

# ASSESSING DIVERSITY AND INCLUSION WITHIN CANADIAN UNIVERSITIES

Erica Wright and Wendy Cukier, Ryerson University

Delivered at the Nineteenth Annual Conversation on the Liberal Arts February 27–29, 2020 | Westmont College, Santa Barbara, CA

# Paper Submission to The Gaede Institute, Westmont College The Nineteenth Annual Conversation on the Liberal Arts, February 27-29, 2020

Assessing Diversity and Inclusion within Canadian Universities

Erica Wright & Wendy Cukier

#### Abstract

The rhetoric of Canadian universities as sites of fair practice and forward-thinking has been criticized by scholars, who have noted that the "equity myth" supports denial of racism within these institutions, undermining the experiences of racialized and marginalized groups (e.g. Nakhaie, 2004; Henry et al., 2017). Research has repeatedly shown that racialized students continue to face discrimination, while there remain persistent gaps in the representation and wages of racialized faculty, senior academic leaders and executive leaders in Canadian universities (Henry & Tator, 2009; Dua & Banji, 2012; Ramos, 2012; Hannay, 2017). Despite the promises of these institutions, they have not put forth practices and policies that effectively address discrimination of racialized groups (Henry et al, 2017). Lack of diverse representation in senior leadership is an issue of access, as academic leaders can determine whose voices are given privilege in research and pedagogy, and influence the culture and mandate of institutions. Diversity in leadership is a key part of creating structural change towards more inclusive organizations (Cukier et al., 2013). Drawing on the critical ecological model (Cukier et al., 2013), this paper will use a systems-level approach to assess diversity and inclusion at multiple levels within Canadian universities. It contributes to the limited research on diverse representation in Canadian leadership by examining the proportion of racialized people on university boards and senior executives in Toronto and Montreal (Diversity Institute, 2012, 2013, 2014, 2015, 2019). Findings show that universities and colleges, even in Canada's largest cities, are still lagging in their diversity agendas, supporting a call for rigorous measurement, reporting and policy changes within these institutions.

# **Introduction**

The rhetoric of Canadian universities as sites of fair practice and forward-thinking has been criticized by scholars, who have noted that the "equity myth" supports denial of racism within these institutions, undermining the experiences of racialized and marginalized groups (e.g. Nakhaie, 2004; Henry et al., 2017). Research has repeatedly shown that racialized students continue to face discrimination, while there remain persistent gaps in the representation and wages of racialized faculty, senior academic leaders and executive leaders in Canadian universities (Henry & Tator, 2009; Dua & Banji, 2012; Ramos, 2012; Hannay, 2017). Despite the promises of these institutions, they have not put forth practices and policies that effectively address discrimination of racialized groups (Henry et al, 2017).

Employment Equity legislation in Canada prohibits discrimination within organizations of women, Indigenous peoples, persons with disabilities and racialized persons<sup>1</sup> (Government of Canada, 2018), and increasingly companies are becoming more conscious of the value of positioning themselves as advocates for diversity and equity in hiring (Ramos, 2012). Comprehensive quantitative research provides an opportunity to evaluate these claims. Measurement and enforcement of diversity policies within Canadian institutions, including in academia, should result in continuous improvement in the numbers of racialized professors and university leaders.

Drawing on the critical ecological model (Cukier et al., 2013), which analyzes at the individual, organizational and societal level, this paper will use a systems-level approach to assess diversity and inclusion at multiple levels within Canadian universities, through a review of current

<sup>&</sup>lt;sup>1</sup>Following the direction of the Ontario Human Rights Commission (n.d.), and recognizing race as a social construct, we use the terms "racialized person" or "racialized group" rather than the more outdated terms "racial minority," "visible minority," "person of colour" or "non-White."

literature on inclusion within Canadian universities. It will contribute to the limited research on diverse representation in leadership by examining the proportion of racialized people on university boards and senior executives in Toronto and Montreal (Diversity Institute, 2012, 2014, 2015, 2019). Lack of diverse representation in senior leadership is an issue of access, as academic leaders can determine whose voices are given privilege in research and pedagogy, and influence the culture and mandate of institutions. Diversity in leadership is a key part of creating structural change towards more inclusive organizations (Cukier et al., 2013).

