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Examining the Foundation: Considering Scaffolding *Soft Skills* from Entry to Graduation in an Undergraduate Business Program

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Examining the Foundation: Considering Scaffolding *Soft Skills* from Entry to Graduation in an Undergraduate Business Program

Abstract

Critical thinking, creativity, communication, teamwork, emotional intelligence, problem-solving, empathy, resilience, ambition, grit, and innovation (Heckman & Kautz, 2012). These skills, often referred to as ‘soft’ skills, are considered a requirement for employment and advancement for the 21st-century graduate (Carnevale & Smith, 2013). Within a Western Canadian School of Business, in an environment highly regarded for technical skill achievement in diploma and degree graduates, faculty set out to investigate the absence or inclusion of human skills in curriculum outcomes as an initial phase of investigation. There is an institutional presumption that human skill development is innately a part of the programs. The intention is that human skills (LeBusque, 2020) or power skills (PMI, 2022) naturally occur during course delivery, creating a commonality across foundational courses to reinforce the skill sets identified, developed, and refined as students complete their credentials. However, industry reports (Lapointe & Turner, 2020; RBC, 2019) and the authors’ own institutional data collected from new graduates and employers indicated room for improvement in these skills.

To gain a better understanding, the authors undertook an examination via document analysis of all common core courses that form the program foundation. Through the lens of dynamic skill theory (Mascolo, 2020), this evaluation involved 24 common courses, comprised of 1,442 course objectives, resulting in a range of 134 Bloom’s Taxonomy verbs. In this paper, the authors begin the exploratory first phase of a broader comprehensive study with a focus on course foundations for learner development. Through this analysis, the authors present a draft framework to better understand and strengthen the learning foundations, to proceed with considerations for realignment and strategic scaffolding of both technical and human skills from entry through graduation.

Pensée critique, créativité, communication, travail d’équipe, intelligence émotionnelle, résolution de problèmes, empathie, résilience, ambition, courage et innovation (Heckman & Kautz, 2012). Ces compétences, souvent appelées « compétences générales », sont considérées comme une condition requise pour l’emploi et l’avancement du diplômé du 21e siècle (Carnevale et Smith, 2013). Au sein d’une école de commerce de

l'Ouest canadien, dans un environnement hautement réputé pour l'acquisition de compétences techniques chez les diplômés et les diplômés, des professeurs ont entrepris d'enquêter sur l'absence ou l'inclusion de compétences humaines dans les résultats du programme d'études comme première phase d'enquête. Il existe une présomption institutionnelle selon laquelle le développement des compétences humaines fait intrinsèquement partie des programmes. L'intention est que les compétences humaines (LeBusque, 2020) ou les compétences de pouvoir (PMI, 2022) apparaissent naturellement pendant l'enseignement des cours, créant ainsi un point commun entre les cours de base afin de renforcer les ensembles de compétences identifiées, développées et affinées à mesure que les étudiants obtiennent leurs diplômes. Cependant, les rapports de l'industrie (Lapointe et Turner, 2020 ; RBC, 2019) et les propres données institutionnelles des auteurs recueillies auprès des nouveaux diplômés et des employeurs indiquent qu'il est possible d'améliorer ces compétences.

Pour mieux comprendre, les auteurs ont entrepris un examen par analyse documentaire de tous les cours de base communs qui constituent la base du programme. À travers le prisme de la théorie des compétences dynamiques (Mascolo, 2020), cette évaluation a porté sur 24 cours communs, comprenant 1 442 objectifs de cours, aboutissant à une gamme de 134 verbes de la taxonomie de Bloom. Dans cet article, les auteurs entament la première phase exploratoire d'une étude approfondie plus large en mettant l'accent sur les fondements des cours pour le développement de l'apprenant. À travers cette analyse, les auteurs présentent un projet de cadre pour mieux comprendre et renforcer les fondements de l'apprentissage, afin de procéder à des réflexions sur le réaligement et l'échafaudage stratégique des compétences techniques et humaines depuis l'entrée jusqu'à l'obtention du diplôme.

Keywords: business education, skill development, course objectives, Bloom's Taxonomy, 21st-century graduate, document analysis

As an institution, Southern Alberta Institute of Technology's (SAIT) vision is "to be a global leader in applied education" (SAIT, 2020a, p.3) and the mission is to "prepare students for successful careers and lives" (SAIT, 2020a, p.3). This over-arching focus, along with metrics tied to government funding, and industry-identified gaps, has highlighted the need to take a closer look at program objectives, outcomes, and the capabilities students develop through the program and embody at graduation. The current institutional structure targets consistency in the delivery of courses through an annual approval of objectives and outcomes (from here forward collectively referred to as 'objectives', as we are not exploring student outcomes in this phase), which have been developed by curriculum designers and subject matter experts. Such consistency relies on the revised cognitive skill domains in Bloom's Taxonomy as our institution utilizes this framework as a building guide for course objectives. In addition, the institution has recently released a capability framework to be included in future course development and redesign that highlights considerations of "creativity, critical thinking, citizenship, curiosity and connection" (SAIT, 2023, p. 31).

