

Combatting partiality: Bridging social, cultural, and economic divides through higher learning

Neil Fassina PhD CPHR ICD.D

Athabasca University

WORKING MANUSCRIPT – Do not cite without expressed written permission of the author.

ABSTRACT

We are facing a difficult time in society. Divisive and fear-based rhetoric fueled by populist and ideological viewpoints dominate numerous mediums, geopolitical relations, and community discussions. Anonymity has enabled criticism and conjecture to displace constructive debate, the seeking of truth, the dissemination of knowledge, and societal conciliation. Underpinning and fueled by this divisiveness is a growing social, economic, and cultural divide between individuals and communities on a global scale. Recognizing the power of knowledge to combat partiality, societies are looking to higher education to slow and ideally reverse these growing divides.

Interestingly, the same liberation of information and the accelerating digital revolution that enabled divisive rhetoric to spread is forcing institutions of higher learning to question many of their traditional and measured foundations. Contemporary learners are expecting a seamless connection between the digital and built environment, formal and informal learning, wrap around supports, and the opportunity to contribute to knowledge. A widening gap between knowledge creation and mobilized innovations has placed numerous societies at risk of reduced productivity, economic strength, and social entrepreneurialism. The need for social change and the steady erosion of competitive advantage has forced institutions to seek out new and globally relevant approaches to learning, research, and innovation to remain reputable in the eyes of their stakeholders.

This paper explores how seeking to create universal equal access to learning may stimulate societal change while simultaneously enabling institutions to model the next generation of higher education. Particular attention will be given to issues of scalability, sustainability, and affordability in describing potential learner and community centric alternatives that enable individuals to create and curate knowledge so that they may improve the social, economic, cultural, and environmental quality of life in their communities.

INTRODUCTION

We are facing a difficult time in society. Divisive and fear based rhetoric fueled by populist and ideological politics dominates numerous forms of media, geopolitical relations, and community discussions. Individuals are finding it easier to tear down and criticize than to constructively debate, seek and speak truth, and create knowledge in place of conjecture. Both underpinning and fueled by this divisiveness is a growing social, economic, and cultural divide between individuals and communities.

Societies at large are calling upon higher education to actively contribute to the slowing and reversal of the increasing cultural, social, and economic divides among and between individuals and communities (e.g., Marginson, 2016; Shimeles, 2016) as well as the global ecological deficit (e.g., Jung, Park, Ahn, 2019). A world in which knowledge and innovation are inequitably distributed is one in which the divides will amplify to a point where they become unbridgeable.

As one of the longest standing social constructs (Encyclopedia Britannica, 2019), higher education has historically been measured, risk averse, and sensitive to avoid trends. Taken together, these lenses have left higher education as a lag industry – a perspective that is in direct opposition to the societal expectations of today. One may argue that a “wait and see” approach by higher education may result in the sector becoming increasingly challenged in the eye of society. With this in mind – we must respond.

THE KNOWLEDGE RENAISSANCE & HIGHER EDUCATION

One may argue that we are at the beginning of a Knowledge Renaissance. One source (DOMO, 2017) suggests that we create 2.5 quintillion bytes of data every day at 2017 pace. Information, when respected, becomes an invaluable commodity in a globally connected context as it forms the basis of knowledge.

The impact of the Knowledge Renaissance on higher education cannot be overstated. With knowledge sitting at the center of a career toolbox, learners, governments, and industry alike are putting pressure on the higher

education sector to adapt at the speed of innovation. In part, because more than 65% of jobs will require some form of higher education (Carnevale, Smith, & Strohl, 2013), the necessary job-ready skills sought through higher education are of greater number and complexity (McPherson, Kersten, George, Lattimer, Breton, Ellis, Kaur, & Frampton, 2006), and rapid innovation leads to a faster obsolescence of information. Together, these forces lead to higher education providers being asked to provide more complex learning opportunities to more learners in a shorter time. This premise, however, remained based on a modern view of a university. Namely, that its role is the pursuit and dissemination of truth through research and teaching. In this model, Universities may be viewed as the creators and curators of knowledge which Universities combine to create and issue credentials.

