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World's Greatest Challenges: Building Interdisciplinary Understanding and Collaboration among Business and Social Work Students

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World's Greatest Challenges: Building Interdisciplinary Understanding and Collaboration among Business and Social Work Students

Abstract

Socially engaged students cross all disciplines. Today's complex and rapidly changing environment poses new challenges for practitioners, students, and educators working within and alongside post-secondary institutions. This research explores how business and social work students interpret and perceive the world's greatest challenges. Eighty-four students participated in the mixed methods study wherein a workshop was delivered to two social innovation and two social work classes. The workshops provided a forum for students to explore their perspectives on the world's greatest challenges individually and as part of a group. Differences and similarities are reported regarding student perspectives of the world in which they live. The results reinforce a change in student mindset requiring significant shifts in the development and delivery of social impact curriculum and pedagogy related to creating shared value, social innovation, and changemaking.

On trouve des étudiants qui sont socialement engagés dans toutes les disciplines. L'environnement actuel complexe et qui change rapidement pose de nouveaux défis pour les praticiens, les étudiants et les éducateurs qui travaillent au sein des établissements d'enseignement post-secondaire ainsi que parallèlement à ces établissements. Cette recherche explore comment les étudiants d'administration des affaires et les étudiants en travail social interprètent et perçoivent les défis les plus grands dans le monde. Quarante-quatre étudiants ont participé à cette étude à méthodologie mixte dans laquelle des ateliers ont été organisés pour deux classes d'innovation sociale et deux classes de travail social. Les ateliers ont fourni un forum qui a permis aux étudiants d'explorer leurs perspectives sur les défis les plus grands dans le monde, individuellement et en tant que membres d'un groupe. Les différences et les ressemblances sont rapportées en ce qui a trait aux perspectives des étudiants sur le monde dans lequel ils vivent. Les résultats renforcent l'existence d'une modification dans la façon de penser des étudiants qui exige des changements considérables dans le développement et la prestation du curriculum de l'impact social et de la pédagogie liés à la création de valeurs partagées, d'innovation sociale et de changements.

Keywords

interdisciplinary education, world challenges, social innovation, social work, change-making, mixed methods; éducation interdisciplinaire, défis dans le monde, innovation sociale, travail social, changements, méthodologie mixte

Cover Page Footnote

We would like to acknowledge the contribution of our Research Assistant, Kaitlin O'Brien, and the assistance of Shelby Hopland Guidi.

Socially engaged students in post-secondary professional programs face increasingly complex and demanding practice environments. This poses challenges for programs delivering curriculum in social innovation, and community engagement. As educators prepare social work and business students for future professional roles, today's social environment is marked by rapid and exponential change (Kim et al., 2018). Social challenges exist on an unprecedented scale necessitating the development of curriculum that is transdisciplinary, integrates theory and practice, and links classrooms with the community (Brock & Kim, 2011). Because of the complexity of the social problems faced by social innovation professionals in addition to business, and social work students, a commitment to collaboration is imperative (Nurius et al., 2017).

Recently, our university received designation as a changemaker campus by AshokaU. A changemaker campus operates in socially and environmentally conscious ways to address local and global challenges (Ashoka U, 2018). This designation fosters an environment that supports partnership across institutional and sectoral boundaries to better engage students in social innovation and community-engaged learning. Individually, a changemaker is someone who believes in making positive changes in society and takes initiative to work with others to achieve social impact (Alden Rivers et al., 2015). Changemaking at the institutional level involves teaching, learning, and research that creates change in partnership with communities. Established as a meaningful approach to social innovation and professional education, changemaking reinforces students' ability to influence positive social change (Bandinelli & Arvidsson, 2013).

Closely connected to changemaking, social innovation exists as a relevant approach in solving the complex and often intractable social-ecological problems facing Canada and the world (Cahill, 2010; Carpenter et al., 2019; Etmanski, 2016). Understanding that disciplinary approaches can only offer partial answers, social innovation involves multiple actors engaged in efforts to solve a broad range of issues that affect community well-being (Westley & Antadze, 2010). To support social innovation, increased alignment across professional disciplines is imperative. However, disciplinary and professional silos persist within the academy, and opportunities to explore student perspectives across disciplines are often limited. As a result, adapting educational frameworks to include innovative social impact curriculum along with opportunities for transdisciplinary knowledge exchange is required (Kim & Krampetz, 2016). With this in mind, this research study explored how social work and business students understand their social world and the challenges within. We approached this project intending to break down disciplinary barriers and create increased alignment and collaboration between these two distinct professions.

