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Outdoor Education in Integrated Curricula

Bert Horwood

Bert Horwood is an Emeritus Professor in Education at Queen's University. He has retired to Prince Edward County, Ontario and hung up his paddles and skis. He relates this story from personal experience.

In 1991, the late Bill Patterson established an integrated program called Tamarack at Mackenzie High School in Deep River, Ontario. It combined credits in English, Outdoor Education and Environmental Science (Patterson, 1995). "Tamarack" is the short hand of the Tamarack Club, a program in which grade 11 and 12 students spend a semester together as a group with only one teacher. The Tamarack Magazine is the accompaniment to everything the students learn each semester the program runs and acts a great source of documentation for ... their accomplishments (School House Museum, 2020).

This chapter is a retrospective account of my research into Tamarack during its inaugural year (Horwood, 1994a). This introductory section will describe integrated curricula in general, report on the status of this and other programs, and outline the program I studied. I will then identify consistencies between the findings of my original research and the current program.

Integrated Curricula

In the 1980s, local school boards took advantage of flexibility allowed by the Province of Ontario to create integrated curriculum programs (Horwood, 1994b). These bundles of three or four credits sought to connect subjects more closely than before. One or two teachers were assigned to each bundle, and dedicated space was pro-

vided as required. Students and teachers were removed from the usual timetable rotation of classes and were thus together all day every day. Programs with an outdoor education credit were able to have as many as 40 days of outdoor work in a semester. Five-day trips to paddle, ski, hike, or climb were easily scheduled.

The late Mike Elrick started an integrated program called CELP (Community Environmental Learning Program, n.d.) that continues to be offered to Grade 10 students in Guelph, Ontario. At another Guelph High School, a Grade 12 program, called Headwaters is available. The focus of Headwaters is to study the physical, chemical, and biological properties of a stream in the Guelph area and write a report. The Hamilton Wentworth Board of Education has not sustained its earlier program that trained secondary students to instruct elementary grade students in the Sunship Earth curriculum (The Institute for Earth Education, n.d.). Since its inception, Tamarack has been offered for a total of 25 times (it runs either annually or bi-annually). The continued existence of Tamarack, CELP, and Headwaters after so many years marks these programs as impressive survivors.

Studying Tamarack

There have been two teachers of Tamarack since the founder retired. John Steer, now retired, and

Charles Sims, currently, both told me how the program had been adapted to reflect changes. One drastic shift came about when the Ontario Government reduced the years in High School from 5 to 4. Less drastic were additions and replacements to the detailed courses of study. Three or four of these had to be chosen to best fit student interests, the teacher's knowledge base and local conditions. Two curriculum areas persisted in the bundle: Outdoor Education, and others, like English that publishing a magazine would accommodate. The 2020 program included a new credit called "Indigenous Studies in a Global Context." The students decided to get permission to visit the Pikawàgàn (Golden Lake) First Nation, an Algonquin community, and to record and publish the stories of the people in the magazine that Tamarack students produce each year.

Three other issues influenced the way the program would run in any given year: One was the increasing public attention to safety as evidenced by qualifications and/or certification of leaders. Combined with the teacher's need for self-care, the staffing of outdoor expeditions demanded special arrangements. The strong municipal aquatic program in Deep River ensured that numerous students on a trip would have excellent lifeguard and first aid qualifications. On one canoe trip, the requirement that there be both male and female adults was answered by a pair of parents coming along. The degree of community support extended to parents and others providing canoes, tents, canoe trailers, and drivers as needed.

I was lucky to be able to study the first offering of Tamarack. It was rich in Outdoor Education, especially in combination with Environmental Science, and was well suited to my personal and academic interests. Having met the ethical requirements for research involving human subjects, and with the consent of the Renfrew County School Board and Mackenzie High School administration, I established a series of interviews with a sample of students, parents, and other teachers in the school. We recorded interviews on audio- and video- tape before, during and

after the program. The students gave me their journals to read, (with private entries covered) and I was a participant observer in several outdoor and some indoor events.

An ancillary source of data was the Trekkers Club at the school. For about fifteen years previously I had helped staff their white water canoe trips while being a researcher and a participant observer. One of my duties on Trekker trips was to record key events on movie film, or videocam as that technology became available. These, plus interviews and journals on trips, were useful back-up data.

The original data is now over thirty years old. It needed to be refreshed and confirmed. Consequently, Charles Sims kindly arranged with three recent former students (each from different years), two parents, and the previous teacher, John Steer, to give me both written information and a telephone interview. These contemporary inputs have reinforced the original data.