The return to campus from emergency remote teaching during the COVID-19 pandemic has led to a concerted effort to understand how to better align course design and curriculum changes to create optimal conditions for learning that will help graduates meet the needs of the business ecosystem to support graduates' work futures. Our research question for this phase of the study was to explore how the learning objectives in our program were oriented in terms of focus on skills and capabilities. This article, resulting from discussions following our presentation (Johnston & Lee, 2022) at the annual Society for Teaching and Learning in Higher Education conference (STLHE, 2022), represents the first phase of a larger research project to understand the mechanisms and structures connecting courses through a foundational learning path for students in our School of Business. These insights will help create iterative changes to course design with intentional scaffolding and consideration of capabilities and skills being targeted for learner development.

Research Context

*"The workplace itself looks different as we return to work in a post-COVID world."
~Charissa Lee, 2023*

As a polytechnic institute, SAIT provides "technical, applied, hands-on learning" (Polytechnics Canada, 2023, para. 2). This approach provides students with the opportunity to develop the skills and knowledge required for the workplace, resulting in a 91% employment rate post-graduation (SAIT, 2020c). With such high employment rates and survey feedback from new employers, one could argue that this 'hands-on' approach is successful, especially regarding technical skills (from new employer surveys), and that SAIT is accomplishing its mission. That said, the Canadian federal government has identified the need to better prepare Canadians for the changing

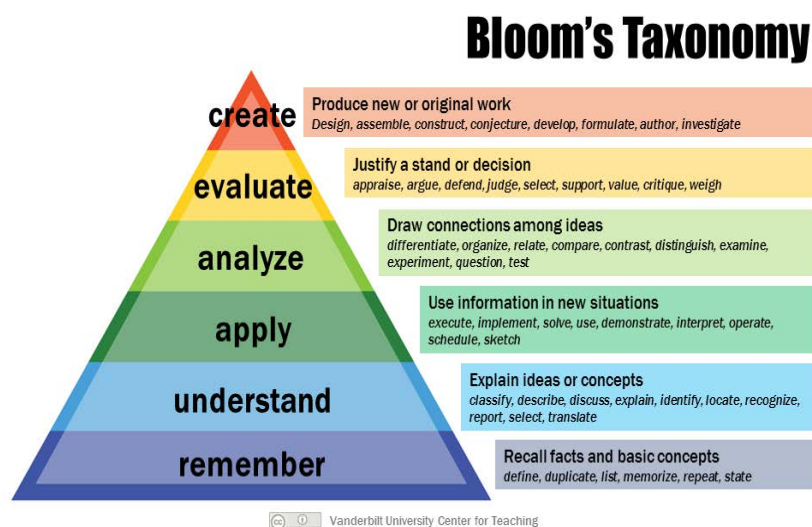
climate of the workplace (Future Skills Council, 2020) and industry reports further support the existence of a skill gap among graduates (Lapointe & Turner, 2020; RBC, 2019).

The workplace itself also looks different as we return to work in a post-COVID world. The intangible benefits, such as the impromptu water cooler conversations that led to innovation, inclusion, and mentorship opportunities have diminished (Accenture Song, 2022), only reiterating the importance of focusing on soft skills. This call to focus on soft skills has most recently been reinforced through the World Economic Forum's *Future of Jobs Report* released in May 2023 (WEF, 2023). Just recently, a report by Quacquarelli Symonds (2023) examined the skills gap further, specifically looking at employer expectations from business school graduates. This only reinforced the demand for soft skills (referred to in this report as 'real skills') that "encompass communication, teamwork, and time management and enhance employability, foster effective leadership, and contribute to building a positive personal reputation (Quacquarelli Symonds, 2023, p. 6).

Institutionally, course outlines have become a detailed and explicit contract of objectives, containing a much more prescriptive tactic for learning expectations, and approved for implementation annually. Such an approach differs from other post-secondary institutions and universities where instructors have academic freedom to meet a course description. With that said, as with most post-secondary institutions, course objectives at SAIT are built in collaboration by faculty (subject matter experts) and curriculum designers utilizing Bloom's Revised Taxonomy of Cognitive Skills (Anderson et al., 2001. Figure 1 provides a brief highlight of Bloom's Revised Taxonomy.

Figure 1

Bloom's Revised Taxonomy



Note: Figure from “Bloom’s Taxonomy” by the Vanderbilt University Centre for Teaching, <https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/>, CC BY. A long description of Figure 1 is provided at the end of this article.