#### **Diversity and Equity in Canada's Universities**

In Canada, in line with the rhetoric of a multicultural society, many major institutions have begun to boast policies of diversity and inclusion, often as broad, abstract concepts (CAUT, 2018). Canadian universities often pride themselves on diversity and equity initiatives, and many can boast a racially diverse student body (Henry et al., 2017; Goitom, 2019). However, this trend is not reflected in the representation of racialized people among senior staff and faculty; Black and Indigenous groups are continually underrepresented among academic leaders within universities, and among faculty (Henry et al., 2017; Dua & Banji, 2012). The University of Alberta looked at Canada's 15 highest-ranked universities and found no representation of racialized and Indigenous persons among the ranks of university chancellors, provosts and vice presidents, and found that racialized men made up only 20% of university presidents (Smith, 2017). The Canadian Association of University Teachers, based on data from the 2016 national census, found that a significant wage gap remains between men and women professors and college teachers (CAUT, 2018; Gordon, 2018). This wage gap is worse for racialized and Indigenous professors. Notably, racialized women earn on average 68 cents for every dollar that their white male colleagues earn

(CAUT, 2018, p.9). Racialized scholars were also found to have the highest rates of unemployment, while female racialized and Indigenous teachers that are employed are less likely to hold full-time positions. Further, along with the challenges for these underrepresented groups in securing tenure-track positions, other systemic barriers indirectly contribute to this cycle, such as the loss of assistant professor roles in Canadian universities which, according to CAUT, will further slow progress (CAUT, 2018).

Despite these numbers, debate continues as to whether there in fact remain systemic issues within universities that disadvantage minority groups. Scholars have posited that this resistance may stem from the desire within the institution to maintain its accepted image of education as a space which thrives on diverse ideas, and thus values inclusiveness and equity (Ramos, 2012). Employment equity policies have proliferated in Canada over the past three decades, and universities have been quick to realize the value of positioning themselves as being at the forefront of this movement, often holding themselves out as equal opportunity employers, and pointing to their diverse student body in marketing campaigns (Henry et al., 2017, CAUT, 2018).

Some argue that underrepresentation of racialized people among professors and university leadership is not due to discrimination within the university but rather a result of lack of qualified candidates, citing few doctorates or alleged lack of quality publications (Ramos, 2012). This argument of the "skills gap" or "skills mismatch" is not unique to academia, yet recent studies have cast doubt on these claims due to a lack of hard evidence (Burleton et al., 2013; Sorensen, 2014). While employers claim they are faced with a limited pool of skilled talent, there is little evidence of wage increases at the industry level, while effective efforts to recruit and promote diverse talent throughout the labour market, including women and internationally-trained

professionals remain stagnant (Sorensen, 2014; Li & Sweetman, 2014; Banerjee, Verma, & Zhang, 2019).

In other cases, there is generally silence by universities about underrepresentation in the professorate (and generally in academic roles) of women, racialized people and Indigenous peoples (Ramos, 2012). The lack of comprehensive research on representation in Canadian university leadership and the professorate undoubtedly contributes to the lack of initiative in this area (Henry et al., 2017). Within the current literature in Canada, studies have often been based in qualitative findings and often small samples, with some exceptions (e.g. Ramos, 2012; CAUT, 2018; Henry et al., 2017). There is a clear need for comprehensive data, including measurement and benchmarking of university leadership representation, in order for to provide a strong foundation for policy and organizational responses to continued inequities.

# Representation Matters: Academic Culture, Student Outcomes and Knowledge Production

Institutional discrimination has complex and varied consequences at the organizational, individual and societal levels, with lack of representation of racialized faculty impacting culture within the institution and determining students' experiences and educational outcomes. Beyond this, however, it is important to acknowledge the power of the university as more than an educational institution, but also one with influence over knowledge production and societal discourse. The Canadian higher education system maintains the values and attitudes developed throughout British colonial history, and scholars have observed that these processes continue to restrict access to powerful positions within the institution, excluding immigrants and racialized groups (Nakhaie, 2004; Goitom, 2019). While the discourse has shifted so that acceptance is no longer based explicitly on race, but on "Canadian experience" and credentials obtained in Canada,

this covert form discrimination or "democratic racism" has the effect of maintaining the status quo (Nakhaie, 2004; Henry & Tator, 1994).