Review of the Relevant Literature

Interdisciplinary education involves students from diverse professions learning together to develop collaborative practice (Bajada & Trayler, 2013). This approach to learning draws from classic theories of adult education and emphasizes reflective practice (Schön, 1987), problem-based learning (Barrows & Tamblyn, 1980), and experiential learning (Kolb, 1984). Several core competencies have been identified that can be taught to students from different disciplines including values and ethics for collaborative practice, communication skills, roles and responsibilities, and teamwork (Nurius et al., 2017). However, this approach to teaching and learning can be difficult to design and implement and insufficient evidence exists as to the efficacy of interdisciplinary education and its contribution to effective outcomes in these core competencies. While interdisciplinarity refers to linkages between two or more disciplines, transdisciplinarity expands forms of engagement to allow diverse groups to operate outside their

separate disciplines and to create new spaces of understanding together (Nurius, Kemp, et al, 2017). An important goal within transdisciplinarity relates to developing “T-shaped” professionals who combine depth and expertise with the ability to collaborate beyond disciplinary borders (Nurius et al., 2017). The concept of T-shaped professionals is well suited to the field of social innovation where depth, breadth and the ability to collaborate within a diverse range of disciplines is highly valued (Hansen, 2010).

Collaborative environments are the hallmark of the business and social work professions where they are increasingly integrated into higher education. Despite not traditionally being socially oriented, many business schools in North America have adjusted their focus to include content that concentrates on ethics, social responsibility, diversity, and sustainability and have also sought to develop collaborative scholars (Alden Rivers & Smith, 2014; Parris, & McInnis-Bowers, 2017). Concurrently, some social work educators have identified the need to collaborate more closely with industry, philanthropists, and a range of private sector entities (Sensoy Bahar, 2017). These discussions are taking place within an environment characterized by increased privatization of government-run programs and decreased government revenues to address social needs (Nandan & Scott, 2013). Driven in part by economic necessity, business and social work priorities are shifting, creating an environment where an expanded business presence exists within the social sector (Long, 2018; Nandon et al., 2015). Social service organizations in Canada are meeting these demands by increasingly engaging in social innovation (Etmanski, 2016; Shier & Handy, 2016a). Within this context, collaborating across disciplines offers creative and new ways of addressing social needs while contributing to community well-being (Morrison & Glenny, 2012).

Bridging social work and business, social innovation provides an opportunity to address complex issues concerning students, their environments, and vulnerable populations both locally and globally. Indeed, the literature suggests that cross-sectoral partnerships are highly valued by employers and leaders in the non-profit sector for this very reason (Shier & Handy, 2016b). Nevertheless, social work as a field has been slow in integrating social innovation, and the links between social work and business are characterized as tenuous at best (Long, 2018). Struthers (2018) noted that distinct ways of thinking about social justice and social innovation has led to competing narratives in the field. Divergent values among students from business and social work have also contributed to these barriers (Arieli et al., 2016). Additionally, students from both professions are not adequately prepared for interdisciplinary and collaborative work (Long, 2018; Nurius et al., 2017).

Nonetheless, creative opportunities exist in conversations that respectfully explore similarities and differences among those involved in social innovation and social justice work (Struthers, 2018). In our experience as educators, business and social work students are often concerned and socially engaged in common issues that speak to their core values and beliefs as individuals including those related to inequity, difference, marginalization, and social responsibility. Interdisciplinary strategies with a focus on changemaking are needed in today’s university curriculum in both social work and business faculties.

Research Context and Design

In 2016, we collaborated to develop a workshop in which social work and business students explored the world’s greatest challenges. A Human Research Ethics Board (HREB) approved study our project was designed to identify the global issues students from each discipline (business and social work) recognized as the world’s greatest challenges. The study examined similarities

and differences among student perceptions, also exploring the student experience of the workshop. We used a mixed-methods approach to study the perception of business and social work students, following the delivery of an in-class workshop. Recognizing the legitimacy and value of qualitative and quantitative forms of data collection, a mixed-methods approach was deemed most appropriate to explore the complexities of the research questions posed (Creswell, 2009; Johnson & Christensen, 2017).

Method

A sixty-five-minute in-class workshop provided students an opportunity to explore what they believed the world's greatest challenges to be. The workshop was delivered to four undergraduate classes in November, 2016: two "Introduction to Social Innovation" classes taught in the Faculty of Business and Communication Studies ($N=49$) and two "Community Development" classes taught in the Faculty of Health, Community and Education ($N=70$). The workshop protocol comprised four phases. Phase 1 required co-instructor facilitation of the lead instructor's class, which included introducing the study, and distributing a worksheet to each student for completion (Refer to Appendix A). Students were invited to individually think about and write down what they considered the world's top five challenges to be, describing each in their own words.