The first analysis in 1991 revealed four kinds of learning experiences which could be attributed to curriculum integration, by dissolving the boundaries between academic disciplines. Three additional attributes emerged when the research analysis focused on outdoor learning outcomes. These seven are:

1. complete process,
2. authenticity,
3. community,
4. student responsibility,
5. inescapable consequences,
6. personal growth, and
7. a sense of wonder.

Complete process

Complete process means that students saw many more steps than usual in their activities. A simple example is baking bannock on the trail. One can easily buy commercial tea-biscuit mix, combine it with water to make the dough, and cook it over the fire. The process is more complete if the students buy the ingredients separately and

combine them correctly. It would be impractical in this example to expect that outdoor education students would mill the wheat to make flour, but they might do, if the course was about cooking.

I witnessed a good example of a more complete process during a visit to the first Tamarack offering. The class was outside the school in a small bush lot clearing. One group was peeling bark off a black ash log. Another group was pounding on an already de-barked log. The log gave a musical note as each blow fell, one blow on every square centimeter of the wood. An adult man was speaking with a couple of others. He turned out to be a guest who had agreed to arrange for students to make ash pack baskets from scratch. It was hard work and they spelled each other off. The pounding caused the wood to split into long, very thin flexible strips. A beautifully finished basket was sitting there as a sort of model and, I supposed, target. I was observing the advantage of freedom from the timetable, and a much more complete process than if the strips had been provided. The process was not perfectly complete because the students had not cut down the trees, although they had seen them standing in the bush. But with that exception, from log to finished basket, they would perform the complete process.

Authenticity

Authenticity refers to the students' experience and conviction that they were doing real work. When they studied a frozen lake on snowshoes using home-made equipment, the contrived nature of the tools did not reduce that sense. In his evaluative statement after the first course, one student said

On this program you don't learn from one teacher, one textbook, you learn from everything. You learn from experience; you learn from observing, and asking questions; you learn from everything you do, and people you meet. This is what life's all about. You make friends, work together, you learn. You go into the world for half a year and just live life.

This student reveals his narrow experience of regular school as not being what he regards as reality. By contrast, being out of school for long periods of time he perceives as real.

The strange thing about this experience of reality is that students applied it equally to obviously contrived, fictional problems as much as to genuine ones. For example, the class was challenged to cross a shallow stream without anyone getting wet. Lunch was on the other side. After some debate they found a dead tree trunk, along which an athletic young woman walked, rope in hand, as far as she could. Then, spurred on by yells of encouragement, she jumped the remaining gap to the other side. She secured her end of the rope to a tree. At length everyone crossed dry-shod. What makes this remarkable is that there was a bridge across the stream, visible only 50 m. away. But the students still felt that their crossing was a piece of the real world. That is one of the reasons that simulations used in outdoor education work so well.

Community

The experience of community is found within the program as well as in the outer civic community. The original Tamarack students, as well as more recent ones, formed a close community during the months of the program. One student in the early program said

We began just as classmates and acquaintances ... but as the class went on we've gotten to know each other. And I know that even on some points on the trips I've had difference of opinion with some of you, and you know, we've had difficulties, but I feel that in each one of you I see a friend. I think you guys are a great bunch of people

This sort of declaration was often coupled with reference to shared difficult accomplishments such as "long portages with heavy packs, scaling a vertical rock face, and lighting a fire in the rain."

At the first only a few members from the civic community were involved. The teacher met with

parents as a group regularly to inform them and to hear any concerns. In turn, many parents provided practical support in terms of equipment, transportation and technical help on trips. As the program continued over the years, a larger and larger corps of involved adults formed. The regular publication of the students' magazine, featuring photos and interviews with local celebrities, became a source of civic pride. The current Tamarack teacher thinks it possible that every household in the town subscribes. Tamarack students as well as schoolmates from the Trekker Club held "work days" in the town, at which students did chores for citizens, like hanging storm windows, yard clean-up, repairs etc. and received donations in return. This was a very welcome service for many older people and provided funds for special outdoor program needs. The inner and outer communities are mutually supportive as all complex communities should be.