Societal forces, however, have eroded much of this knowledge creation and curation perspective. Looking first to curation, the commoditization of information and ease of access has placed information literally at individuals' fingertips through cellular technology. With the help of modern and personalized search algorithms (e.g., Google, 2019), the individual can now serve as curator of their own learning outcomes.

Beyond the potential for individualized and personalized knowledge curation, the nature of information creation has changed in the eyes of learners. The first notable shift in modern learners is from passive recipient of information through critical consumer of information and more recently active contributor of information, thereby eroding the creator role of modern Universities.

Despite the erosion of two tenets of a modern university, the higher education system remains steadfastly committed to the issuance of credentials. Even this, however, is under threat as corporations are lessening their focus on specific credentials, or the need for a credential at all, as a requirement for employment (Counter, 2018; Connley, 2018). In the place of formal higher education credentials, employers are turning to generic learning or micro-learning experiences as conditions of employment (Harvey, 2018; Lewington, 2019). This degree slip effectively erodes one of the last "insider" value propositions held by a modern university.

Our modern context is not the first time the social construct of a University has faced significant change. They have moved from student run to faculty led, and most recently to social enterprises managed by an administration (Frijhoff, 1996; Scott, 2006). Universities have moved from a focus on the divine through to a humanist lens focused on the person (Ruegg, 1996). With each adaptation, universities have inherently sought to meet the needs of society. The difference in the knowledge renaissance is that the needs of society are shifting faster than ever before.

Pulling on the root of humanism within society that propagated initially in the 15th century, a renewed lens toward relevance may be to consider Universities as social enterprises that enable individuals to create and curate knowledge so that they may improve the social, economic, cultural, and environmental quality of life in their communities.

UNIVERSAL EQUAL ACCESS – BEING TRULY LEARNER FOCUSED

Let us start with the premise that every human is capable of learning at some level. This is echoed in the UN's Envision 2030 Goal #4 that seeks to create equal and affordable access to quality education throughout life (United Nations, 2018). Specific to higher education, this UN sustainability goal states that every person should have equal and affordable access to quality technical, vocational, and tertiary education, including University (United Nations, 2018). One may venture that this goal rests upon research that highlights the positive impact that education has on reducing inequality (Toh, 1984), increasing economic opportunities (Blanden & Machin, 2004), and strengthening labour productivity and growth (Sabot, Ross, & Birdsall, 2016).

Despite a global recognition of the importance of University education, most modern universities discriminate between individuals and "select" who should be given the opportunity to learn. These criteria are often put in place to increase the probability that the learner will complete the credential for which they have applied (e.g., Jerant, Henderson, Griffin, Hall, Kelly, Peterson, & Franks 2019; Schauner, Hardinger, Graham & Garavalia, 2013). The risk to society, however, is not inherently based on "selecting" learners who have the readiness, ability, and capacity to learn. Rather it is in the criteria by which Universities discriminate between potential learners. Well meaning, yet arguably misplaced proxies for a learner's readiness, ability, and capacity to learn abound: Merit (often based on the "successful" completion of secondary school), location of residency, financial ability, or demographic characteristics such as gender, age, ethnicity, religion, and culture.

The unintended consequence of using these proxies is that they create systemic barriers between individuals and knowledge unrelated to readiness, ability, and capacity, thereby reinforcing the very lines of inequality within communities and society that education is being asked to reduce. In holding on to these artifacts, however, the social and cultural divide is amplified by Universities through their selection processes.

To be truly learner centric, Universities cannot intentionally or unintentionally prevent individuals and communities from reaching their highest potential through knowledge. This is the principle of universal equal access – the principle that all individuals who have the readiness, ability, and capacity to learn should be given equal opportunity to do so.