Upon completion of the individual challenge lists, Phase 2 required that groups of four to five students were formed. Consistent with insights from Carmichael et al. (2018), three short vignettes of world issues were selected in advance to engage students in the workshop and illustrate the level and scale of the issues to discuss in their groups. The videos addressed population growth (National Geographic, 2010), income disparity (Broadbent, 2014) and fossil fuels (Post Carbon Institute, 2010). Afterward, the groups were invited to spend thirty minutes discussing the videos and their challenge lists so that a group consensus list be developed. Each student recorded their group's consensus list on their worksheets, after which students were provided an opportunity to share their lists and observations with the entire class. Phase 3 invited students to reflect on the entire workshop and record their final individual challenge list on their worksheet.

The last phase required that the instructors leave the classroom so the research assistant (RA) could outline research study objectives and informed consent, also explaining that students were free to participate or not. Students wishing to participate completed the informed consent form were advised that their participation was confidential, and their worksheets would not be released until all grades had been posted and the appeal period was complete.

Data Analysis

The research assistant collected and stored the informed consent forms and eligible worksheets, which were released to the research team in March 2017. The RA reviewed each worksheet, removing personal identifiers to ensure anonymity in the event the research team decided to review original documents. The RA typed and summarized responses from each worksheet and raw data were summarized for each class on an excel spreadsheet, that was subsequently reviewed and coded by the research team. Refer to Appendix B for the legend used to code student responses.

Quantitative data analysis was undertaken to examine workshop results. Descriptive statistics were run for each class to identify trends and anomalies. Each participant's challenge list

was reviewed and responses were grouped and coded by the research team. Based upon the coding, priority challenges were reviewed for each participant and frequency counts tabulated to identify the top five challenges for each discipline at each phase of the workshop. Quantitative analysis and statistical inference were determined by comparing challenge lists across the two groups of students. Because the social innovation class included business students ($n=27$) and students from other disciplines ($n=7$) to ensure adequate sample size, the two groups were combined ($n=34$) and are referred to as business students in this study.

Because we were interested in exploring differences and similarities between two independent groups, the Z test for two proportions was used to examine the challenge lists of business and social work students throughout each phase of the study. When conducting the Z test, two conditions must be met; first, that each group include a minimum of 30 cases and, second, that each group report at least five successes and five failures (Field et al., 2012). For instances in which either condition was not satisfied, the assumption that the difference in sample proportions follow a normal distribution required that Fisher's exact test for 2x2 cross-tabulation be used. Fisher's exact test calculates the exact probability of the chi-square statistic and its use is recommended when sample sizes are small (Conover, 1980; Field et al., 2012).

Two open-ended questions related to student learning and their perception of the workshop were included on the worksheet. These questions invited participants to share their thoughts, observations, and feedback on the workshop as well as their overall learning throughout the class. Responses to these questions were treated as qualitative data. The research assistant transcribed data verbatim, which was consolidated into a single document. Qualitative analysis was conducted using grounded theory coding methods. A constant comparative method of data analysis is used in grounded theory whereby qualitative data are collected, coded, and analyzed simultaneously. One member of the research team began by conducting line-by-line coding of the qualitative data to identify initial codes and properties. This initial phase of coding involved naming each line or segment of the data in order to identify ideas on which to build the analysis (Charmaz, 2014). While concurrently conducting workshops, we continued to check, question, and interpret the data, comparing data to ongoing coding efforts. Lastly, theoretical coding of data was conducted which involved conceptualizing how the identified categories related to each other and are integrated with the broader findings (Glaser, 1978).

Participants

Of the 109 students enrolled in the four classes, 84 students submitted their worksheet for study inclusion, representing a 77.1% participation rate. Segmented further, 40.5% ($n=34$) identified as business students while 59.5% ($n=50$) indicated they were registered in the social work program. Tables 1 and 2 present descriptive statistics for the age and gender variables across the four classes.

Table 1

Participant Demographics – Age

Course Category	<18	18-24	25-29	30+	N/A*	Total
Business	2	29	2	1	0	34
Social Work	0	30	8	11	1*	50
Total	2	59	10	12	1*	84

*Did not identify age

Seventy-six percent of the participants identified as female ($n=64$) with the majority (70%) indicating they were between 18-24 years of age ($n=59$). It is notable that females were in the majority in each of the four classes and that social work students tended to be older in that 38% of social work students were 25 years of age or more ($n=19$), versus 9% of their business colleagues.

