EQUITY, DIVERSITY AND INCLUSION IN HIGHER EDUCATION AND RESEARCH: WHAT THEY ARE AND WHY THEY ARE NEEDED

## POTENTIAL BENEFITS OF DIVERSITY IN HIGHER EDUCATION AND RESEARCH

SHARI GRAYDON REPORTS A REVEALING EXAMPLE OF THE IMPORTANCE OF ROLE MODELS

Vigdis Finnbogadottir was the President of Iceland from 1980 to 1996. One day during the last year of her presidency, she and her grandson were watching a television news piece about the candidates to replace her in the upcoming election, and her grandson exclaimed:
But Grandma, they can't be president! They're men!
Her grandson assumed that the president had to be a woman, because that was the only kind of president he had ever known. In this way, the presence of role models lets some groups of students see what is possible and imagine themselves in different roles.

## WHAT ARE THE POTENTIAL BENEFITS OF DIVERSITY IN HIGHER EDUCATION AND RESEARCH?

DEVELOPING EQUITY, DIVERSITY AND INCLUSION IN HIGHER EDUCATION AND RESEARCH IS ESSENTIAL TODAY, SO THAT CITIZENS CAN HELP TO BUILD AN ECOSYSTEM IN OUR INSTITUTIONS, AND THEN A SOCIETY THAT IS MORE CREATIVE, PRODUCTIVE AND REPRESENTATIVE.

1. Presence of role models
2. Wider range of concerns
3. More diverse student body
4. Greater development of students' skills
5. Improved ability to solve problems and make predictions
6. Improved ability to interact
7. Reduced risk of group think
8. Improved performance
9. Increased innovation

WHAT ARE THE POTENTIAL CHALLENGES OF DIVERSITY IN HIGHER EDUCATION AND RESEARCH?

BUT DESPITE ALL THESE POTENTIAL BENEFITS, DIVERSITY CAN
ALSO ENTAIL SOME CHALLENGES THAT CANNOT BE IGNORED.

1. Personal problems
2. Communication problems
3. Problems associated with fundamental and instrumental preferences
4. Need for a critical mass

## WHAT SHOULD YOU REMEMBER?

## TO ENJOY THE BENEFITS OF DIVERSITY, WE MUST ALSO FOCUS ON INCLUSION AND EQUITY.

> We cannot measure equity, diversity and inclusion by statistics alone (for example, the percentage of female professors in engineering faculties). We must also look at issues such as the work climate, well-being, cultural safety, contribution and progress. To benefit from diversity, it is essential to use some "levers" associated with it, such as education, development and implementation of policies and creation of more inclusive environments.

## REFERENCES

American Council on Education et American Association of University Professors (2000). Does diversity make a aifference : Three research studies on diversity in college classrooms. Repéré à : https://www.aaup.org/NR/rdonlyres/97003B7B-055F-4318-B14A-5336321FB742/0/DIVREP.PDF

Apfelbaum, E.P., Phillips, K.W. et Richeson, J.A. (2014) Rethinking the baseline in diversity research: Should we be explaining the effects of homogeneity? Perspect Psychol Sci, 9(3), 235-44. https://doi.org/10.1177\%2F1745691614527466

Bear, J. B. et Woolley, A. W. (2011). The role of gender in team collaboration and performance. Interdisciplinary Science Reviews, 36(2), 146-153. https://doi.org/1 0.1179/030801811X13013181961473

Bédard, L., Déziel, J. et Lamarche, L. (2006) Introduction à la psychologie sociale : vivre, penser et agir avec les autres (2e éd.). Montréal, Québec : Pearson.

Bohnet, I. (2016). What works : Gender equality by design. Cambridge, Massachusetts : The Belknap Press of Harvard University Press.

Díaz-García, C., González-Moreno, A. et Sáez-Martínez, F.J. (2013). Gender diversity within R\&D teams: Its impact on radicalness of innovation. Innovation: Management Policy Practice, 15(2), 149-60. https://doi.org/10.5172/ impp.2013.15.2.149

Fox, M.F. (2003). Gender, faculty, and doctoral education in science and engineering. Dans L.S. Horning (dir.), Equal Rites, Unequal Outcomes. Innovations in Science Education and Technology (vol. 15, p. 91-109). Dordrecht : Springer Netherlands. Repéré à : http://www.springerlink.com/index/10.1007/978-94-010-0007-9_5

Graydon, S. (2016). OMG! What if I really am the best person : The top 7 reasons women should speak Up. Canada.