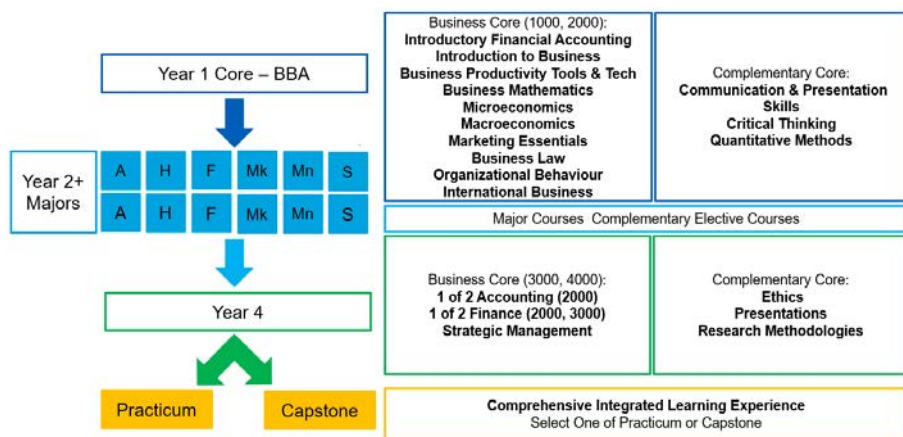
An instructor’s pedagogical considerations, therefore, involve achievement for information transfer, learning assessment, communication, interaction, and collaboration in relation to the predetermined objectives provided in the course outline based on a particular teaching assignment. This focus leads to a set of program and course objectives that explicitly lack emphasis on affective and psychomotor skills, relying on implicit learning of these capabilities via a course process (e.g., completing a technical project with a group and implicitly expecting that students are gaining teamwork skills and capabilities through the process of the group work but not necessarily teaching group work skills).

Based on the known institutional approach to course design, it was also realized by the authors that each course in the degree pathway was constructed and revised independently of each of the other courses. This led the authors to start their inquiry through the identification of 24 common courses across the Bachelor of Business Administration (BBA) degree program, as seen in Figure 2. These common courses, required for all business students, are common across all six majors of study. In 2021-2022, this involved 1,215 BBA students, with an additional 1,100 Business Administration (BA) diploma students. The BA serves as an optional pathway to complete the first two years of the degree requirements and finish in a ‘two plus two’ structure (where two years of coursework following the diploma completion can be applied to finish the BBA degree requirements). The core courses have equivalents in both the BA and BBA streams so this study encompasses both streams, with the focus primarily being on the overall BBA

pathway. The size of this program demonstrates the relative impact of these considerations. It was also part of the motivation for the authors of this paper to undertake a larger scholarly plan to better understand and scaffold learning design to create optimal conditions for these students, and future graduates, to consider soft skill development in learning design.

Figure 2

Course Pathway through BBA Degree



Note: Identified are the mandatory business core (management foundation courses) and mandatory complementary courses (outside of management) but still common to all students. This represents a generic four-year program that may be met through a single admission to the BBA degree, or as a 'two plus two' beginning with the two-year BA diploma and adding the subsequent two years to earn the BBA degree. The fundamental business core applies in both scenarios for student pathway completion. Major areas of study include Accounting (A), Human Resources (H), Financial Services (F), Marketing (Mk), Management (Mn), and Supply Chain (S). A long description of Figure 2 is provided at the end of this article.

Institutional indicators typically used to measure or identify graduate success have included employment rates, graduate surveys, new employee surveys, and collaborative conversations with Program Advisory Council (PAC) members from across industries. Perceptions around technical skills competencies have often been highly scored across the instruments used. When asked about satisfaction with the program after graduation, 93% of students found the courses in their program were relevant (SAIT, 2020b), however, it is not clear what aspects graduates specifically considered to be relevant to the courses. Clarity into this inquiry in the survey, along with respondent demographics, would help us better understand gaps in the data, along with additional questions to ask to gain a better understanding of the impact of program outcomes. Further, both graduate and employer feedback would enable us to better align program objectives with industry needs. These findings could be compared against the contemporary reports and research which looks at post-secondary institutions' role in social and emotional skills (CBC, 2021), new alternatives for

students to develop marketable skills (First Policy Response, 2020), and the demand for functional skills and adaptive capacity (LearningCity, 2022; WEF, 2023). For the institution to make iterative development to the course objectives, the first phase of this study, presented at STLHE 2022, was to explore the courses as a collective pathway.

Methodology and Methods

This exploration was conducted within the case study of a bounded system (Creswell, 2012; Merriam, 2009). This study is bounded as one post-secondary institution, and specifically, one program within the School of Business.

This work is underpinned by dynamic skill theory (Fischer, 1980; Fischer & Bidell, 2006; Mascolo & Fischer, 2015) as an integrative model of psychological development. Mascolo (2020) reports that “the foundational concept of skill is itself an integrative concept” (p. 91). “A *skill* refers to the capacity to control elements of acting, thinking, and feeling within particular contexts and psychological domains” (Fisher, 1980 as cited by Mascolo, 2020, p. 91). Student skills addressed, developed, and refined are, at a minimum, driven by the objectives of a course, which are then used by instructors to develop their lessons. The dimensions integrated into the dynamic skill theory connect to the interplay that we believe is necessary for the inclusion of both technical and soft skills. With the continued skills gap (addressed previously), the researchers felt compelled to begin an exploration of the functional documents intended to steer the direction of courses – the course outlines. The inquiry was spurred by the interest to look at course outcomes across the 24 common courses to seek gaps in targeted skills (in both dimension and complexity).