Table 2

Participant Demographics – Gender

Course Category	Male	Female	Other	Do Not Identify	Total
Business	12	22	0	0	34
Social Work	7	42	0	1	50
Total	19	64	0	1	84

Results

The world challenges identified by students were influenced by several factors, some external and some internal. We start with a discussion regarding the challenge priority lists along with observed differences and similarities across the two groups throughout the workshop. We then move to a summary of student feedback regarding the workshop, the challenges, and the impact of the group discussion following the three vignettes.

Quantitative Results

Phase 1 of the study required that each student create an initial list of what the student believed the world's top five challenges were. Table 3 presents the most frequently identified world challenges by discipline. A test of difference between proportions was calculated for each challenge by comparing participant responses between the two groups (business and social work students) to determine the level of significance of associated p values.

Table 3*Phase 1: Individual Top Five Challenges at Start of Workshop*

Challenge Rank	Business	Social Work	Between Group <i>p</i> Values
Challenge 1	Environment	Environment	<i>p</i> =.7344 environment
Challenge 2	Poverty	Poverty	<i>p</i> =.0956 poverty
Challenge 3	Discrimination	Discrimination	<i>p</i> =.7837 discrimination
Challenge 4	Violence/abuse*	War/terrorism	<i>p</i> =.0437 violence/abuse* <i>p</i> =.1267 war/terrorism
Challenge 5	Education**	Hunger/thirst	<i>p</i> =.0022 education** <i>p</i> =.3673 hunger/thirst

p* < .05 significance, *p* < .01 significance

Regardless of discipline, the findings revealed students identified the same top three world challenges at the start of the workshop. No significant differences were observed between student groups. This result suggests that workshop participants, regardless of program of study, did not perceive their social world differently.

At the same time, however, significant differences were observed when comparing challenges four and five across the two groups. Business students identified “violence and abuse” as their fourth challenge (*p*=.0437) and “education” as their fifth challenge (*p*=.0022), revealing significant differences from their social work colleagues who identified “war and terrorism” (*p*=.1267) and “hunger and thirst” (*p*=.3673) respectively.

Phase 2 of the workshop required that groups of four or five students be formed to discuss individual challenge lists as well as view three short videos. After viewing the videos, each group developed a consensus list of the top five challenges. Table 4 presents the most frequently cited world challenges by discipline.

Table 4*Phase 2: Group Top Five Challenges after Discussion and Videos*

Challenge Rank	Business	Social Work	Between Group <i>p</i> Values
Challenge 1	Environment	Environment	<i>p</i> =.1533 environment
Challenge 2	Discrimination	Poverty**	<i>p</i> =.0719 discrimination
Challenge 3	War/terrorism	War/terrorism	<i>p</i> =.8459 war/terrorism
Challenge 4	Education*	Discrimination	<i>p</i> =.0206 education* <i>p</i> =.0719 discrimination
Challenge 5	Violence/abuse**	Equality	<i>p</i> =.0020 violence/abuse** <i>p</i> =.0644 equality

p < .05 significance ** *p* < .01 significance

Once again, “environment” remained the top challenge across the four classes, regardless of discipline. Moreover, the Z test for two proportions did not reveal significant differences between business and social work students, (*p*=.1533). Consistent with Phase 1, this finding suggests that “environment” remained a key concern of students enrolled in these classes, regardless of discipline. Because the priority position of “environment” did not change following the intervention, this result suggests the importance and the degree to which students in these classes perceived the “environment” as a major world challenge. It is however instructive that following the group discussion, the business students’ consensus list shifted to include “war and

terrorism” as the third world challenge, sharing the same priority position as social work students. Significant differences between groups was observed regarding “poverty” ($p=.0024$), “education” ($p=.0206$) and “violence and abuse” ($p=.002$).

Phase 3 required that students reflect on the entire workshop and develop their final individual list of the world’s greatest challenges, recording their final list on their worksheet. Table 5 presents the most frequently identified world challenges and associated p values.