Gurin, P. (1999). The compelling need for diversity in education. Expert Reports in Defense of the University of Michigan, 32(2), 36-62.

Hunt, V., Layton, D. et Prince, S. (2015). Why diversity matters. McKinsey \& Company. Repéré à : https://www.mckinsey.com/business-functions/organization/our-insights/why-diversity-matters

Jacobi, T. et Schweers, D. (2017). Justice, interrupted: The effect of gender, ideology and seniority at supreme court oral arguments. Rochester, NY : Social Science Research Network. Repéré à : https://papers.ssrn.com/abstract=2933016

Jacquinot, P. (2009). Les employés handicapés en France : leçons d'intégration. Gestion, 34(3), 116-27. Repéré à : https://www.cairn.info/revue-gestion-2009-3-page-116. htm

Liefooghe, C. (2010). Économie créative et développement des territoires : enjeux et perspectives de recherche. Innovations, 31(1), 181-97. Repéré à : https://www. cairn.info/revue-innovations-2010-1-page-181.htm

Page, S.E. (2007). The difference : How the power of diversity creates better groups, firms, schools, ans societies. Princenton, New Jersey : Princeton University Press.

## ACKNOWLEDGEMENTS

The completion of this project was made possible by our partners: the Natural Sciences and Engineering Research Council of Canada (NSERC), the Fonds de recherche du Québec - Nature et technologie (FRQNT), the Secrétariat à la condition féminine and the Université de Sherbrooke.

Québec Science (2019). Entrevue avec Isabelle Desgagné-Penix, biochimiste d’origine innue [Vidéo en ligne]. 20\% : un balado où des femmes en science et en techno se racontent. Repéré à : https://www.quebecscience.qc.ca/balados/20-pourcent/

Richard, O.C. (2000). Racial diversity, business strategy, and firm performance: A resource-based view. Academy of Management Journal. 43(2), 164-77. https:// doi.org/10.5465/1556374

Sommers, S.R. (2006) On racial diversity and group decision making: Identifying multiple effects of racial composition on jury deliberations. Journal of Personality and Social Psychology, 90(4), 597-612. http://dx.doi.org/10.1037/00223514.90.4.597

Tadmor, C. T., Satterstrom, P., Jang, S. et Polzer, J. T. (2012). Beyond individual creativity: The superadditive benefits of multicultural experience for collective creativity in culturally diverse teams. Journal of Cross-Cultural Psychology, 43(3), 384-392. https://doi.org/10.1177/0022022111435259

Torchia, M., Calabrò, A. et Huse, M. (2011). Women directors on corporate boards: From tokenism to critical mass. Journal of Business Ethics, 102(2), 299-317. https://doi.org/10.1007/s10551-011-0815-z

Turner, C.S.V., González, J.C. et Wood, J.L. (2008). Faculty of color in academe: What 20 years of literature tells us. Journal of Diversity in Higher Education, 1(3), 139-68. Repéré à : https://pdfs.semanticscholar. org/3202/76e31dc8a9db88372b2491e6ac8ab0381d8e.pdf? ga=2.186062569.137655584.1562600946-250170571.1562600946

Université de Sherbrooke (2019, 20 février). La grande université humaine [Vidéo en ligne]. Repéré à : https://www.youtube.com/watch?v=mbkI4qu4uQ4

## ABOUT THE NSERC CHAIR FOR WOMEN IN SCIENCE AND ENGINEERING (QUEBEC)

The overall goal of the NSERC Chair for Women in Science and Engineering (Quebec) is to increase women's participation in science and engineering in Quebec. To achieve this goal, the Chair has divided its program into two components: an activities component and a research component.

The general objective of the activities component is to break down the often unconscious and unintentional barriers that girls and women face at various times in their lives and that limit their access to enjoyable careers in science and engineering.

The general objective of the research component is to analyze the current status of women in science and engineering in Quebec, and then evaluate potential solutions to help them to advance in these fields.

In the activities and research that it plans to carry out during its first term, the NSERC Chair for Women in Science and Engineering (Quebec) will pursue the following specific objectives:

1. Demystify science and engineering;
2. Raise awareness of the impact that careers in science and engineering have on society;
3. Present women currently working in science and engineering as role models, to counter stereotypes;
4. Provide tools to support women who have chosen careers in science and engineering, and sensitize the settings in which they work;
5. Support science and technology teachers in primary and secondary schools;
6. Understand and report on the status of women in science and engineering in Quebec;
7. Develop strategies for recruiting and retaining female science and engineering students and professors in Quebec.