To pursue this exploration, content analysis as a technique for objective, systematic, and quantitative descriptions of the content of communication was applied (Margolis & Zunjarwad, 2018) to the course outlines of the 24 common and foundational courses required to be completed by all students in this business program. The most recently approved course outlines (2021-2022) were accessed through the institutional database of approved and archived course outlines (through Acalog Academic Catalog Management System™). The objectives from each of the documents were collated into a combined Excel spreadsheet where each researcher identified the verb used. In the second round of analysis, the researchers each coded simplified verbs (aligned to Bloom’s Revised Taxonomy), and inter-rater reliability (Lombard et al., 2002) was established through one researcher coding half of the objectives and the other reviewing. Where inconsistent coding occurred during the review, the item was identified, and the researchers discussed the discrepancy and worked to come to an agreement.

This study was used to identify initial gaps and focus areas for capabilities and competencies in the management core courses of a Bachelor of Business Administration

Delimitations and Limitations

Delimitations of this study, based on this early exploratory phase, included the identification and analysis of the objectives from the 24 common courses. This work intended to determine if there was an obvious gap at this foundational level regarding the focus of skills and capabilities. This does not mean that it is absent in the course pedagogy and execution of content by individual instructors, but the intention was to look at what was present in the building blocks of this design system. Limitations include the course offerings comprised in the degree as these are provincially approved for the initial degree offering and transferability to other institutions is considered, but there is variability in the course offerings within similar degrees at other institutions. In addition, this analysis of current course outlines does not yet include student assessments and achievements and restricts the ability to make any link to the causation of the gap. This initial phase of our study identifies the presence (or absence) of building blocks within the framework and will be the basis of subsequent phases.

Findings and Discussion

The results of this analysis provided the researchers with an overview of the complexity and frequency of verbs across the 24 common course objectives. The verbs utilized focused solely on the cognitive domain of Bloom's Revised Taxonomy (2000), or intellectual competencies. These courses were constructed with the expectation that students graduate high school equipped with the cognitive ability to handle the academic rigour presented in post-secondary education. Such cognitive skills are then honed through post-secondary education in preparation for the workplace. While cognitive skills, such as retaining and applying knowledge and theories, are important skill sets for graduates, workplaces require their employees to have more than the ability to think – and prioritize critical thinking, idea integration, and implementation (actions).

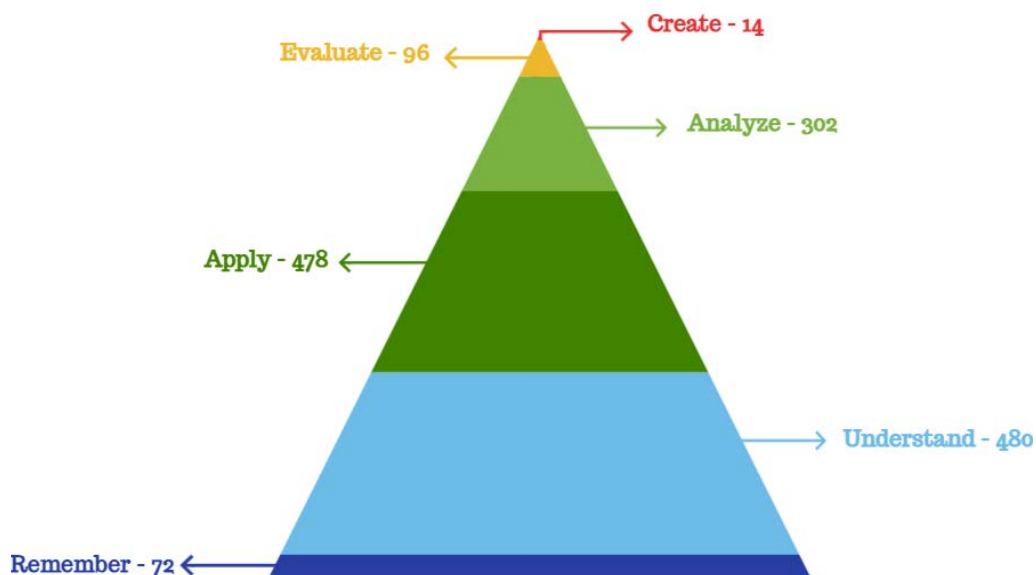
Individuals choose to invest in education to gain a competitive advantage in the labour market by acquiring the necessary skills for employability, as highlighted by human capital theory (Becker, 1993). The term employability remains largely theoretical with Lowden et al. (2011) providing a broad definition focused on a collection of skills, attributes, and characteristics – a description supported by Human Resources Management's approach to job analysis through knowledge, skills, and abilities (KSAs). De Vos et al. (2011) instead measure employability through outcomes, suggesting that employable individuals “fulfill, acquire, and create work” by utilizing competencies. While both definitions of employability express the importance of acquiring more than cognitive skills, this was not what was identified through this phase of our analysis. We acknowledge that focusing primarily on a student's cognitive ability does not guarantee that they will possess the necessary non-cognitive skills, such as resilience, adaptability, motivation, reliability, or perseverance to succeed in the workplace.