Table 5

Phase 3: Individual Top Five Challenges at End of Workshop

Challenge Rank	Business	Social Work	Between Group p Values
Challenge 1	Environment	Environment	$p=.1664$ environment
Challenge 2	Poverty	Income disparity*	$p=.1086$ poverty $p=.0180$ income disparity*
Challenge 3	Discrimination*	War/terrorism Poverty	$p=.1123$ war/terrorism $p=.0010$ discrimination*
Challenge 4	War/terrorism	Sickness/health	$p=.1086$ poverty $p=.1014$ sickness/health $p=.1123$ war/terrorism
Challenge 5	Income disparity*	Equality	$p=.0102$ equality $p=.0180$ income disparity*
	Education*		$p=.0024$ education*

* $p < .05$ significance, ** $p < .01$ significance

Upon completion of the workshop, “environment” was identified as the greatest challenge regardless of field of study across the four classes ($p=.1664$). Once again, the z test for two proportions revealed no significant difference between business and social work students. This provides further evidence that both groups of students perceive the environment challenge similarly.

Over the course of the workshop, business students did shift their challenge priority list in that “discrimination” was displaced by “poverty,” with discrimination shifting “war and terrorism” from its third position; this suggests that the group discussion did indeed influence priority lists. On the other hand, social work student results revealed a significant shift in the challenge position for “income disparity” ($p=.018$) following the group discussion. It is noteworthy that this challenge did not appear on the individual challenge lists students created at the start of the workshop. In fact, we posit that this may indeed be reflective of the impact that one video, *Wealth Inequality in Canada*, had on social work students in particular and business students to a lesser degree.

Qualitative Results

Two open-ended questions related to students’ learning and perceptions of the workshop were included on the worksheet. These questions invited participants to share their thoughts, observations, and feedback on the worksheet as well as their general learning as part of the workshop. All responses to these questions were treated as qualitative data. Findings from the qualitative data were conceptualized into two broad categories related to the learning the students drew from the workshop. These included, increasing awareness and gaining perspective and learning through group discussion and dialogue.

Increasing Awareness and Gaining Perspective

In the first category, students described the increased insight and awareness of world issues they drew from participating in the workshop. One common takeaway was an increased personal awareness of the social issues affecting the world. In many cases, these included issues that students were unaware of or had not previously considered. For example, one participant reported that, “The challenges we have are much larger than I thought... I thought this workshop was very eye-opening.” Another student acknowledged, “It provided good insights on new topics I never really considered.”

The idea of being exposed to new perspectives was a recurring theme throughout the data. This was particularly the case when the students worked in small groups to reach consensus regarding their top five world challenges. Within the small groups, learners reported they exchanged ideas, learned from each other’s perspectives, and discussed their personal values. As part of this process, participants reported they learned from group members about new issues and realized that people see world issues in different ways. This was an important insight for one participant who noted, “I thought it was beneficial to talk to others in order to be introduced to issues that you didn’t think of.” In some cases, differing ideas complicated the task of reaching a consensus. One student described how their perspective broadened as a result of the group discussion, “I think everyone has different perspectives, which come from personal experiences/morals/ethics/beliefs etc. This makes it difficult to come to a more specific consensus.”

As shared by one participant, the personal values underlying student perspectives was a valuable point of discussion, “it made me more aware of the unknown and less discussed issues that are taking place. It made me think about my values and what my future may look like.” Indeed, many participants described the group discussion as an opportunity to share and discuss their personal values. Several identified this as a core part of their learning whether that was connecting around shared values or identifying differences. For example, one student reported that, “our group had a lot of the same values, just different perspectives on them.” Another confirmed that disclosing and discussing their values was an important part of the exercise, “We easily agree on the top five challenges. We have some common values and it is also a subject that we care about, we pay attention to.”

Although in the minority, some students identified differing experiences of the identified social issues based on their social location. As discussed earlier, the majority of students reported that the workshop opened their eyes to new information and perspectives. However, some students identified having firsthand experience related to some of these world issues. This suggests that in addition to discussing their values and opinions, social location and privilege were also part of the fabric of the group discussions. One participant described an example of how this happened in her small group,

I grew up in a third world country, so I have experienced many of these things first-hand, my partner identified as a privileged white female so she didn’t see the same disparities as I did. We had a thoughtful discussion and both learned something new.

As one participant suggested, “the world’s greatest challenges depend on where you live and what your values are. We can definitely generalize the challenges, but what they look like and how they are dealt with will differ.” Thus, while many students may experience world challenges

as issues that happen to other people, others may see themselves as much more affected by these issues.

