

Headwaters: The Next Stage in High School Integrated Programming

by Michael Elrick

Background

For 12 years, Centennial High School in Guelph has run an integrated program called the Community Environmental Leadership Program (CELP). In 1995 the program was offered at the grade 11 level and involved the following courses: Environmental Science, Environmental Geography, Outdoor Education (Physical Education) and Personal Life Management (Guidance). The program ran successfully in the second semester for seven years. In 2001, with the high school system being modified to fit into a four-year model, and the elimination of the environmental science and geography credits, a decision was made to move CELP to the grade 10 level. The following four courses were chosen to make up the package: Academic English, Careers and Civics, Outdoor Activities and Interdisciplinary Studies. The program was also expanded to run during both semesters and officially began to draw students from four Guelph-area high schools.

As part of the curriculum of CELP, high school students teach the three-day Earth Education Program "EARTHKEEPERS™"¹ to grade five students from our school board. This was modeled for us by the Bronte Creek Integrated Project of the Halton board. In 2006, the grade 12 program "Headwaters"² was initiated and offered the following four courses: Environment and Resource Management, Canadian Literature, Outdoor Activities and Interdisciplinary Studies. In 2007 the credit of grade 12 university English replaced the Canadian Literature credit but the latter is still offered to those students who wish to take it. Headwaters runs concurrently with CELP and both programs take place at the same off-site campus, 15 minutes from town. One teacher is designated for the three credits in CELP, one

teacher is designated for the three credits in Headwaters, and one teacher is designated for the two credits for the English courses of both programs.

Introduction

My intention with this paper is to share the origins of the grade 12 Headwaters program and provide a brief outline of the program's curriculum and methodologies. I will argue that integrated courses offer a sustainable solution for keeping outdoor and environmental education alive in our school boards and will provide reasons for this.

The Beginnings

The first water molecules of the Headwaters program were created by a student of mine in 2001. He was enrolled in a two-credit senior co-op placement with the grade 10 CELP program. One day he casually suggested that I should offer another program, but at a higher level. He then proceeded to rhyme off four courses that he thought would be a good fit and started organizing how it would work. I brushed it off at first, but like all good ideas that spill, I had trouble wiping it off. I, too, started assembling different course packages and imagining the possibilities. I believe I was interested for a couple of different reasons. One, the maturity of students at the grade 12 level would allow for a greater depth of experience, inquiry into issues, and level of community building. Second, I felt more than ever that this type of education, guided by themes of environmental sustainability and community, was of utmost importance in our world today. One afternoon I casually mentioned the idea to my colleague Janet Dalziel who teaches the English course in CELP. It was at this point that we eddied out

into the main current and the idea really started to flow. Every moment the two of us would meet, the discussions were always of imagining the possibilities. "If we had this credit, we could do this!" or "Logistically, how would this work with two simultaneous programs at the same site?" But the discussions kept going, and one day I said to Janet, "Even if this never gets off the ground, it's still been fun thinking about it." But by the fall of 2004, when the calendar was being designed at our school for the next year's course selection, we floated our Headwaters proposal to our principal. She was initially supportive, and said that we would have to get it passed by the department head group. As I had experienced this process before, I knew I had to approach all the specific departments involved as well as spread the word to others for support. There are two challenges that constantly face our integrated programs: 1) Getting others to accept that these courses can be taught outside the existing conventional classroom format, and 2) Teaching the courses to the standards necessary to launch these students to the next level, whether that be grade 11, university or college. In our favour was the reputation and standard that we had worked hard at achieving in our grade 10 program. Woven in, as is typical in a community, was the fact that several of the department head's children had participated in CELP. At the meeting, the proposal met with support and concern, but in the end it was agreed that the Headwaters integrated program would enter the course calendar. The next challenge would be to sign up enough students. By the end of March 2005 we achieved that goal and with that, the principal allocated the staffing units toward the program. The first Headwaters program was launched.

Some Program Specifics

I have always described our program as simply "school." We teach curriculum courses outlined by the Ministry of Education. We are certified teachers hired by the public school

system, and we support students to continue to play sports or music with their home schools. Our integrated programs are not intended to exist in isolation, but rather to support and enhance the educational possibilities for those in our community. The skills and lessons we impart are meant to be "taken back" and used in each student's home school, university or college.

The overall theme of the Headwaters program is *A Journey to the Source*. We attempt, metaphorically, to journey farther upstream, to the source of environmental and community problems, and to the source of solutions for a sustainable future.

Food is a topic that is explored in depth and used as a vehicle to accomplish much of the curriculum for several courses. Every Friday the students are responsible for designing a meal for the entire class using the principles of locavores.³ Using a local online delivery service⁴ that specializes in locally grown and organic foods, the students order their ingredients on Monday, delivery takes place Thursday, and lunch is made for Friday. The delivery company lists beside each of its ingredients whether the product is organic and/or locally grown, and where the product comes from. My assignment allows them to order only locally grown products (mostly from Southern Ontario) and asks them to calculate their food mileage for each meal. This is calculated as a basic estimate by averaging the food mileage of each item, excluding spices. (There are more complex formulas available for doing this that account for the type of transportation used to deliver the food item for sale.) Our first meal in February, for example, was maple parsnip soup and sweet potato quesadillas. This assignment also encourages students to start their own connections locally. For example, one student knows an egg farmer; another knows a beekeeper who produces honey. The main purpose is to reduce one's ecological footprint by lowering food mileage and to make the connections to healthy agricultural lands, local farmers and good tasting food!