Underrepresentation of racialized people within institutions is often linked to other dimensions of discrimination (Henry et al., 2017, p.6). While the authors found that racialized and Indigenous professors were under-represented and underpaid in Canadian universities, they also noted racism embedded more deeply throughout the institutional systems. For example, racialized faculty tended to outperform their white counterparts in terms of successful research grants and number of article publications, and maintained this record though many criticized for research that was "too political or ideological." Despite their publication records, racialized faculty were less likely to be awarded tenure, and take much longer to earn promotions (Henry et al., 2017, p.307).

Through over 1500 interviews analyzing the lived experiences of Black communities in the Greater Toronto Area, one study found that the proportion of Black teachers was associated with more positive experiences for Black students, helping them to manage issues of racism and to feel supported more generally. Unfortunately, four in five participants attended high schools where few or none of the teachers Black, and 50% said that they faced challenges in school due to race. At the postsecondary level, one in five college or university graduates responded that Black role models would have made their educational journeys easier (Environics Institute & Diversity Institute, 2017).

Curriculum and knowledge production is also a product of representation in academic institutions. Racialized and Indigenous people are often written out of the curriculum, and have historically received little support for research on racialization and poverty, a fact that has persisted until today (Dei & McDermott, 2014; Henry & Tator, 2009). Further, not only does systemic discrimination result in lack of availability of courses which are relevant to a diverse student body,

and lack of role models like them, limited faculty who can teach issues of race, including Black and Indigenous history, with authority can also undermine the quality of education in these areas (Henry et al., 2017, p.7).

Particularly relevant to the Canadian environment is the primacy given to Western education, and the devolution of credentials obtained from abroad. Canada prides itself on a worldrenowned immigration system and a uniquely "multicultural" society, which is founded on the belief that immigrant settlement and integration is a two-way street, requiring the Canadian-born population to accept the culture and traditions brought by newcomers, as newcomers in turn adapt to the Canadian way of life (Government of Canada, 2011). Despite this popular rhetoric, the evidence of immigrant economic outcomes paints a very different picture. While they often hold higher educational credentials than their Canadian-born counterparts, racialized immigrants fare far worse economically (Smith & Fernandez, 2017). Devaluation of foreign-obtained education and work experience is an insidious fact of life for immigrants to Canada, with a recent report by the United Way (2019) stating that, regardless of how long immigrants have lived in Canada, they are becoming poorer. The average income of immigrants who have been in Canada for over two decades has not increased in 35 years, despite a steady increase in income of the Canadian-born population (United Way, 2019). The situation is worse for racialized groups - in Toronto, Canada's most diverse city, racialized people earn 52 cents for every dollar a white person earns (United Way, 2019). This as well speaks volumes to the exclusivity of knowledge production, and who has access, and whose voices are prioritized above others. The current structure of knowledge production from within the institution is "upheld historically by an overwhelming white research community that bolsters empirical science and measurement techniques interwoven with sexist, racist and class-based ideologies" (Goitom, 2019, p.197).

7

#### Racialized Leadership in Universities - An Analysis of Progress

The Diversity Institute examined the proportion of women and racialized leaders in six different sectors in Toronto and Montreal, and collected this data over the last eight years. Sectors included the corporate, voluntary, public and education sectors, as well as government and elected officials. This paper analyses the progress that has been made in terms of diversity among executives and directors in the education sector in Toronto and Montreal, with a focus on colleges and universities.

The methodology uses publicly available information on senior leadership across multiple sectors, analyzing organizations located in Canadian cities. This paper looks at the findings from two cities, Toronto and Montreal, and analyzes progress between 2011 and 2017 in Toronto, and 2012 and 2019 in Montreal. Universities, colleges and school boards in these cities will be looked at.

Researchers located lists of executive staff and leadership within the target organizations and recorded each individual's gender and racialized status using captioned photographs and biographies found online. In some cases, there was insufficient information to code an individual's gender or racialized status, or a photo was not publicly available, in which case the individual was coded as 'unsure' and was excluded from the analysis. If more than 50% of an organization's senior leaders were coded as 'unsure,' the entire organization was excluded from the analysis (Diversity Institute, 2019).