Learning through Group Discussion and Dialogue

Exchanging their views and managing differences as part of the group discussion was also a learning for many. Students reported several challenges associated with this task, including difficulty finding consensus in the group, managing differing personalities, expressing differing opinions, and fear of offending others. Perhaps because these discussions touched upon their values, students reported them as impactful learning. In particular, participants gained much from discussing issues from different perspectives, negotiating a consensus, and demonstrating respect for other's views. One participant described the challenge associated with this task, "Not everyone has the same opinions regarding great challenges and may be passionate about them. Some people may become offended when being persuaded to come to a consensus that one challenge maybe more important than the other." In managing these challenges, students reported a diverse range of strategies both direct and indirect. Generalizing the issues to reach consensus was one common strategy as was hiding dissent and compromising.

Managing different perspectives, opinions, values, and social locations was identified as a core learning process related to the world's greatest challenges workshop. At times, this caused discomfort for students as they engaged in dialogue and negotiated consensus. However, it also provided a platform for understanding and change. Many participants described how the group discussion helped them understand important connections. For instance, one student commented, "When discussing the top issues, we noticed that all of our ideas were somehow connected to one another" while another participant noted, "I think it is interesting to have different disciplines having different education to put a stop to issues we are having."

Discussion

Table 6 presents each discipline's priority list along with the percentage of students identifying each challenge at each phase of the workshop. Certainly, one of the most remarkable findings concerns the fact that "environment" was identified as the primary challenge across both disciplines in each phase of the workshop. The first position did not change following the group discussion, nor after viewing the three videos. Moreover, the Z tests revealed no significant differences between the two groups of students across the three phases of the workshop ($p = .7344$, $p = .1533$, and $p = .1644$). This finding is important in that, regardless of discipline, the "environment" appeared to be top of mind for business and social work learners.

Table 6*World's Greatest Challenges by Discipline Frequency Summary*

Discipline	Phase 1 Top Challenges (%)	Phase 2 Top Challenges (%)	Phase 3 Top Challenges (%)
Business			
1	Environment (76.5)	Environment (91.2)	Environment (73.5)
2	Poverty (55.9)	Discrimination (58.8)	Poverty (70.6)
3	Discrimination (50.0)	Poverty (52.9)	Discrimination (61.8)
		War/terrorism (52.9)	
4	Violence/abuse (38.3)	Education (44.1)	War/terrorism (50.0)
		Discrimination (38.8)	
5	Education (35.3)	Violence/abuse (32.4)	Income disparity(41.2)
			Education (41.2)
Social Work			
1	Environment (79.6)	Environment (79.6)	Environment (85.7)
2	Poverty (73.5)	Poverty (72.0)	Income disparity(67.3)
			War/terrorism (67.3)
3	Discrimination (46.9)	War/terrorism (55.1)	Poverty (53.1)
4	War/terrorism (42.9)	Discrimination (38.8)	Sickness/health (40.8)
5	Hunger/thirst (32.7)	Equality (32.7)	Equality (22.4)

When comparing challenges across disciplines from the start of the workshop to its culmination, it is interesting to note that significant changes were not observed among business students. However, this was not the case for social work students. As social work students moved through the workshop, significant differences were observed as students identified their second, third, fourth, and fifth challenges. “Poverty” moved from second to third position ($p=.0012$), contributing to the displacement of “discrimination” from the top five challenge list ($p=.0002$). “War and terrorism” shifted to the second priority position ($p=.0005$) and “hunger and thirst” disappeared from the priority list altogether ($p=.0003$).

Moreover, and as discussed previously, the inclusion of “income disparity” as a world challenge by students in both disciplines, following the video, suggests the potential impact the video and the group discussion had on participants. It is important to note that while this shift was not significant among business students, it was significant among social work students ($p=.0018$), possibly suggesting social work students are more open to new information when compared to their business colleagues. Alternatively, it may suggest that because the majority of learners in the social innovation classes were business students, the notion of income disparity may have already been on their radar.

Some social work students reflected on this shift in their commentary. For example, one student remarked on the impact of both the group discussion and the video on their list of challenges. “Yes, it did shift, because after talking to others and watching the videos, my perspectives changed because it introduced issues that I hadn’t thought of. For example, overpopulation.” The shift in perspective was also echoed by another social work student, “Yes, it made me more aware of the unknown and less discussed issues that are taking place. It made me think about my values and what my future may look like.”

Certainly, the shift in the priority positions was anticipated, recognizing the impact that group discussion can have on influencing individual perceptions and opinions (Krueger & Casey,

2009; Stewart et al., 2007). What was not anticipated was the position strength that the “environment,” “poverty,” and “discrimination” held throughout all phases of the workshop across the four classes.