In March we make maple syrup with a small 50-bucket operation. It is the first “harvest” from the land with our own hands. In conjunction with this we are piloting this year a grade one education program called “MapleKeys,” which will be taught by the grade 12 students and will meet four main objectives of the grade one Science and Technology curriculum.

At the end of March we start, in a small, makeshift greenhouse, seeding a vegetable garden where we will grow our food to use weekly, and to share with our parents at a closing celebration meal in late June. As well, fall crops will be sown in order that the following year’s class can utilize the bounty for their locavore meals in the winter and spring. This involves digging, double digging, planting, weeding, fertilizing and harvesting. In mid-May we transfer the plants from the greenhouse to the garden and also help some plants along with cold frames. This year we hope to have a few chickens to obtain eggs from, and more importantly, to demonstrate the soil cycle by making compost from their manure. We have some perennial rhubarb plants and often our first tastes of spring come in the form of rhubarb pie sweetened by maple syrup. Soon there is salad and spring squash. Living locally is an overriding principle of the Headwaters program and food is our entry point to the curriculum objectives.

Three overnight experiences take place in Headwaters. Initially there is a six-night winter camping trip in Algonquin Park. This trip uses traditional travel methods of snowshoes and toboggans, and the students sleep in large canvas tents with portable woodstoves. In early May there is a one-night solo on the property. At the end of the course there is a three-night canoe trip that takes place on a local river and celebrates our bioregion. For each experience, the students are involved in a craft that prepares them for the wilderness journey. For the winter trip, they sew snowshoe moccasins using elk hide purchased from a local farmer. For the solo, they build

their own shelters using traditional wigwam-building techniques. And for the canoe trip, they carve their own paddles from wood that we have milled from the property. This year we are piloting the making of wooden toboggans for the winter trip.

The university-level English course takes place on a daily basis in a classroom setting. The curriculum initially involves reading essays by authors such as Sigurd Olson, Henry David Thoreau and Sharon Butala. Students read a novel and write an essay through an independent study unit. We read the book *True North* by Elliot Merrick, which ties into themes of traditional winter travel. A third of the book is actually read in tents during the evenings in Algonquin Park. The play *King Lear* by William Shakespeare and the novel *No Great Mischief* by Alistair MacLeod are studied in depth. On a weekly basis, the students give seminars that we have titled “Voices.” For example, we have three seminars titled “Voices of Algonquin Park” prior to our first overnight trip. In late May we move our classroom to the City of Guelph and interview local citizens who are making a difference in our community. These interviews are written up and published in a small book, similar to a cultural journalism project. The students also keep journals and attempt to capture their own voice as we journey through the course.

The concept of “peak oil” is a main theme for much of our lectures delivered as part of the Environment and Resource Management course. We look at the history of the use of energy by humans, and the transitions from wood to coal and from coal to oil. We define the theories of Hubbert’s Peak, and the world peak of oil. We look at the impacts of our carbon-based energy uses such as the enhanced greenhouse effect and global warming. We envision what society will look like in a post-peak oil world and experiment with solutions of renewable energy, conservation of energy and living locally. We read from essays from James Howard Kunstler, author of *The Long Emergency*, and Paul Roberts, author of *The End of Oil*.



The Hero's Journey

Running in series with our Headwaters journey is a framework of the hero's journey as described by Campbell (1973) and summarized by Vogler (1998). According to Campbell, the hero's journey is an archetype of experience that resonates with the inner being of all humans. It is a journey with defined stages that ultimately leads a person home. For the Headwaters students, the *call to adventure* stage has already occurred, just by their signing up for the program. The *crossing of the first threshold* stage is the initial winter camp wilderness trip. This is a journey to the "special world" that Campbell writes about, and our hope is that the students sense the special-ness of the world in a setting of natural integrity. Several stages later, the *journey to the innermost cave* is the solo experience when ultimately students must face their own fears and thoughts at night time. After the solo comes the *seizing of the sword* stage; at this time

students are given a blank piece of cedar wood that, using a spoke shave, they will fashion into a paddle allowing them to journey "home" in the final stages. The *return with the elixir* stage is an upstream paddle and hike to a spring-fed pond that is the source of the small creek that flows through our off-site school property. The water literally can be seen bubbling right out of the ground through the disturbance made to the mud and debris at the pond bottom. We fill a glass jar of this pure spring water and toss it on a woodstove that evening in a self-made sauna in order to cleanse us before returning to our communities. The next day we literally paddle home by canoe via Blue Springs Creek and the Eramosa River to Guelph. We have been to "the source" and now it is time to go back. The key part in the hero's journey, and one that Loynes (2004) argues is missing in many educational journeys today, is this final stage of returning home in order to contribute positively to one's community. We finish with

a final locavore meal and slide presentation with our families in the City of Guelph.