Researchers coded each pictured individual as either "male" or "female," and as "visible minority<sup>2</sup>," or "non-visible minority." Due to the subjective nature of this type of inquiry, specifically with regard to ascribing identity, data was coded three times to test inter-coder

<sup>&</sup>lt;sup>2</sup> "Visible minority" used as terminology for racialized groups in coding throughout the studies, for consistency, beginning in 2011.

reliability, which exceeded 95%. Where there was uncertainty or differences of opinion amongst coders, another coder was brought in to review the final decision (Diversity Institute, 2019).

#### **Greater Montreal**

In 2019, 16 universities and colleges and 8 school boards in the Greater Montreal Area were examined, totaling 442 individuals coded for gender, and 384 coded for racialized group status. In 2019, 6.8% of senior leaders within the universities, colleges and school boards studied were racialized. From 2012-2019, there was a 5.7% increase in racialized leaders in the education sector (from 6.4% in 2012 to 6.8%). However, among university and college senior management teams (excluding school boards), only 2.4% of individuals were racialized; 87.5% of universities and colleges had no racialized people on their senior management teams. On university and college boards, 6% of members were racialized; none of the universities or colleges had a board comprised of more than 20% racialized members.

In 2019, 60% of university and college boards have more than 40% women, 56.3% of university and college senior management teams have more than 40% women. Overall, 47.1% of senior leaders in the education sector were women.

In 2015, 3.5% of senior leaders in the education sector were racialized people (Diversity Institute, 2015). This was a decline from the numbers in 2012, when, of the 359 individuals in the sample, 6.4% of senior leaders were racialized. This is despite the fact that racialized individuals account for 22.5% of the overall population in Greater Montreal (Diversity Institute, 2013).

In 2015, 43.7% of senior leaders in Montreal's education sector were women. In 2015, 57.1% of colleges and 25% of universities had at least 40% women on their board of governors.

9

The majority of colleges and universities had more than 50% women in senior executive roles (Diversity Institute, 2015).

This was an improvement from 2012, when 40.7% of leaders in Montreal's education sector (of the 562 individuals analyzed), were women. In 2012, representation of racialized women leaders within universities and colleges was less than 5%, though they accounted for 11.5% of the Greater Montreal population (Diversity Institute, 2013).

#### **Greater Toronto**

In 2017, racialized people made up more than 50% of Toronto's population, yet only represented 23.1% of senior leadership positions in the education sector (universities, colleges and school boards). Women, who are 51.7% of Toronto's population, made up 40.1% of senior leadership positions in Toronto's education sector (Cukier, 2017).

In 2014, 19.6% senior leaders in Toronto's education sector were racialized. 41.4% of senior leaders in Toronto's education sector were women (Diversity Institute, 2014). This was a slight increase from 2011. In 2011, of the 321 senior leaders that were analyzed for gender in Toronto's education sector, 40.8% were women (Diversity Institute, 2012).

In 2011, 40.0% of executives and 36.9% of the board of governors within the universities analyzed were women. In colleges, 54.5% of executives and 40.8% of board of governors were women. Among the sectors analyzed, education had the highest percentage of women leaders, however, the sector was not as strong in terms of racialized leadership (Diversity Institute, 2012).

Though racialized women accounted for more than 25% of the population in the Greater Toronto Area, comparable to the proportion of white women, they account for a much smaller percentage of leaders across multiple sectors with none of university executive positions in the study help by racialized women (Diversity Institute, 2012).

#### Measurement, Policy and Implementation: A Call to Action

In both cities, we see that both women and racialized individuals are underrepresented in university and college senior leadership, and the outcomes are significantly worse for racialized women. While women's representation is still not on par with men, we see more significant progress towards equity than with racialized groups, for which the dial has hardly moved. Uneven distribution of racialized leadership across subsectors of education, and between different universities, suggests that the policies and processes within individual organizations have an impact on diversity in leadership, and rejects the notion that the issue is due to a lack of qualified candidates. The lack of consistent progression in some subsectors also suggests that there is a need to review diversity and equity initiatives for universities and colleges to implement consistent measurement and enforcement of these policies.

Henry et al. (2017, p.308), evaluating eight Canadian universities, support the finding that equity initiatives vary substantially across universities, with equity offices differing in terms of staff numbers and reporting requirements, and policies ranging from merely satisfying government regulations to more broad responses to systemic issues. The current situation of a stratified workforce cannot be addressed with sporadic and unenforced diversity policies, particularly if leaders do not view inequity as an issue to be addressed throughout all organizational processes, and within institutional culture.