With an explicit spotlight on developing cognitive skills, opportunities to build the soft skills found in the affective domain of Bloom’s Taxonomy become an implicit process (such as the assumption that team dynamics are learned via groupwork), and often an under, or unevaluated outcome. The dynamic nature of soft skills, in consideration of dynamic skill theory, often makes it difficult to quantify and measure through traditional forms of post-secondary assessment, especially if course objectives have an excessive focus on hard skills. And, while graduates express satisfaction in the relevancy of courses in the program, as per the satisfaction rates expressed by students (SAIT, 2020c), their confidence in their affective preparedness was not assessed.

The empirical information collected through this study also shows that the evaluation and program outcomes lean heavily towards lower-to-mid-level order thinking, as seen in Figure 4. As a hands-on, technical institute, this focus on applied learning and assessments aligns with the importance placed on polytechnic learning, which is to ensure students can put theory into practice while developing industry-specific knowledge (Polytechnics Canada, 2023).

Figure 4

Frequency of Verbs from BBA Objectives Across Common Courses



Note: A long description of Figure 4 is provided at the end of this article.

Based on institutional data gathered from graduates and new employees, along with industry and government influence, a preference for a higher-order skillset also exists, identifying the assumed gap. According to a report by Deloitte and The Global Business Coalition for Education (2018), students need a skill set that includes “communication, critical thinking, creative thinking, collaboration, adaptability,

initiative, leadership, social emotional learning, teamwork, self-confidence, empathy, growth mindset, cultural awareness” (p.16). Further, in a survey conducted by the Association of American Colleges and Universities (Hart Research Associates, 2015), 91% of respondents agreed that for career success, “a candidate’s demonstrated capacity to think critically, communicate clearly, and solve complex problems is more important than his or her undergraduate major” (p. 6).

The frequency of verbs utilized in learning objectives was also standardized across each year of the 4-year program, as seen in Figure 5 (with the frequency values shown in Table 1). This provides us with a clear overview of the progression students experience as they advance through the program. The findings highlight the limited focus on the development of higher-order thinking skills, specifically in Year 4 of the program.

Figure 5

Standardized Frequency of Verbs

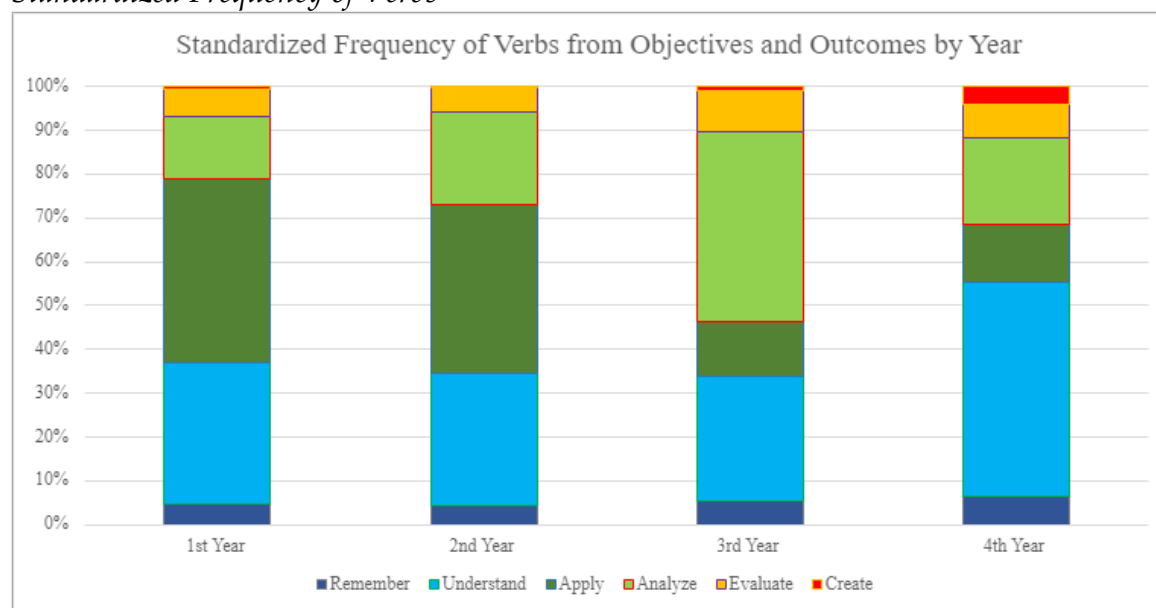


Table 1

Frequency of Collected Verbs According to Blooms’ Revised Taxonomy by Year of Study