A Sustainable Model for Delivering Outdoor and Environmental Education

It has been a difficult time for many of us in the outdoor and environmental field for the last 15 years: outdoor centres, one after another, have closed down; outdoor education teachers have been eliminated or replaced with those in lower paid positions; environmental courses and content have been cut from the curriculum. Over the same time period, however, we have seen the growth of integrated programs with outdoor and environmental focuses. And many of these involve the teaching of elementary environmental programs by the high school students. Is this perhaps a model for “keeping the message alive” within our school system? Is this a sustainable model for years to come?

I believe that integrated programs have two significant factors in their favour: The first is that integrated programs do not lie outside the main staffing formula. In other words, the teacher’s salary is paid because these courses are simply high school credits. If the teacher was not teaching them in the integrated program, they would be teaching them back at their home school. When budget crunches come, school boards always look for what they can cut outside of the main formula. With integrated programs, there is no double staffing, there is nothing to cut, there is no “outside.” As well, many integrated programs have worked hard at not asking anyone for too much money. In our programs, we try to raise 80% of our own funds. We receive a regular school course budget and a small amount from an environmental committee of the board, but most comes through student fees and revenue generated from the elementary programs. Again, when people ask me, “Haven’t they cut your program yet?” my response is, “What is there to cut?” I never thought that I would admit this, but the Mike Harris government taught me how to survive

through the toughest of educational tyrants. It is also the reason why I am careful to accept funds that would replace any of our funding sources, because as quickly as I have seen money granted, I have seen money cut. Our integrated program has been running steadily for 13 years and to date we have put through over 500 high school and 5,000 elementary students. Today, teachers in our school board have initiated three more grade 10 CELP programs, each teaching EARTHKEEPERS. There are times at our off-school site that we have 45 high school students, 80 elementary students, 10 parents and 6 teachers. No one is double staffed and it all takes place within the main funding formula.

An argument might be made, though, that to some extent, this model is a user-pay system. I agree and do not have a simple answer. I wish it could all be fully funded from core sources but I have been in the business of educational survival in chaotic times. Somehow, this is where I have ended up. In an attempt to deal with the user-pay issue, our school board has a policy that no student will be denied this program due to financial reasons and I make my best attempts to advertise this.

The second major factor in keeping integrated programs sustainable is to ensure that they dig themselves into mainstream curriculum and enable educators to develop longer-term contacts with their students. Integrated programs, by their nature, make a statement that environmental and outdoor education is woven into every course. It is not separate from, or on the fringes. It is right in the core. In this way, students recognize it as a part of their education. I also believe that having compulsory credits has helped solidify the sustainability of our integrated programs. This is the reason we include the English credits, the Careers and Civics and the Environment and Resource Management courses. Students today are under tremendous pressure to graduate in four years and are not able to take a semester of full electives easily. To date, I have had students who have completed the

grade five EARTHKEEPER program, returned as grade 10 CELP students, and then returned two years later for Headwaters. They still graduate high school in four or four-and-a-half years. I have journeyed alongside many students during their high school tenure. Some, I have also coached on the school volleyball team. And because I live in the same city as I teach, I run into my students all the time. There is much research today discussing the benefits of long-term facilitation between teacher and students (Beames, 2006). As well, the concepts of place-based education and *frilufsliv* (Faarlund, 2002) have been gaining momentum. I believe integrated programs follow these above principles well.

Final Thoughts

While integrated programs have been around in Ontario for many years, to date I have not come across any other two-stage high school program. I have offered a summary of Headwaters in the hopes of inspiring others to follow their own imaginations when it comes to educational possibilities. I have also offered some arguments for the place that integrated programs offer our education system when it comes to keeping the focus on outdoor and environmental issues. Finally, I sense a shift in the thinking of our human population when it comes to issues of environmental sustainability — a shift towards healing. In whatever shape or form it takes, I feel it is imperative that we educators do our part.

References

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Endnotes

- ¹ EARTHKEEPERS™ is a registered trademark and program of the Institute for Earth Education, Greenville, West Virginia, USA.
- ² The name “Headwaters” is widely known in the outdoor field as the business name for Hugh Stewart’s canoe manufacturing business in Quebec. The name Headwaters was first suggested by the CELP English teacher Janet Dalziel. Michael Elrick felt it was necessary to gain permission from Hugh Stewart to use this name, thus, a letter of permission was sent. Hugh Stewart responded that he has no legal authority over the use of the name, though he was grateful for being asked and sanctioned its use for our program.
- ³ According to the website www.locavores.com, locavores’ principles are as follows:
 - 1) If not locally produced, then organic.
 - 2) If not organic then family farm.
 - 3) If not family farm then local business.
 - 4) If not local business then Terroir (foods known from the region).
- ⁴ Homefield Organics is food delivery service that operates in the Guelph area. They have an online ordering system that lists whether a product is local and/or organic, and also where it comes from. For more information, visit www.homefieldorganics.com.

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