DISMANTLING THE ACCESS, QUALITY, and AFFORDABILITY Quagmire

A primary argument put forward by higher education providers for having competitive entry or first past the post entry requirements is that access must be balanced against affordability and quality, thereby leaving universal equal access unattainable. This argument is often rooted in the “Iron Triangle.” The premise of the triangle is that access, quality, and affordability must be traded off such that only two of three can be accomplished. For example, all else being equal, to create universal equal access, one must either decrease affordability or decrease quality.

One may argue, however, that the iron nature of the triangle is built on our own assumptions and traditional models of Universities. To dismantle the triangle, we need to first look through the changing nature of Quality and Affordability.

QUALITY

For illustration purposes, I will talk about quality as a product of the “what, where, when, why, and how” people learn.

What do people learn? Looking back over the history of the modern university, one can see the emergence of a humanist perspective stemming from one of a focus on divinity during the 15th through 17th century. While professional environments emerged at the same time (e.g., medicine), the humanist perspective dominated and later developed into the modern study of the humanities. The 19th century became more focused on the natural sciences (Levi, 1942). As time progressed through the 20th century, society witnessed a dramatic shift in the “gold standard” of what people needed to learn. “Learning to know” (Nan-Zhao, 2005) shifted toward “Learning to Do.” Oddly, this gold standard set in motion a reverse pendulum for the humanities in needing to rationalize their place in the learning environment (Levi, 1983).

The digital revolution has forced us to rethink the gold standard of learning, yet again. To begin, technology is innovating so quickly that technical skills are often obsolete before the student has completed a program (Kasriel, 2017). Concomitantly, the increased complexity of social, economic, and environmental challenges brought on by exponential technology gains has increased the demand for humanistic skills (e.g., Accenture, 2019; RBC, 2018). In a knowledge based economy, however, neither can be ignored. To this end, Universities are asked to combine “learning to do” with “learning to know.” That is, Universities are asked to create renaissance graduates whom have exceptional (and up to date) technical skills and a full complement of “soft” skills often affiliated with the humanities such as critical thinking, communication, leadership, and social intelligence. A troubling pressure associated with this growing expectation on Universities is that society is expecting a faster time-to-market for these renaissance grades. That is, learners should undertake more learning in less time.

To adapt, universities need to dismiss the premise that learners start from a homogeneous beginning with respect to capacity, capability, and readiness. While this assumption is more accurately supported in highly competitive entry environments, it is far less likely to be supported in an environment that enables universal equal access. Adding further complexity to the heterogeneous nature of the modern learner is that rapid, easy, and free access to liberated information has enabled learners to self-initiate and self-curate their learning journey. Thus, the baseline knowledge of a first time University learner is likely to be increasingly heterogeneous. In dismissing the premise of homogeneity of learners participating in higher education, Universities need to rapidly and on scale assess where an individual is in their personal learning journey (current knowledge) as well as the learner’s capacity, capability, and readiness to learn at a University level.

Complementing the idea that not all learners start from the same place, we must also dismiss the premise that all learners are seeking a similar outcome. An individual's learning goals may be as unique as they are. Knowing that not all learners will have a clear and refined sense of their desired outcomes, let alone their desired learning goals, we need to quickly and on scale enable learners to continuously define and adapt their individual personal learning goals. Having assisted the learner in assessing their unique starting point and unique end point, we must then be able to assist them in creating a self-curated and personalized learning journey so that they may bridge the gap from where they are to where they would like to be.

By shifting our lens regarding learners' on-ramp to engaging universities, we are forced to reconsider many of the supply chain management principles currently underpinning the business operations of Universities. Take for instance credential the "unit" of a degree. Within this alternative lens, learners would only undertake the learning outcomes that they need and do not already have.