	Remember	Understand	Apply	Analyze	Evaluate	Create
1 st Year	28	189	246	84	37	3
2 nd Year	21	143	183	100	27	1
3 rd Year	10	52	23	79	17	2
4 th Year	13	96	26	39	15	8
	72	480	478	302	96	14

In Figure 5, the primary emphasis of Years 1 and 2 remains heavily focused on objectives that are dominated by verbs within the *understand* and *apply* classifications - lower to mid-order thinking categories. Courses in Year 3 demonstrate a progression towards *analyze*, increasing into higher-order thinking skills, however, courses in Year 4 do not follow this trend – instead, there seems to be a shift back towards *understand* as a primary focus. This suggests there is a need for re-evaluating learning objectives, especially in Year 4 courses, which would enable students to put into practice the knowledge, understanding, and application that was gained over the first three years of the program. Furthermore, students would have an opportunity to evaluate, analyze, and create, leading to the theoretical development of critical thinking skills (or at least the intended opportunity for these developments).

Another finding of the analysis conducted was the overwhelmingly large number of distinct learning objectives among common courses. Across the 24 courses, there were a total of 1,442 individual objectives identified. This is an average of 60 learning objectives per course. For those students who are taking a semester with a full course loading (5 courses), they average 300 learning objectives per semester. While there does not seem to be agreement in the academic community as to how many objectives are sufficient for a course, the assessment of 300 suggests to us that there may be an opportunity to review the value of each objective, and associated assessment alignment, along with the connection to the overarching program outcomes.

A final, and unexpected finding that came to light amid our study was the institutional intention to implement competency pillars based on human-centered capabilities. In response to changing industry requirements, government funding directives, and the changing post-COVID workplace, the institution is undertaking a review of graduate outcomes. While this framework has recently been released and has not yet been implemented into course redesign, it supports our findings that a soft skills gap exists in the program outcomes. The undertaking of this larger research study, therefore, is appropriately timed.

Future Research and Considerations

As this is only the preliminary stage of a larger undertaking, the opportunities for future research are extensive. One progressive next step will be to further analyze the data into categories of behaviour along the cognitive (Anderson et al., 2001), psychomotor (Simpson, 1972), and affective (Krathwohl et al., 1964) domains, and explore assessments and student achievement. The insights across multiple data sources could then be triangulated to explore student learning and effective design. This would include gathering feedback from faculty, students, and graduates on perspectives of capabilities, soft skills, and skills across other domains (through a protocol approved by the institutional Research Ethics Board). We would like to explore the implication of soft skill objectives as perceived by a variety of stakeholders (students, faculty,

administration, and industry) which would enable us to better understand perceived gaps, as well as make informed iterative adjustments to current course designs and objectives.

Additionally, a longitudinal study evaluating students' preparedness for the workplace would also provide us with information on the gaps that exist in program outcomes. While students are currently surveyed on their satisfaction with the program post-graduation, there is limited information collected from alumni who have relevant work experience. Further, feedback gathered from industry members that address skill perceptions from across the three domains would provide further understanding and insight.

As contemporary research emerges on the future of work skills following the pandemic, and through technological developments such as generative artificial intelligence), we are interested in exploring skills and capability frameworks to support faculty in the transition to redefining objectives and outcomes that support the development of skills that include all three domains. We have identified the usage of Bloom's Taxonomy which focuses primarily on cognitive learning, with limited attention paid to the psychomotor and affective domains. This inclusion of the three domains found in Bloom's Taxonomy parallels the knowledge, skills, and attitudes reflected in Human Resource Management, and strengthens the importance of students' growing competency across all three domains.

The direct extension of this work could consider how the declared learning objectives and associated assessments are designed to best support the student learning experience. A heightened focus is being encouraged by faculty to identify and implement authentic and formative assessments to better support student learning. It is also imperative that we pursue an investigation into the preparedness of the incoming students to better position skills gained through high school and into post-secondary education; especially considering at least three years of interruption due to the pandemic.

Conclusion

There is an institutional movement to identify objectives and outcomes in learning that support the capability and development of students under the broad topic clusters of creativity (transforming ideas into reality), critical thinking (using data and logic to figure it out), citizenship (people, society, and the planet), curiosity (asking, testing, exploring, and engaging), and connection (building effective relationships). The next step we will be taking is identifying specific objectives under each topic cluster to recommend for course iteration and inclusion. This will be mapped at both the micro (course) level, and macro (program level). The intention is not to have equal focus on all clusters in every course, but rather explicit development in each course that supports

appropriate scaffolding and development across the experience for students through the program.

There is an extension to be considered that includes the coaching and support of faculty to ensure that pedagogical approaches and assessment strategies create effective learning experiences for students – which cannot be accomplished solely through changed course outlines and re-evaluated objectives. The prerequisite to this was to identify what was currently contained in the objectives of the course pathway and understand the current state as a connected system. This approach has been very valuable to our work and serves as a solid foundation upon which to build and iterate. We want to thank and acknowledge the STLHE 2022 conference participants who offered great discourse and insights that helped us navigate and gain perspectives on our work.

