

## Sharing the science of early childhood development through an online learning tool

Today, both the national and international editions of the Science of Early Child Development resource are in high demand.



Throughout his life, CIFAR founding President [Fraser Mustard](#) was an active proponent of the importance of the early years. Mustard spoke widely regarding the emergence of exciting new scientific research linking early life experience with long-term health outcomes.

A group of individuals in the Community Services Program at Red River College (RRC) in Manitoba recognised the relevance of the new findings to individuals working with children on the Front line. Unfortunately access to emerging scientific data was difficult and existing text-based resources were dated. The RRC team envisioned the development of an online resource entitled the [Science of Early Child Development](#) (SECD), a “living text book” dedicated to disseminating key research findings and concepts related to child development in an expedient, interactive and

engaging way. The development of a proposal conceptualizing how this might be achieved was assigned to Janet Jamieson, an instructor in RRC’s Early Childhood Education (ECE) Department. While conceived with the ECE curriculum in mind, the team knew the SECD tool had the potential to be of value to a much larger knowledge user community. With this in mind, the online nature of the resource was critical as it increased geographic accessibility, decreased expense and made it easy to stay current as new research emerged.



Videos of CIFAR EBBD program researchers were created to describe scientific concepts. Above, Marla Sokolowski, Co-director of CIFAR's Child and Brain Development program (formerly EBBD) explains genes.

#### CIFAR Contribution:

Inspired by his advocacy for the importance of the early years, the RRC team approached Fraser Mustard in 2001 to discuss the concept of the SECD and the need for credible scientific content. Enthusiastic, Mustard connected RRC to two key groups: the University of Toronto's Atkinson Centre for Society and Child Development and CIFAR's program in Experience-based Brain and Biological Development (EBBD, now called Child & Brain Development). Dan Keating, then director of the Atkinson Centre, was excited about the SECD. He hoped it might reduce the 15-year gap between research and practice that existed at the time. Under the guidance of Jane Bertrand, the Atkinson Centre established a lasting partnership with RRC in the development and delivery of the SECD.

In addition to facilitating the partnership between the two institutes, CIFAR's most significant contribution to the SECD was the provision of expert scientific content. Recognising that an EBBD program meeting represented an ideal opportunity for RRC to have access to a group of world renowned experts in the area of child and brain development, the CIFAR fellows invited the SECD team to their 2004 meeting in Vancouver. While there, the SECD team interviewed and videotaped program fellows about key scientific concepts and emerging research. The meeting also prompted invitations to visit the labs of nearby EBBD fellows, enabling additional interviews and footage of the lab environment and experimental approaches. According to Jamieson, these initial clips served to shape much of the way the SECD content was driven. In 2012 the SECD team returned to another EBBD program meeting to interview additional researchers and gain updates on existing and emerging research.

Jamieson says "We are still using the CIFAR interviews extensively in every version of the SECD. The EBBD group has been key for us in terms of generating the kind of research that we want to make accessible to wider audiences...we've appreciated the openness so much. It's been a vehicle for taking that work and some of their ideas all over the world." More than 15 EBBD Fellows or Advisory Panel members are featured in the SECD. According to Jamieson, "Fraser [Mustard] linked us to the CIFAR EBBD group and that was just fantastic because that opened up doors to some of the very best researchers in the world in this area."

#### Outcome:

The potential of the SECD was quickly recognised by the Lawson Foundation, which awarded RRC a grant to develop and deliver the resource as part of the Foundation's Beginning Years early child development grantmaking program. First made public in 2005, the SECD is an accessible, online, multimedia, core curriculum resource which provides up-to-date and easy to understand information regarding the impact of early experience on brain development and lifelong trajectories of health, learning and behaviour via five key modules: Brain development, Coping and Competence, Communicating and Learning, The Ecology of Childhood and Developmental Health. To help learning "come alive" the SECD engages users with a variety of innovative knowledge transfer methods including games, videos, interactive activities, pop up readings, interviews, case histories, audio clips, web links and suggested questions for discussion. The SECD is used by a variety of knowledge users including professionals, instructors, workshop facilitators, professors and students.