Available for reinvestment then are those resources that would otherwise be directed toward having learners achieve learning outcomes that they either a) do not need, or b) already have. Universities may seek to reviewing the health of individual learning outcomes (and potentially to the level of learning objects) rather than reviewing the health of an entire program or credential. Similarly, it leads to an environment in which learning outcomes are sunset rather than entire programs. This fundamentally changes the nature, makeup, and shape of the credential itself.

While not universal, a characteristic of many post-secondary credentials is that the credential signals a learner's understanding of, if not mastery of, a cumulative knowledge base within a content domain (Council of Ministers of Education, Canada, 2007). The starting frame of a content domain then sets forth the parameters, real or perceived, regarding what is or is not relevant as a learning outcome. The application of a personalized learning journey calls into question the conceptualization of a domain specific degree, the complement of technical and non-technical learning objects within the credential, how those learning objects are grouped (i.e., the discrete unit of a "course"), as well as the ordering and sequencing of learning outcomes (e.g., pre-requisites, program levels, residency requirements, etc.).

Why do people learn? While the question of complementing technical and non-technical learning outcomes in an individual's learning journey is important, the question does not represent the full gambit of reasonings behind why individuals may choose to initiate and curate their personal learning journey. On the one hand, both technical and non-technical skills may enable a learner to "do" by applying what they learn in context, they may also enable learners to "be" and "become" (Nan-Zhao, 2005) by enabling them to achieve their goals, adapt and thrive in a changing world, and reach their highest potential. To this end, the discrete learning recognition of a credential is not necessarily a shared outcome among learners. Similarly, it may not be a shared outcome among society and employers as noted earlier. Whether this discrete set of learning outcomes is important to a learner and represents an end into and of itself rests singularly with the learner, not the University.

To suggest that a credential is an end into and of itself is to suggest that learning can be completed in large episodes (typically a four year period) and that individuals can achieve the necessary learning in this single episode to meet their needs through the rest of their life. That is, after four years of intensive learning, someone is prepared with the tools they will need to positively contribute to themselves and their communities throughout their life. Given the pace of change in the digital economy, this is simply not true.

Based on the premise that personalized learning pathways need to be as unique as the individuals curating them and personalized to meet individual needs on scale, and that learning does not take place simply in discrete unites, a University's must also demonstrate an ability create a recognition system that can accommodate individualized needs throughout life. Only then can the University enable the learner "to learn" (Athabasca University, 2019) and "to connect" (Athabasca University, 2019).

Not only do people want to learn, but they also want to contribute to knowledge (Fischer, 2002; Sharpe, Beetham, & De Freitas, 2010). Thus, our learning models need to recognize and adapt to the idea of crowd sourced learning – a model in which learners are critical consumers of information, social exchangers of information, and active contributors to information. Through the full complement of these three lenses, learners become knowledgeable while simultaneously fulfilling their need to contribute to knowledge throughout their personalized learning journey.

When & Where do people learn? The premise that that individuals can learn throughout life inherently recognizes that individuals will learn both within a university supported learning pathway and beyond the reach of a University supported pathway. If not, then the only place that learning occurs would be through a University – a simply untenable statement.

If we return to the premise of a self-curated personalized learning journey, the concept of lifelong learning had two significant implications for a University. First, a University needs to rapidly recognize and sanction, on scale, formal (university) and informal (non-university) learning. Second, Universities need to remove the artificial separation between learning and life.

