone contributes to community governance. Each student creates a self-designed major, choosing courses that fit their individual academic interests, then engages in real-world experiences off campus through their Cooperative Education Program. Evaluation is an integral part of both learning and teaching. Assessment is a continuous process requiring the active participation of the student and the instructor. In addition to receiving traditional number/letter grades, each student's performance is detailed in a narrative evaluation based on a set of standards and learning objectives. Antioch's mission is to provide "a rigorous liberal arts education on the belief that scholarship and life experience are strengthened when linked, that diversity in all its manifestations is a fundamental component of excellence in education, and that authentic social and community engagement is vital." Antioch is more affordable than the average private American university and online options improve both financial and geographic accessibility. They were the fourth University in the U.S. to offer admissions to black students on an equal basis with white students.

Arizona State University is a public university in Metropolitan Phoenix, Arizona that follows the *New American University Model*, created by President Michael Crow to change admissions and teaching methods to expand access to higher education. ASU runs three parallel programs: one traditional program, one synchronous online program, and one asynchronous online program (entitled "ASU Online"). ASU Online uses a technological infrastructure called EdPlus to deliver individualized feedback, customized learning paths, and educational simulations. With better-than-average financial and geographic accessibility, ASU aims to be a leader in filling in the achievement gap through initiatives such as their Starbucks College Achievement Plan. This plan covers the full cost of tuition and mandatory fees at ASU Online for Starbucks employees who work an average of 20 hours per week and have not yet obtained a bachelor's degree. Employees who are serving or have served in the U.S. military can also designate an additional family member to receive the benefits of the Starbucks College Achievement Plan.

New School at Dawson College is a public two-year college in Montréal, Québec, aiming to offer "a different way of doing Humanities and English" by considering the science of learning in their methods and promoting active learning. As a part of the CEGEP system, the New School is financially accessible; however, its one campus is geographically inaccessible to students outside the Greater Montreal area. Established in 1973, New School takes a Critical Humanistic approach to learning, based on the principles of Critical Pedagogy and Humanistic Education. In small learning groups, students play a greater role in shaping the content of their courses and designing how they will study their subjects. In student-led group discussions, learners are encouraged to relate their studies to their personal and social lives and constantly link the personal to the political.

Bryn Mawr College is a private, women's liberal arts college in Pennsylvania. Their mission is to "educate students to the highest standard of excellence to prepare them for lives of purpose". The cost of attending is high, however around 70% of students receive financial aid. Geographic accessibility is limited to one campus, however, there have partnerships with other institutions in Pennsylvania. Bryn Mawr uses an interdisciplinary active learning approach through their 360° (degree) program, providing opportunities to participate in a cluster of courses connecting students and faculty across disciplines to focus on common problems, themes, and experiences. The courses in a cluster aim to approach a common topic from different angles, methods or lenses (a full, 360° perspective).

Quest University in Squamish, British Columbia, is one of only 22 private universities in Canada. It sought to reinvent undergraduate liberal arts and science education, using an innovative philosophy and novel curriculum when enrolling its first class in 2007 with 73 students. They emphasize teaching skills that meet real world demands, while preparing students for any occupation or career they choose. Classes remain small and are all seminar-discussion format. In 2017, Quest had the highest National Survey of Student Engagement (NSSE) scores in Canada. Quest's mission is to "transform how our students think, question, and engage with the world through a revolutionary educational model that sparks personal growth and intellectual development." Although 85% of students receive financial aid, as a private university, the tuition is significantly higher than other universities in Canada. Students take one "Block" at a time—a single course that meets for three hours per day for 3½ weeks. The Block Plan is a major part of Quest's teaching philosophy, allowing full immersion in a single subject, close interaction between faculty and students, highly interactive classrooms, and seminar-style learning. The scheduling flexibility afforded by the block plan also allows elite athletes and performers to complete a university degree despite intense training and touring schedules. All students spend at least one block in an experiential learning course.

Alverno College is a private, catholic university in Milwaukee, Wisconsin. Alverno aims to "prepare women for lives of personal and professional distinction and meaningful engagement with the world." (Alverno admits both men and women in their graduate programs.) Founded in 1887, Alverno started innovating new education models in the 1970's to attract "more and better" students. All 60+ undergraduate majors offer an education grounded in the same "8 Abilities" — communication, analysis, problem solving, social interaction, effective citizenship, valuing, aesthetic engagement, and developing a global perspective — through meaningful feedback, small class sizes, dynamic learning, hands-on experience, and supportive, empowering community. They do not use a standard numerical

or letter-based grading system, but instead a narrative grading system. Instead of a student receiving a GPA or a single letter grade, they get a written assessment regarding their ability and the quality of their work. Alverno offers a traditional campus setting, with distance learning opportunities. Alverno's approach is characterized by continuous improvement. Everything is assessed, and these evaluations are the basis for analysis, problem solving, implementation of new schemes for learning, and further assessment. In 1996, Alverno was one of six small, innovative liberal arts colleges awarded funds by The John D. and Catherine T. MacArthur Foundation (best known for its "genius" grants to creative individuals) for being “found to show a certain genius” in how they educate students.

 # 30 #