#### Resource Reach:

Having seen the SECD team present at a conference, The World Bank's Lead Child Development Specialist Mary Young was keen to internationalize the resource, noting, according to the Lawson Foundation, that the SECD resource "broadens and enriches our knowledge base about the importance of early child development. It is a gem. It is a must for every undergraduate and postgraduate student undertaking studies in social science and human development." Initial support from the World Bank and an ongoing partnership with the Aga Khan Foundation funded the development of an international edition of the

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Janet Jamieson, RRC

SECD, adapted for use in a variety of global contexts.

#### National Impact:

The SECD has impacted ECE training curricula in Canada as many colleges use it as a core resource and has profoundly affected how students think about child care and child development. Early in its development the Manitoba provincial government provided the SECD to all licensed child-care centres, family child-care homes and nursery schools. It also asked RRC to create an online introductory course for the SECD, which qualifies for the introductory 40-hour training session that Manitoban Child Care Assistants must take. According to the SECD website, one course user said “I knew early development was important but now after finishing this course I can see how crucial it is to all areas of development.” The SECD is also used as a curriculum tool at the undergraduate and graduate level at the University of Toronto, as part of a DFATD-funded, joint-Aga Khan University Honours course in evolutionary biology and as part of the Flex-PhD program in the Department of Human Development and Applied Psychology at the Ontario Institute for Studies in Education. University of Toronto’s Fraser Mustard Institute for Human Development (FMIHD) also uses the SECD in a PhD-level course entitled Pluralistic Human Development, which is part of the Collaborative Program in Human Development. The FMIHD has also asked the RRC to create a new learning module dedicated specifically to pre-natal development.

#### International Impact:

The SECD has also had a significant impact on raising awareness regarding the importance of the early years and in changing curriculum approaches abroad, particularly for those who may have otherwise faced social, geographic or financial barriers. According to the SECD website, one user based in Mombasa, Kenya said of the international edition “With access to world-leading scholars and researchers, it gives a global vision in linking science to early child development as an integrating approach to enhancing human development...when I get to read the resource, I never want to quit.” Course participants include individuals from over 21 countries, many at the senior management level.

As in Canada, the SECD has also been adopted as a core curriculum resource in select universities in the United States, Bangla-

desh and Pakistan. International students also use the SECD as an advocacy tool or as a supporting resource for government briefs. Wanting to develop a common base of knowledge throughout their network, the Aga Khan Foundation provided funds to support the development of an online training course based on the SECD, but which provides a more international context, as facilitated by footage in Egypt, East Africa, Afghanistan, Tajikistan, Pakistan and Bangladesh. The Bernard van Leer Foundation also funded additional filming in Cuba, a follow up to Fraser Mustard’s strong interest in Cuba’s integrated early developmental health programming. To further enhance global applicability and use, RRC also developed short off-line modules (with plans for translation into Arabic, Portuguese and Swahili, amongst others), which are used in face to face training as a complement to the SECD resource. With funding from the Conrad N. Hilton Foundation, RRC, in partnership with the Aga Khan University, has also taken on the creation of a specialised module to help train individuals working with children affected by HIV/AIDS, in order to develop a common knowledge base.

#### Conclusion:

Part of CIFAR’s mandate is the creation of transformative knowledge. CIFAR is proud of the role it has played in the development of the SECD and in its continued contribution to SECD scientific content. The adoption of the SECD as a key educational resource in ECE curricula nationally and internationally has maximized the impact of research by enabling the rapid mobilization of scientific knowledge from the laboratory to the classroom. The innovative methodologies employed in the SECD to convey these scientific concepts serve to enhance teaching and learning capacity, increasing the knowledge and skill set of early childhood educators and ECE training organisations. The continued dissemination of SECD content has an enormous potential to enhance implementation of best practices and societal health and well-being. This success story exemplifies the types of outcomes that motivate CIFAR programs: great minds from a variety of backgrounds coming together to utilize their expertise for the betterment of society.

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#### For more information:

[www.cifar.ca/child-and-brain-development](http://www.cifar.ca/child-and-brain-development)

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Course user in Mombasa, Kenya

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