As students reflected on their workshop experience, exchanging their views and managing differences as part of the group discussion was reported as a learning for many. Students identified several challenges associated with this task including difficulty finding consensus, managing different personalities, expressing differing opinions, and fear of offending others. Again, these observations were anticipated and have been highlighted in literature related to overcoming cross cultural group work tension (Mittelmeier et al., 2018), group dynamics when task completion is interdependent (Forsyth, 2013), and how cooperative learning groups can assist students to explore differences, reach consensus, and construct knowledge (Gillies, 2003). Perhaps because these discussions touched upon their values, students reported them as impactful learning. In particular, participants gained much from discussing issues from different perspectives, negotiating a consensus, and demonstrating respect for others' views.

The Challenge of the “Environment”

As discussed earlier, the majority of participants identified the “environment” as the most important world challenge regardless of discipline. Recognizing that these workshops were conducted in November 2016, the research team believes that this workshop was an indicator of the importance this challenge was to become by October 2019 in Canada and throughout the world. While we do not purport that these findings are generalizable to the broader population, it is however noteworthy that this challenge was on the radar of our students in 2016, which we had not anticipated.

Collaboration, Cross-pollination and Creating Impact

Over the past ten years, we have witnessed a shift in how students engage in our classes, with each other, and with class material. We view this shift as reflective of a desire on the part of students, to engage in the classroom with material that has meaning and significance to them (Monaco & Martin, 2007; Price, 2009; Seemiller & Grace, 2015). However, at times, this can create discomfort and challenges for educators. Opportunities to work in groups, to cross-pollinate and co-create, as well as provide occasions for students to think big and explore are important. It is important for learning and it is important in preparing students for future endeavours, regardless of discipline (Mulgan et al., 2007; Ng et al., 2010). There is a very real need to create learning environments that not only engage, but activate and amplify student awareness and involvement in the world in which they reside (P21, 2016).

Limitations

Several limitations exist in the study, which should be acknowledged. Because it was conducted within one lecture, the time available to deliver the workshop was 65 minutes. Therefore, it is possible that group discussion was constrained, and students may not have been able to explore in-depth their understanding of each other's challenge lists. A second limitation concerns the use of videos to demonstrate the scale of challenges the research team was interested

in exploring. Although view time was short, one or more of the videos may have influenced results, potentially biasing our findings.

Third, while the majority of students in the social innovation class were business students, seven students self-identified as open studies. These data were retained to enable statistical testing and may have influenced the results to some extent, in that open studies students have not been admitted into a degree program. Therefore, the limitations as noted above should serve to caution readers regarding unwarranted conclusions regarding the generalizability of these findings to the broader population.

Conclusion

This research explored how students enrolled in two different programs of study perceive the greatest challenges facing the world today. Our findings revealed the significant position that the environment holds in the values and beliefs of our students in addition to poverty and discrimination. Feedback from participants indicated that the workshop was a meaningful learning experience that allowed students to connect around shared values or through the identification of differences.

Discussing and managing different perspectives, opinions, values, and social locations was identified as a core experiential learning process related to their participation in the workshop. Recognizing the complexity of our world today, to collaborate effectively across disciplines requires an advanced skill set to discuss issues from different perspectives, negotiate consensus, and demonstrate respect for other's views. Participants validated that the world's greatest challenges workshop provided key learning in this area.

Understanding the complexity of the world in which students live, and the importance of preparing them to contribute to positive social impact has been central to developing curriculum for social work and business students. Coaching and mentoring students to engage in collaborative practice is imperative recognizing the nature of the social challenges they will face in their professional areas of practice. The findings from this study provide a platform to engage students in social issues that truly matter to them while offering insights into the rich learning processes involved in interdisciplinary learning.

From a teaching and learning perspective, this study identified a gap in course content and one outcome from this study has been that each instructor has adapted course material to include resources related to the environment, whether as a case study, research topic, or a complex problem to be mapped. Furthermore, both courses have been modified to include the workshop. For example, in the social innovation class, the workshop has become the primer for students preparing to identify a complex problem to examine in their social innovation lab. While the above refinements represent a step toward addressing learner needs and interests, we believe the results, while unexpected, point to an opportunity to develop interdisciplinary pathways of learning that embed social innovation and social impact across disciplinary silos.

It is our view that the results may be reflective of a change in student mindset that is necessitating shifts in the development and delivery of social impact curriculum across disciplines. There is limited research on this and results from this study may assist educators to better understand student perspectives of world challenges and their learning environment. Although the findings cannot be generalized to the broader population, we believe they may be of interest to thought leaders in the public, private, and social service sectors in that the results provide evidence that these two groups of students have priorities that are not very different from each other.