Returning to the assumption that a credential is a distinct learning goal, Universities have sought to equate university sanctioned learning (i.e., credit and non-credit courses as part of a credential) with non-university learning. The most recent formulations of this attempt are seen in prior learning assessments, curriculum mapping, transferability agreements, and the like. Inherent in this approach is an attempt to equate someone's prior knowledge (or learning) with the knowledge (or learning) that they would garner by completing a course at the University in question. Most of these equating processes, however, work on a level of analysis that is only tangentially related to learning – the course. The logic follows that providing recognition toward a degree for a learner's pre-existing knowledge that was acquired outside the University and potentially self-curated and personalized can only be provided if said knowledge is deemed by a third party to be equivalent to the knowledge that may potentially been acquired by the learner had the learner enrolled and successfully completed a University course. Given that credit is not often given for parts of courses, but rather the entire course, the logic follows that pre-existing knowledge (or learning outcomes) must exist in "neatly packaged units" that are of equal size (e.g., 1, 3, 6, etc. credits worth) and of equivalent make up (i.e., similar groupings of learning outcomes) to that of a university course. Thus, universities are aware that people learn in other environments, but in order to formally acknowledge that learning it must first be equated to something easy for the University to count.

Adding to the complexity of prior learning recognition is the tendency for Universities to require "residency." The concept being that in order to be granted a credential by an institution, the learner must have acquired a certain percentage of their knowledge (often 50% or greater) at the institution granting the degree. Combining the perspective of residency and prior learning assessments, the logic follows that life long learners may seek credit for pre-existing knowledge, provided that pre-existing knowledge does not exceed 50% of the potential knowledge garnered through a degree.

The inherent challenge with this perspective is that sanctioned and non-sanctioned learning may not equate. Moreover, by asking the learner to equate non-sanctioned learning to sanctioned learning is asking them to adapt to the university as compared to the university adapting to the learner. Moreover, seeking to equate sanctioned and non-sanctioned learning is to suggest that a learner is simply the sum of their university learning – which we know inherently to not be true. An individual is the sum of many parts – including their learning.

Shifting our lens back to the learner, Universities need to ask a) what is the learning goal, b) where is the learners' knowledge today, c) how can we best assist the learner in bridging the delta, and d) how can sanctioned university learning complement to non-sanctioned learning to help bridging the delta?

To put the learner in the middle, we need to be able to assess whether sanctioned learning and non-sanctioned learning has met the learning outcomes of an individual quickly and on scale. At some level, this assertion fundamentally violates the assumption of what a transcript represents.

Learning goals tend to be embedded in a community context or a personal context. The place based classroom environment, thereby, creates an artificial distinction between learning and the individualized context of the learner. Universities need to break down this artificial barrier. We see this underway through initiatives such as work integrated learning (WIL) and changes in the didactic approaches to learning methods. Universities, however, need to take the step to the natural end point of WIL and talk about context or community integrated learning (CIL). The premise here is that the context in which a learner finds themselves makes them a better learner and ultimately improves the learning environment. To be truly learner focused, however, universities need to take the learning to the learner – not the opposite.

A further recognition within this section is that learning goals emerge, are met, and evolve throughout life depending on the outcomes and goals of the individual and the community. For learning to be truly life long, it

needs to be available when the learner needs it (on-demand) and be presented in manageable “chunks.” This is in recognition that the average person has 24 minutes per week to learn (Berskin). If learning is presented in manageable chunks and on-demand, then we must also violate the perceived linear nature of learning. Rather than concepts building upon each other in sequence, learning opportunities must be relatable and connectable – more like a nomological network than a learning pathway.

THE FINAL ARM – AFFORDABILITY

An underlying motivation to explore alternative economic models often focuses on the increasing operational expenses associated with delivering the core knowledge creation and dissemination mandates of universities as well as the increasing costs associated with the increasing expectations of learners to provide wraparound supports. With government funding decreasing over time, many of these expenses can be passed along to the learner leading to a parallel motivation to explore alternative models stemming from increasing tuition costs. Regrettably, discussions regarding alternative economic models tend to focus on the simplistic economic motivators of increasing revenue or decreasing operational costs.

On the revenue side, efforts regularly demonstrate innovation and creativity, yet tend to remain “close to home” and, with a couple of notable exceptions, do not necessarily stretch the vertical or horizontal strategic diversification of institutions. With respect to mitigating operational expenses, institutions tend to focus on doing less of something the institution is already doing. Beyond the point of operational contingencies, however, the reduction of resources injected into the system will eventually result in a collapse of the system overall.