The way that representation is measured, and what is measured, matters. This paper looks at representation of women and racialized people in academic senior leadership, with the view that

11

the tone from the top matters, influencing the culture, processes and the import placed on equity within the organization. Diversity requires looking beyond the numbers, and systems-level responses at the organizational level are needed. Tools such as the Diversity Assessment Tool (DAT) can be useful, as it benchmarks an organization's diversity initiatives against other organizations within a sector, measuring leadership, HR, culture, and other areas (Cukier & Smarz, 2012). The DAT is an organizational assessment tool developed to measure organizations' ability to attract and retain diverse groups throughout various sectors. Through analyzing the organizational environment, policies and operations, the DAT draws attention to the various spheres of influence within organizations, and the ways that they can increase diversity throughout the value chain (Cukier, Smarz & Yap, 2011). When applied within the university context, the DAT can be useful for assessing university policies and practices, such as tuition and housing costs, EDI reporting requirements, admission processes, curriculum, pedagogy, research, student supports, outreach and marketing.

This paper provides a brief overview of some of the major challenges facing the higher education sector in Canada in terms of inclusion of racialized groups, and their promotion to leadership. The findings show stalled progress in terms of the promotion of racialized individuals to leadership roles in academia, a clear indication that intentional and forceful action is vital. More comprehensive measurement and ongoing tracking of progress is needed in order to drive the push for intentional action by universities, colleges and governments.

# **Bibliography**

- Banerjee, R., Verma, A., & Zhang, T. (2019). Brain gain or brain waste? horizontal, vertical, and full job-education mismatch and wage progression among skilled immigrant men in Canada. *International Migration Review*, 53(3), 646-670.
- Burleton, D., Gulati, S., McDonald, C. & Scarfone, S. (2013). Jobs in Canada: What, where and for whom? TD Economics. Retrieved from

https://www.td.com/document/PDF/economics/special/JobsInCanada.pdf

- Canadian Association of University Teachers (CAUT). (2018). Underrepresented & Underpaid Diversity & Equity Among Canada's Post-Secondary Education Teachers. Retrieved from <u>https://www.caut.ca/sites/default/files/caut\_equity\_report\_2018-04final.pdf</u>
- Cukier, W. (2017). DiversityLeads 2011-2017. Representing Canada? Visible minorities' representation in senior leadership positions across major Canadian cities. 2017 National Metropolis Conference: Montreal, March 2017.
- Cukier, W., Gagnon, S. Lindo, M., Hannan & Amato. (2013). A [critical] ecological model to enabling change: Promoting diversity and inclusion. In Malin, Virpi, et al. (Ed.) Getting Things Done: Practice in Critical Management Studies. Emerald Publishing Limited.
- Cukier, W. & Smarz, S. (2012). Diversity Assessment Tool: A comparison. International Journal of Knowledge and Change Management, 11(6), p.49-63.

<sup>Cukier, W., Smarz, S., & Yap, M. (2011). Using the Diversity Audit Tool to assess the status of women in the Canadian financial services sector: A case study.</sup> *The International Journal of Diversity in Organizations, Communities & Nations, 11*(3), 15-36.Dahm, M. J., Willems, E. P., Ivancevich, J. M., & Graves, D. E. (2009). Development of an organization

diversity needs analysis (ODNA) instrument. *Journal of Applied Psychology, 39*(2), 283-318.

- Dei, G. J. S., & McDermott, M. (2014). Introduction to the politics of anti-racism education: In search of strategies for transformative learning. In *Politics of anti-racism education: In* search of strategies for transformative learning (pp. 1-11). Springer, Dordrecht.
- Diversity Institute. (2019). *DiversityLeads: Women & racialized people in senior leadership* positions Greater Montréal Area. Toronto: Diversity Institute.
- Diversity Institute. (2015). *DiversityLeads: Women and visible minorities in senior leadership positions: A profile of Greater Montreal*. Toronto: Diversity Institute.
- Diversity Institute. (2014). DiversityLeads: Women and Visible Minorities in Senior Leadership Positions: A Profile of the Greater Toronto Area (GTA). Toronto: Diversity Institute
- Diversity Institute. (2013). *DiversityLeads: Women and visible minorities in senior leadership positions: A profile of Greater Montreal* 2012-2013. Toronto: Diversity Institute.
- Diversity Institute. (2012). DiversityLeads: Women in Senior Leadership Positions: A Profile of the Greater Toronto Area (GTA). Toronto: Diversity Institute
- Dua, E. & Bhanji, N. (2012). Racialization, Race and the University. *Canadian Ethnic Studies*, 44(2).
- Environics Institute & Diversity Institute. (2017). *The Black Experience Project in the GTA: Overview Report*. Retrieved from