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Appendix A World's Greatest Challenges Workshop Worksheet

Please use this worksheet to gather and note your reflections throughout today's workshop. As you may recall from our previous class, at the end of the workshop, you will be invited to share your observations and perceptions. It would be appreciated if you would capture/detail your observations as much as possible on the worksheet provided. This will be helpful to my research colleague and me in the event you choose to include your individual worksheet in the research study we are conducting.

Please do not include your name on this worksheet, because in the event you decide to participate in the study and provide consent to do so, we want to ensure your participation is anonymous by ensuring that you cannot be identified in any way.

There are five sections included in this worksheet, we would ask you to complete:

Section 1: Demographics

Section 2: Your personal list of what **you** believe the top five World's Challenges are today.

Section 3: After viewing the video clips and your discussion in a small group, what did **your group** decide were the World's Greatest Challenges today?

Section 4: Now that you have had a chance to view the videos and have a group discussion, what do you personally think the world's greatest challenges are today?

Section 5: Individual reflection of the workshop

Please circle the response that best describes you.

Section 1: Demographics

Current Faculty:

- a) Business & Communications
- b) Social Work/Child Studies
- c) Arts
- d) Science
- e) Other _____ [please indicate]

Gender: a) Female b) Male c) Other d) Do not wish to identify

Age: a) <18 years b) 18-24 c) 25-29 d) 30+

Section 2: In the space below, please describe what **you** believe the **top 5** of the World's Greatest Challenges are today? [Please remember there are no right or wrong answers, we are simply interested in what you perceive at this point in time in the workshop before any discussions, etc.]

1i	
2i	
3i	
4i	
5i	

Section 3: Following your review of the video clips in class and a discussion in your small group, please indicate what **your group** identified as the top 5 World's Greatest Challenges today.

1g	
2g	
3g	
4g	
5g	

Section 4: In the space below, following your viewing of the video clips and the group discussion, please indicate what **you** believe the World's Top 5 Greatest Challenges are today? [Once again, please remember there are no right or wrong answers, we are simply interested in **your opinion** after viewing the videos and having a group discussion]

1a	
2a	
3a	
4a	
5a	

Section 5: Individual Reflection

Upon reflection, do you have any additional thoughts you would like to share regarding this study or observations you had about this topic? working in your group? The challenges, etc..

Did your perspective on the World's Greatest Challenges shift or change as a result of this exercise? Please describe how this shift /change occurred and why it may have taken place.

Thank you so much for completing this worksheet.

As reflected in the course outline and discussed in class, you will be invited to participate in a research study concerning your perceptions of the World's Greatest Challenges. An Informed Consent Form will be given to you for your completion in the event you are consenting that your reflection worksheet can be included in our study of the World's Greatest Challenges. As you may recall, this study aims to explore the similarities and differences regarding perceptions of the world's greatest challenges for students enrolled in the following two courses: Introduction to Social Innovation and Community Development.

Appendix B World Greatest Challenges Coding Sheet

Code #	Challenge	Subtopics included
1	Environment	global warming, climate change, sustainability, environment, pollution, environmental problems, clean drinking water, water supply, fresh water, abuse of resources, food waste
2	Income disparity	income inequality, spread of wealth, money greed, unequal opportunities, income gap, disparity
3	Discrimination	racism, gender, human rights, discrimination, lack of humanity, cultural differences, stigma
4	Equality	as is, not specific
5	Inequality	as is, not specific
6	War, terrorism, radicalism	war, terrorism, religion, ISIS, Russia, conflict, security, radicalism, peace, refugees
7	Poverty	poverty, homelessness, lack of resources
8	Education	education, literacy, lack of education, lack of education opportunity, technology access, literacy
9	Abuse, violence	child, domestic, sexual assault, violence, harassment, rape culture, human trafficking, crime, social and political crime
10	Sickness, health	global illness, sickness, cancer, health care access
11	Hunger, thirst	hunger thirst, food security, starvation
12	Economy	unemployment, economy, global finance, debt, financial stability
13	Freedom of speech	freedom of speech, media censorship
14	Addiction, substance abuse	substance abuse, addiction
15	Mental health	mental health
16	Overpopulation	population, overpopulation
D1	Gender	0=male; 1=female; 60=n/a
D2	Age	1= <18; 2=18-24; 3=25-29; 4=30+
D3	Faculty	1=Business 2=Social Work 3=other