

**CALL FOR RESEARCH PROPOSALS**  
**Canadian Federation of Business School Deans**  
**March 20, 2019**

The Canadian Federation of Business School Deans (CFBSD) invites proposals for research that addresses the interface between business education and STEM (Science-Technology-Engineering-Mathematics) education. The research study (or report) must be conducted within the context of achieving equity, diversity, and inclusivity principled outcomes.

It has been widely reported that Canada faces a shortage and demographic imbalance in STEM education. According to the Conference Board of Canada, the number of STEM graduates per hundred thousand population in Canada is among the lowest in its OECD peer group<sup>1</sup>. Recognizing this, the government of Canada has identified it as a major education policy priority, particularly with respect to choices made by young women<sup>2</sup>.

Indeed, the global competitiveness of a society is said to be a function of STEM education (Drew, 2011). STEM education impacts the development and implementation of new technologies that create state-of-the-art products, services, and processes. These improvements, when implemented, have a positive impact on the quality of life and on the economic, social, and environmental health of our Canadian society.

However, the full value of STEM education can only be realized if it is complemented by business education. The journey of an idea from the laboratory to the market passes through a commercialization process which needs knowledge, skills, and attributes like entrepreneurial mindset, knowledge of legal, marketing, and financing to name a few. The CFBSD applauds the STEM education priorities, and at the same time feels a responsibility to draw attention to the need for expanded education in developing business and management skills.

While we know that STEM education needs to be complemented by business education there are issues that need to be better understood. How is STEM education enhanced by business education to give action and direction to the outcomes that impact the competitiveness and well-being of Canadian society? How can, or should, STEM and business education be better integrated? How does, or can, the business education fraternity support STEM education or adapt to changes in STEM education and technologies? What are the best practices in developed economies? What are the challenges in bridging the gaps and what are the integration strategies? What are the social considerations – gender and social equity, changing demographics and inclusivity, structural issues, and regional imbalances within the Canadian higher education system?

Some interesting areas that need attention are the identification and understanding of programs and support systems that bring business knowledge and support to STEM programs.

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<sup>1</sup> <https://www.conferenceboard.ca/hcp/provincial/education/sciencegrads.aspx>

<sup>2</sup> <https://www.ic.gc.ca/eic/site/013.nsf/eng/home>

One such example is the complementarity of the national science foundation (NSF)<sup>3</sup> program and the JOBS<sup>4</sup> Act in the United States. These programs create and support the need for STEM students to develop business skills (Winkler, Schweikert, Troudt, & Schulman, 2015). How are research parks, business partnerships, and technology transfer programs helping STEM students gain business skills?

Another area of interest is the interface of business education for STEM students. While business minors and dual degrees are the well-known opportunities, what are the other interfaces and opportunities (Roos, 2015)? What is the impact of such an education? How often do STEM students engage in these opportunities? How well do university entrepreneurship initiatives e.g. Hunter Hub for Entrepreneurial Thinking at the University of Calgary, help the business orientation of STEM students? Finally, what are the antecedents, enablers, and contexts, which affect the different demographic heterogeneities?

The proposed research should seek to improve our understanding of the interplay between STEM and business education. Perspectives from different disciplines are welcome. We also encourage evidence-based reports that have recommendations towards this objective.

#### **Submission Guidelines:**

This call is part of the Canadian Federation of Business School Deans (CFBSD) initiative to optimize the value of STEM education through business education to derive the best value for Canadian society.

You are invited to submit a research proposal including on any of the above or related topics. The proposal should clearly indicate the topic of interest, the interface between STEM and business education, and any demographic issues addressed. We are welcoming any and all disciplines, methodologies and frameworks.

#### ***Important Deadlines:***

Research study proposal	April 15, 2019
Award of grant	May 31, 2019
Report submission deadline	December 31, 2019

#### ***Grant value:***

The CFBSD will provide a financial award of \$10,000 to the successful proposal, \$5,000 upon award, and \$5,000 following receipt of the full report, subject to terms and conditions as outlined in the agreement with successful candidate.

For any queries please contact Tim Daus, Executive Director of the CFBSD at [daus@cfbsd.ca](mailto:daus@cfbsd.ca)

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<sup>3</sup> [https://www.nsf.gov/news/special\\_reports/i-corps/index.jsp](https://www.nsf.gov/news/special_reports/i-corps/index.jsp)

<sup>4</sup> <https://www.sec.gov/spotlight/jobs-act.shtml>

Reference:

Drew, D. E. (2011). *STEM the tide : reforming science, technology, engineering, and math education in America*. Baltimore, MD: Johns Hopkins University Press.

Roos, J. (2015). Bringing business schools into the STEM era. *Global Focus*, 9(3), 32–36.

Winkler, C., Schweikert, C., Troudt, E. E., & Schulman, S. A. (2015). Infusing business and entrepreneurship education into a computer science curriculum-A case study of the STEM virtual enterprise. *Journal of Business and Entrepreneurship*, 27(1), 1–21.

**Guidelines for proposals for research that addresses the interface between business education and STEM (Science-Technology-Engineering-Mathematics) education.**

Please refer to “CALL FOR RESEARCH PROPOSALS, Canadian Federation of Business School Deans, March 20, 2019” for specific details on project subject.

Proposals should be 3 to 5 pages maximum, exclusive of appendices, and should be organized in the order described below.

**Proposal Abstract**

Resume (approximately 50-80 words) of research focus, objectives, methodology, and primary deliverables.

**Proposal Summary**

Primary researcher’s name, contact information, and credentials.

Proposal title.

Explain how, in your view, this research will support the CFBSD overall mission to expand the organization’s knowledge and understanding of the issue.

How could the report be used to further our knowledge and understanding of the problem in a way can be of value to CFBSD, its members and important stakeholders in the Canadian management education sector?

**Research Description**

There are a number of issues addressed in the call for proposals document. Please describe the particular approach you would choose for this research. What would be the focus of the research? What is your understanding of the key issues? Why is this topic important?

**Methodology**

Describe your proposed methodology and explain how it will answer or lead to a better understanding of the research problem.

**Expected Results / Deliverable Description**

What do you see in terms of length of final document?

What information would be included and how does this coincide with the proposed methodology?

**Timeline for completion**

Proposals will be reviewed by a committee in May 2019, with an intended award decision to be made by May 31, 2019.

Deadline for final report is December 31, 2019. Information on expected progress reports and other details are to be negotiated with selected candidate before final award is granted.

**Appendices**

Curriculum vitae of researcher

**Submit proposals via email to:**

[daus@cfbsd.ca](mailto:daus@cfbsd.ca)

**For more information contact:**

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