# https://www.ryerson.ca/content/dam/diversity/reports/black-experience-project-gta---1overview-report.pdf

Goitom, M. (2019). 'Legitimate Knowledge': An Auto-Ethnographical Account of an African Writing Past the White Gaze in Academia. *Social Epistemology*, *33*(3), 193–204

- Gordon, A. (2018). Lack of diversity persists among teaching staff at Canadian universities, colleges, report finds. Toronto: Toronto Star. Retrieved from <u>https://search-proquestcom.ezproxy.lib.ryerson.ca/docview/2023761946?pq-origsite=summon</u>
- Government of Canada. (2018). *Employment Equity in federally regulated workplaces*. Retrieved from <u>https://www.canada.ca/en/employment-social-development/programs/employment-equity.html</u>
- Government of Canada. (2011). *Evaluation of the Welcoming Communities Initiative*. Retrieved from: <u>https://www.canada.ca/en/immigration-refugees-citizenship/corporate/reports-</u> <u>statistics/evaluations/welcoming-communities-initiative/section-1.html</u>
- Hannay, C. (2017, October 26). Tribunal to review discrimination allegations in Canada Research Chair choices. *The Globe and Mail.* Retrieved from https://www.theglobeandmail.com/news/politics/tribunal-to-review-discriminationallegations-in-Canada-research-chair-choices/article36746711/
- Hansen, R. (2017). Why both the left and the right are wrong: Immigration and multiculturalism in Canada. Political Science & amp; Politics, 50(3), 712-716.
- Henry, F., Dua, E., James, C.E., Kobayashi, A., Li, P., Ramos, H., Smith, M. (2017). The Equity Myth: Racialization and Indigeneity at Canadian Universities. Vancouver/Toronto: UBC Press.
- Henry, F. & Tator, C. (1994). The Ideology of Racism: "Democratic" Racism. *Canadian Ethnic Studies/Etudes ethniques au Canada 26*(2), 1-14.
- Henry, F. & Tator, C. (2009). Racism in the Canadian University: Demanding Social Justice, Inclusion, and Equity. Toronto/Buffalo/London: University of Toronto Press.
- Levin, B., Nolan, J. J., Perry, B., Levin, B., Nolan, J. J., & Perry, B. (2015). Disrupting the

mantra of multiculturalism: Hate crime in Canada. American Behavioral Scientist, 59(13), 1637-1654.

- Li, Q. & Sweetman, A. (2014). The quality of immigrant source country educational outcomes: do they matter in the receiving country? *Labour Econ*, *26*, 81–93.
- Nakhaie, M. R. (2004). Who controls Canadian universities? Ethnoracial origins of Canadian university administrators and faculty's perception of mistreatment. Canadian Ethnic Studies, 36(1), 92-110.
- Ontario Human Rights Commission. (n.d.). *Racial discrimination, race and racism (fact sheet)*. Retrieved from: <u>http://www.ohrc.on.ca/en/racial-discrimination-race-and-racism-fact-</u>sheet
- Ramos, H. (2012). Does how you measure representation matter?: Assessing the persistence of Canadian universities' gendered and colour coded vertical mosaic. Canadian Ethnic Studies, 44(1), 13-37.
- Smith, M. (2017). Action needed to close the leadership gap in Canadian universities. Edmonton: Academic Women's Association, University of Alberta.
- Smith, W. C., & Fernandez, F. (2017). Education, skills, and wage gaps in Canada and the united states. *International Migration*, 55(3), 57-73.
- Sorensen, C. (2014). *The myths about Canada's skills gap*. MacLean's. Retrieved from https://www.macleans.ca/work/jobs/the-myths-about-canadas-skills-gap/
- United Way of Greater Toronto. (2019). *Rebalancing the Opportunity Equation*. Retrieved from: https://www.unitedwaygt.org/file/2019\_OE\_fullreport\_FINAL.pdf