References

- Accenture Song. (2023). *Accenture life trends 2023*.
<https://www.accenture.com/content/dam/accenture/final/capabilities/song/marketing-transformation/document/Accenture-Life-Trends-2023-Full-Report.pdf#zoom=40>
- Anderson, L. W., Krathwohl, D. R., & Bloom, B. S. (2001). *A taxonomy for learning, teaching, and assessing: a revision of Bloom's Taxonomy of educational objectives* (Abridged ed.). Longman.
- Becker, G. (1993). *Human capital: A theoretical and empirical analysis, with special reference to*. University of Chicago Press.
- Carnevale, A. P., & Smith, N. (2013). Workplace basics: The skills employees need and employers want. *Human Resource Development International*, 16(5), 491-501.
<https://doi.org/10.1080/13678868.2013.821267>
- CBC. (2021). *What are Canadian post-secondary institutions saying and doing? Social and emotional skills*. [Issue Briefing, 21 January 2021]. The Conference Board of Canada. https://fsc-ccf.ca/wp-content/uploads/2021/01/10877_25110_issue-briefing_ses-canadian-post-secondary.pdf
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Pearson.
- De Vos, A., De Hauw, S., & Van der Heijden, B. (2011). Competency development and career success: the mediating role of employability. *Journal of Vocational Behavior*, 79(2), 438-447.

- Deloitte & Global Business Coalition for Education. (2018). *Preparing tomorrow's workforce for the fourth Industrial Revolution, for business: A framework for action*. Deloitte Touche Tohmatsu Limited.
<https://www.deloitte.com/global/en/issues/work/gx-preparing-tomorrow-workforce-for-the-fourth-industrial-revolution.html>
- First Policy Response. (2020). *How will post-secondary education change in the next two years?* <https://policyresponse.ca/how-will-post-secondary-education-change-in-the-next-two-years/>
- Fischer, K. W. (1980). A theory of cognitive development: The control and construction of hierarchies of skills. *Psychological Review*, 87, 477–531.
- Fischer, K. W., & Bidell, T. R. (2006). Dynamic development of action and thought. In R. M. Lerner, W. Damon, R. M. Lerner, & W. Damon (Eds.), *Handbook of child psychology: Theoretical models of human development* (pp. 313–399). John Wiley & Sons Inc.
- Future Skills Council. (2020). *Canada – A learning nation: A skilled, agile workforce ready to shape the world*. Employment and Social Development of Canada.
<https://www.canada.ca/content/dam/esdc-edsc/documents/programs/future-skills/report-learning-nation/Future-Skills-Council-Report-EN.pdf>
- Hart Research Associates. (2015). *Falling short? College learning and career success*. Report by Hart Research Associates. <https://www.aacu.org/research/falling-short-college-learning-and-career-success>
- Heckman, J. J., & Kautz, T. (2012). Hard evidence on soft skills. *Labour Economics*, 19(4), 451-464. <https://doi.org/10.1016/j.labeco.2012.05.014>
- Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1964). *Taxonomy of educational objectives: Handbook II: Affective domain*. David McKay Co.
- Johnston, S. L., & Lee, C. (2022, Jun 6-10). *Scaffolding “soft” skills from entry to graduation, across programs for undergraduates in business* [Conference presentation #105]. Society for Teaching and Learning 40th Annual Conference (STLHE), Ottawa, ON, Canada.
- Lapointe, S., & Turner, J. (2020). *Leveraging the skills of social sciences and humanities graduates*. Skills Next 2020. <https://fsc-ccf.ca/wp-content/uploads/2020/01/UniversityGraduateSkillsGap-PPF-JAN2020-EN-FINAL.pdf>

