Igniting health consciousness in elementary school children and their families

Dr. Danielle Batttram is taking her research beyond academia and contributing to the London community. Batttram, an associate professor in the Division of Food and Nutritional Science at Brescia, has created “Nutrition Ignition” a school-based obesity prevention program focused on healthy eating and physical activity. The Children’s Health Foundation and Goodlife Kids Foundation fund the program, which focuses on fun and play while teaching students from Grades 1-8 about healthy eating and being active. The program is currently being implemented at St. Robert Catholic School. “The most important part,” Batttram says, “is that we are engaging an entire school community. We are shifting the school culture towards a healthy lifestyle.” Batttram, however, doesn’t take all the credit. “St. Robert Elementary School was already doing so much. We have built on their existing initiatives and they have welcomed us with open arms.” What Batttram says she’s doing is helping the community come together to better serve the needs of children and their families.

“The old saying is true – it takes a village to raise a child,” says Batttram. “In essence, we are enhancing the capacity of the entire school community.” The program incorporates everyone – teachers, staff, students, and, most importantly, parents. “There is a unique bi-directional influence between children and the adults in their lives. It is one thing to get children interested in eating healthy and being active and then have them, in turn, influence their parents and teachers. But adults also need to role model for the children.” This program has done well to accomplish this so far and has received positive feedback from the school board, teachers, parents, and students alike.

“Nutrition Ignition” is also providing opportunities for students in the university community to expand their education. Both undergraduate and graduate Food and Nutrition students at Brescia, and Kinesiology students at Western University, are being given the opportunity to participate in field placements, gaining valuable experiential learning opportunities while participating in research.

For the future, Dr. Batttram would like to see “Nutrition Ignition” continue to evolve. “Our partnership with St. Robert has been overwhelmingly positive and together we continue to find innovative ways to make the program better. My hope is that the lessons learned at this one school will enable us to expand the program into other school communities. Our goal is simple – to create a culture that supports healthy eating and physical activity for as many children and families as possible and to do so in the most sustainable ways.”

From Computer Hackers to Old Order Mennonites: A Qualitative Approach

Dr. Steve Kleinknecht is fascinated by the social world and says, “Everyone has an interesting story to tell. Acknowledging and respecting that people have a desire to be understood and appreciated are key to how I conduct my research.” While Kleinknecht recognizes and appreciates the value of quantitative research, he prefers the qualitative approach, taking a highly active and participatory role in his research and immersing himself among those he studies. This approach is seen clearly throughout his research, most specifically in his examination of computer hackers and Old Order Mennonites. One might ask how these two seemingly opposite groups could possibly be related. Kleinknecht, an assistant professor of Sociology at Brescia, says the connection is simple. “They are both subcultures – microcosms of larger society.”

In his research on hackers, Dr. Kleinknecht set out with the purpose of gaining access to a subculture that had, thus far, maintained an air of mystery when it came to social research. Society has a definition of hackers as computer criminals. Kleinknecht discovered, however, something that was very different. The groups he interviewed and spent time with simply did not fit the bill. He learned that curiosity, not crime, characterizes the subculture. “They are interested in how things work and how they can be improved” he says. Hackers and the media are caught up in a definitional war – the mainstream definition of what it means to be a computer hacker was at odds with what Kleinknecht was witnessing. The reality, he discovered, was that the self-defined “true” or “old school” hackers he was meeting were...
innovative thinkers – the epitome of ingenuity and hard work. They look for a problem and find a way to fix it.