One may argue that a risk associated with simply focusing on the macro concerns of revenue or expense simply tweaks the current economic model as compared to fundamentally disrupting it. To authentically disassemble the iron triangle, we need to challenge the assumptions that underly the enterprise processes and practices that we believe to be “normal” in our modern day environment.

When one considers the economic and business processes that support the learner experience from recruitment through alumnus, there are literally thousands of decision points and assumptions made about creating and adding value to the learner. Many of these processes will have been created to select a finite number of learners or were created on the premise of limited capacity created by physical infrastructure. To meet the true learner centric environment outlined in this discussion and doing so from a technology based infrastructure, it is not simply a matter of evergreening or reengineering these processes. Rather, it is about designing them and engineering them from the ground up based on the outcome being sought.

CONCLUSION

Extending the reasoning that today’s modern university is a product of significant evolution over hundreds of years, it stands to reason that the university of the future will have adapted to meet the needs of society going forward. Recognizing that the needs of society are evolving more rapidly, one may reason that the future iterations of higher learning are set to occur in a more dynamic and disruptive manner than in the past. Until we are willing to break down several of our core assumptions, we will not be truly learner centric or society centric. Only through fundamental change might we dismantle the conundrum we have created for ourselves related to the iron triangle. If our focus remains on fulfilling our role as social enterprises that enable individuals to create and curate knowledge so that they may improve the social, economic, cultural, and environmental quality of life in their communities, and we view this opportunity on scale, then we stand the chance of authentically bending and mending the divides that currently occupy our cultures.

REFERNECES

- Accenture, 2019. Accenture Technology Vision 2019. https://www.accenture.com/_acnmedia/PDF-94/Accenture-TechVision-2019-Tech-Trends-Report.pdf#zoom=50 Accessed June 26, 2019.
- Athabasca University (2019). Imagine Learning Framework. <http://opvpa.athabascau.ca/learning-framework/docs/LearningFramework.pdf> Accessed June 26, 2019.
- Berskin by Deloitte (Date unknown). <https://www.autonomy-multimedia.com/home/2018/5/7/a-learning-revolution> Accessed June 26, 2019.
- Blanden, J., & Machin, S. (2004). Educational inequality and the expansion of UK higher education. *Scottish Journal of Political Economy*, 51(2), 230-249.
- Carnevale, A.P., Smith, N., & Strohl, J., (2013). Recovery: Job growth and educational requirements through 2020. Georgetown University, Center on Education and the Workforce.
- Connley, C. (2018). Google, Apple, and 12 other companies that no longer require employees to have a college degree. CNBC. <https://www.cnbc.com/2018/08/16/15-companies-that-no-longer-require-employees-to-have-a-college-degree.html> Accessed June 25, 2019.
- Counter, R. (2018). Want a job in Canadian tech? Don't worry about that University degree. *Canadian Business*, September 4. <https://www.canadianbusiness.com/work/want-a-job-in-canadian-tech-dont-worry-about-that-university-degree/> Accessed June 25, 2019.
- DOMO (2019). Data Never Sleeps 5.0. https://www.domo.com/learn/data-never-sleeps-5?aid=ogsm072517_1&sf100871281=1 Accessed June 25, 2019.
- Editors of the Encyclopedia Britannica (2019). University. Encyclopedia Britannica. www.britannica.com/topic/university. Accessed June 25, 2019.
- Fischer, G. (2002). Beyond "couch potatoes": From consumers to designers and active contributors. *First Monday*, 7(12).
- Frijhoff, W. (1996). Patterns. In H. D. Ridder-Symoens (Ed.), *Universities in early modern Europe, 1500-1800, A history of the University in Europe*. Cambridge. Cambridge University Press.
- Google (2019). The rise of personal searches. <https://www.thinkwithgoogle.com/feature/personal-searches/#/> Accessed June 25, 2019.
- Harvey, D. (2018). Make way for micro-credentials. *Canadian HR Reporter*. <https://www.hrreporter.com/article/36126-make-way-for-micro-credentials/> Accessed June 25, 2019.
- Jerant, A., Henderson, M. C., Griffin, E., Hall, T. R., Kelly, C. J., Peterson, E. M., ... & Franks, P. (2019). Do admissions multiple mini-interview and traditional interview scores predict subsequent academic performance? A Study of Five California Medical Schools. *Academic Medicine*, 94(3), 388-395.
- Jung, Y., Park, K., & Ahn, J., (2019). Sustainability in higher education: Perceptions of social responsibility among University students. *Social Sciences*, 8, 90. Doi: 10.3390/socsci8030090.
- Kasriel, S. (2017, July). Skill, re-skill, and re-skill again. How to keep up with the future of work. *World Economic Forum*. <https://www.weforum.org/agenda/2017/07/skill-reskill-prepare-for-future-of-work/> Accessed June 26, 2019.
- Levi, A. W. (1942, May). The Social Function of the Humanities. In *The Educational Forum* (Vol. 6, No. 4, pp. 341-349). Taylor & Francis Group.
- Levi, A. W. (1983). The humanities: Their essence, nature, future. *Journal of Aesthetic Education*, 17(2), 5-17.
- Lewington, J. (2019). University students can now earn badges to recognize their merits. *Maclean's Magazine*. <https://www.macleans.ca/education/university-students-can-now-earn-badges-to-recognize-their-merits/> Accessed June 25, 2019.