- LearningCity. (2022). *Calgary's skills development framework*.
<https://static1.squarespace.com/static/5b8748eb372b96145e73af65/t/636fceedbf1a617141dedee/1668271857123/Calgary+Skills+Development+Framework.+1.0.pdf>
- LeBusque, M. (2020). *Stop calling them soft skills - They're human skills*. InsideHR.
<https://www.insidehr.com.au/stop-calling-them-soft-skills/>
- Lombard M., Snyder-Duch J., & Bracken, C. C. (2002). Content analysis in mass communication: Assessment and reporting of intercoder reliability. *Human Communications Research*, 28(4), 587–604.
- Lowden, K., Hall, S., Elliot, D., & Lewin, J. (2011). *Employers' perceptions of the employability skills of new graduates*. Edge Foundation.
- Margolis, E., & Zunjarwad, R. (2018). Visual research [Chapter 27]. In N. K. Denzin & Y. S. Lincoln (Eds.). *The SAGE handbook of qualitative research* (pp. 600-626). SAGE.
- Mascolo, M. F. (2020). Chapter 4 – Dynamic skill theory: An integrative model of psychological development. In M. F. Mascolo & T. R. Bidell (Eds.), *Handbook of integrative developmental science Essays in honor of Kurt W. Fischer* (pp. 91-135). Routledge.
- Mascolo, M. F., & Fischer, K. W. (2015). Dynamic development of thinking, feeling, and acting. In W. F. Overton, P. M. Molenaar, & R. M. Lerner (Eds.), *Handbook of child psychology and developmental science: Theory and method* (pp. 113–161). John Wiley & Sons Inc.
- Merriam, S. B. (2009). *Designing your study and selecting a sample. Qualitative research: A guide to design and implementation – Revised and expanded from qualitative research and case study application in education*. Jossey-Bass.
- PMI. (2022). Project Management Institute - Disciplined Agile power skills.
<https://www.pmi.org/disciplined-agile/people/powerskills>
- Polytechnics Canada. (2023). *Polytechnics Canada*. <https://polytechnicscanada.ca/>
- Quacquarelli Symonds. (2023). *The skills gap: What employers want from business school graduates*. <https://www.qs.com/reports-whitepapers/graduate-management-education/>
- RBC. (2019, May). *Bridging the gap: What Canadians told us about the skills revolution*. RBC Thought Leadership.

<https://www.rbc.com/dms/enterprise/futurelaunch/assets-custom/pdf/RBC-19-002-SolutionsWanted-04172019-Digital.pdf>

SAIT. (2020a). *Institutional strategic plan: New world. New thinking.* 2020-2025. <https://www.sait.ca/assets/documents/about-sait/new-world-new-thinking.pdf>

SAIT. (2020b). *Purpose, applied.* <https://www.sait.ca/campaigns/purpose-applied>

SAIT. (2020c). *Graduation employment results – School of Business.* <https://www.sait.ca/about-sait/who-we-are/publications/graduate-employment-survey/school-of-business-results>

SAIT. (2023, December). *From classroom to career: Annual report 2022/23.* SAIT. <https://www.sait.ca/assets/documents/publications/sait-ar-2022-23-web-dec23.pdf>

Simpson, E. (1972). *The classification of educational objectives in the psychomotor domain: The psychomotor domain.* Vol. 3. Gryphon House.

WEF. (2023). *The future of jobs report: 2023.* <https://www.weforum.org/publications/the-future-of-jobs-report-2023/>

Long Descriptions

Figure 1 – Bloom’s Revised Taxonomy

A rainbow-colored pyramid equally segmented into 6 sections ordering the levels of human cognitive processing from highest to lowest. The highest, first tip is “Create: Produce new or original work; Design, assemble, construct, conjecture, develop, formulate, author, investigate.” Second is “Evaluate: Justifying a stand or decision; Appraise, argue, defend, judge, select, support, value, critique, weigh.” Third is “Analyze: Draw connections among ideas; Differentiate, organize, relate, compare, contrast, distinguish, examine, experiment, question, test.” Fourth is “Apply: Use information in new situations; Execute, implement, solve, use, demonstrate, interpret, operate, schedule, sketch.” Fifth is “Understand: Explain ideas or concepts; Classify, describe, discuss, explain, identify, locate, recognize, report, select, translate.” And sixth, forming the bottom or base of the pyramid and representing the lowest order, is “Remember: Recall facts and basic concepts; Define, duplicate, list, memorize, repeat, state.” Alt Text created by Michelle Morgan.

Figure 2 - Course Pathway through BBA Degree

A blue square with the writing Year 1 Core - BBA overtop of a blue arrow pointing down to 12 blue squares with the labels of A, H, F, Mk, Mn, and S. A blue arrow points down to the label Year 4, with a bifurcated green arrow pointing to practicum or capstone. A 4 square matrix equally segmented. The top left square is labelled Business Core (1000, 2000), and underneath are a list of courses including introductory financial accounting, introduction to business, business productivity tools and tech, business mathematics, microeconomics, macroeconomics, marketing essentials, business law, organizational behaviour, and international business. The top right square is labelled complementary core, and underneath are a list of courses including communication and presentation skills, critical thinking, and quantitative methods. The bottom left square is labelled business core (3000, 4000), and underneath are a list of courses including 1 of 2 accounting (2000), 1 of 2 finance (2000, 3000), and strategic management. The bottom right square is labelled complementary core, and underneath are a list of courses including ethics, presentations, and research methodologies. The bottom of the matrix has Comprehensive integrated learning experience, followed by select one of practicum or capstone.

Figure 4 - Frequency of Verbs from BBA Objectives Across Common Courses

A rainbow-colored pyramid segmented into 6 sections. The highest, first tip is "Create" with only 14 BBA objectives using this domain. Second is "Evaluate" with 96 BBA objectives using this domain. Third is "Analyze" with 302 objectives using this domain. Fourth is "Apply" with 478 objectives using this domain. Fifth is "Understand" with 480 objectives using this domain. And sixth, forming the bottom or base of the pyramid is "Remember" with 72 objectives using this domain.