Dr. Kleinknecht studied the Old Order Mennonites in a similar fashion. His grandfather had a good history with the community, and by building on this personal connection he was able to gain access. Typically, researchers talk about social contact as the cause of assimilation and integration into a host society. Kleinknecht, however, felt this painted an overly simplified, deterministic picture of how change happens; human society isn’t that “neat and tidy; there is no black and white.” Thus, he began to consider the social nuances of how the Mennonites are able to keep themselves separate and avoid assimilation into the modern culture. What he discovered is that the Old Order Mennonites engage in a variety of everyday practices to preserve their culture, and these practices fall into three broad categories. The first is social distancing. By “insulating” themselves from the outside world with their unique language, clothing, and self-presentation they create symbolic boundaries. They isolate themselves, in the most literal sense, through their geographical location and their social institutions. The second method of preservation is social control within the community. Religious leaders, in conjunction with members of the community, “ prescribe” change by controlling what is acceptable and unacceptable to their way of life. The third and final practice involves constructing and reinforcing an ideology that characterizes their lifestyle as sacred and worthy of preservation. Kleinknecht concluded that appreciating how the Old Order Mennonites actively attempt to maintain separation – in all its forms (geographical, social, psychological) – was the key to understanding the preservation of their culture.

Currently Dr. Kleinknecht is continuing his work on the Old Order Mennonite community in his paper “Prescribed Change,” which discusses how social control is used to manage change among the Old Order Mennonites. He is also working with his mentor, William Shaffer, on a comparison between the Old Order Mennonites and the ultra-Orthodox Jews on cultural continuity. Throughout all his research, Kleinknecht emphasizes the value of qualitative methods, saying “to develop a science of social change, we need to consider the participants’ perspectives. In doing this, the groups he researches never fail to surprise him. With his hacker research, where he expected to find simplists, he found innovators. Where he expected to find simplicity in the Mennonite tradition, he found complexity similar to that in modern society.

New technology leads to a new understanding of navigation

Using fMRI technology, Dr. Jennifer Sutton is considering the brain processes that occur during navigation in a whole new way. Traditionally, studies like this one are done behaviorally in labs. By using virtual reality software and fMRI technology, an enhanced MRI process that measures brain activity by monitoring changes in blood flow to different parts of the brain, Dr. Sutton and her colleagues at Western University and Temple University are able to accurately pinpoint which parts of the brain are active during navigation. “Navigation, getting from point A to point B, is actually the product of many different cognitive processes. What looks simple is actually quite complex,” says Sutton, an associate professor of Psychology at Brescia University College. This study focuses specifically on one aspect of navigation – reorientation.

In an initial study, Sutton created a virtual reality task in which participants were first asked to view the location of a traffic cone in a virtual room. Next, their orientation in the room was disrupted by darkening the screen and, once the room reappeared, having the participant face a randomly determined direction. Finally, participants put the cone back in the same place they saw it before. This task was done in three different virtual rooms. The first room had participants use room shape (geometry) to identify the correct location. The cone was placed in the centre of a rectangular room and, using wall lengths, participants could identify which corner the cone should be moved to. The second room used what Sutton called a “feature” – a single red wall in a perfectly square room. Participants could then use the position of the red wall to place the cone. The final condition used a combination of geometry and feature, with a red wall in a rectangular room. Sutton found that when a feature is present in the room, there is increased activity in the hippocampus, an area of the brain known to be involved with spatial processing. “Psychologists knew that the hippocampus is involved in spatial processing, but before this, we didn’t know how it worked during reorientation.”

Intrigued by the findings of the initial study, Sutton and her colleagues developed a follow-up study that considered activation in the brain when only geometry is considered. The task remained the same in this study; however, room shape was indicated in three different ways – using four walls, four pillars forming corners in an open space, and a rectangular floor without walls. The findings indicated that adults are able to accurately replace the cone in each of the conditions, but brain activity between them differs. The hippocampus is more active in the condition where pillars form the room shape. Sutton believes this is related to the important role the hippocampus plays when remembering configurations of objects.

It is apparent that reorientation is significantly more complex than it appears and involves a number of cognitive processes that psychologists are still trying to understand. Sutton continues to expand the knowledge in the field through her innovative approach to research.
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For the future, Dr. Battram would like to see “Nutrition Ignition” continue to evolve. “Our partnership with St. Robert has been overwhelmingly positive and together we continue to find innovative ways to make the program better. My hope is that the lessons learned at this one school will enable us to expand the program into other school communities. Our goal is simple – to create a culture that supports healthy eating and physical activity for as many children and families as possible and to do so in the most sustainable ways.”

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