- Marginson, Simon (2016). Higher Education and Growing Inequality. *Academic Matters* (January). <https://academicmatters.ca/higher-education-and-growing-inequality/> Retrieved June 25, 2018.
- McPherson, K., Kersten, P., George, S., Lattimer, V., Breton, A., Ellis, B., Kaur, D., & Frampton, G., (2006). A systematic review of evidence about extended roles for allied health professionals. *Journal of Health Services Research Policy*, 11(4), 240-247. DOI 10.1258/135581906778476544.
- Nan-Zhao, Z. (2005). Four 'pillars of learning' for the reorientation and reorganization of curriculum: Reflections and discussions. *International Bureau of Education-UNESCO*.
- RBC (2018). The coming skills revolution. *Humans Wanted. How Canadian youth can thrive in the age of disruption*. https://www.rbc.com/dms/enterprise/futurelaunch/_assets-custom/pdf/RBC-Future-Skills-Report-FINAL-Singles.pdf Accessed June 26, 2019
- Ruegg, W. (1992). Epilogue: the rise of humanism. In H.D. Ridder-Symoens (Ed.), *Universities in the middle ages, A history of the university in Europe*. Cambridge: Cambridge University Press.
- Sabot, R., Ross, D., & Birdsall, N. (2016). Inequality and growth reconsidered: Lessons from East Asia (No. id: 8848).
- Schauner, S., Hardinger, K. L., Graham, M. R., & Garavalia, L. (2013). Admission variables predictive of academic struggle in a PharmD program. *American journal of pharmaceutical education*, 77(1), 8.
- Scott, J.C. (2006). The mission of the university: Medieval to postmodern transformations. *Journal of Higher Education*, 77(1), 10-13. DOI: 10.1353/jhe.2006.0007.
- Sharpe, R., Beetham, H., & De Freitas, S. (2010). *Rethinking learning for a digital age: How learners are shaping their own experiences*. Routledge.
- Shimeles, A. Can higher education reduce inequality in developing countries?. *IZA World of Labor* 2016: 273 doi: 10.15185/izawol.273
- Toh, K. W. (1984). *Education as a vehicle for reducing economic inequality. Ethnicity, Class and Development Malaysia: Persatuan Sains Sosial Malaysia*.
- United Nations (2018). *The Sustainable Development Goals Report 2018*.