Student responsibility

Students in integrated programs had responsibility both for themselves and for others. Packing personal needs, including suitable clothing, for trips is an example of self-responsibility. It appeared in every aspect of the program from being prepared for the day's work to full-hearted participation on the ground. Responsibility for others is exemplified by having a climber on belay, or being the lead and rescue canoe in white water. But there is a strong dynamic between responsibility and community because as one's responsibility expands to include more people, it becomes part of the community — what the students call teamwork.

This was illustrated in a small group of four that I visited during supper on a nine-day canoe trip. They told me they hated their meal (Kraft dinner) because they had been eating it every day since day one. They explained that when they planned the menu for their food group every suggestion was vetoed by someone. The only thing all four could agree on was Kraft dinner. Now they could see that they should have tried harder, been less agreeable, or accepted that one person each day

would be unhappy with the food rather than all four being unhappy. And no other group was willing to trade with them.

A recent Tamarack graduate described discovering the importance of knowing when to assert leadership in group problem-solving situations and when to shift to a supportive follower role. He claimed that this was one lesson from Tamarack that was key to his success in launching a new career.

Inescapable consequences

Outdoor events have inescapable consequences attached to all decisions. Weather is the greatest threat. Careful, thoughtful preparations are perpetually required to cope comfortably and safely with wind, wet, heat and cold. After several seminars on packing to keep the contents dry in case of rain or canoe capsize, a Trekker leader, on the one-night shakedown trip, famously would have each student in turn toss their packs into the lake at the site where facilities were good to dry out. This encounter with the value of dry packing technique prevented many a more serious wetting.

Damage or loss of equipment also has difficult consequences. A broken ski, snowshoe or paddle stops movement until the loss is made good somehow. The commonest damage in my experience is a holed canoe. Students need training for repair of both canvas and plastic canoes.

Sometimes inescapable consequences were escapable earlier in time. The winter camp site of the first Tamarack had a dry sink for washing. Grey water drained into a large 4 or 5 gallon bucket under the sink. The students had a roster for daily kitchen work. When the bucket was only half full it was easy to skip emptying it. Same when it was three quarters full. Eventually it got too full to be emptied without slopping the contents about, requiring a tedious clean-up. Consequences that come naturally with an activity or decision, and cannot be evaded, are powerful teaching forces.

Personal growth

Personal growth usually doesn't happen in a sudden burst but rather by small increments. Past and recent Tamarack students report growing feelings of confidence and empowerment. A student of the original course put it this way in his final evaluative statement.

Just by taking this course each and every one of us dared to be different. And I think that's the way you grow. That's the way you expand yourself to the full extent. You also look at challenges in a new way. Now, I find if there's a challenge in it you don't look down on it; not that little voice telling you that, "I dunno if I can do it." You know? You know you can. You conquer your fears.

Teamwork, cooperation, and help: I never thought that we'd work so well together. It's pushing yourself to your limit. You often find that, many times, I've said. "Do I have limits? You know, even after 75 km bike riding, do I really? Is there a limit? Like, where is it? Far ahead!" You find out it's way further than you thought it was.

A parent of a recent graduate put it another way, [Tamarack] provides meaningful experiences that help them grow as individuals as well as positive influences in the community. This parent attributed growth to the outdoor experiences.

Over the years, the teachers recognized the value in having a class with a diversity of abilities and socio-economic backgrounds. In some years, there would be a few students with substantial bush and mechanical skills, but less academic abilities. There might be a "difficult" student, a person who did not easily make friends or have patience in group work and decision-making. Invariably there was mutual growth to improve the learning climate. In one dramatic case, a difficult student was not fully one with the class until the closing campfire when his skills, kindness and unobtrusive care of individuals was sincerely, gratefully, and emotionally described. Tears all round.

Sense of wonder

When both students and parents spoke to me about the personal growth they experienced, they often included a much deeper relationship with the natural world. This approaches what I call the sense of wonder. One parent wrote, "In my opinion,... our sons were able to grow a greater appreciation of nature and how we exist within it, as well as grow their individual spirit." Students recalled their feelings of wonder in journals and final statements. Some of their words follow:

What really sticks out in my mind is the Whiskey Jack. I think many people had it eat right out of their hands. It was great. I couldn't believe it. A bird would just come, land on your arm and eat from your hand. I'm sure I'll always remember it. I just can't imagine forgetting it. [Note: "Whiskey Jack" is a local name for a Grey Jay.]

One night a few of us were just lying by the lake and we heard some wolves. That was a really neat experience for me 'cause in my two [required] book reports I read books about wolves. And right from the first, I was really intrigued by them, really interested in them. And then to go out and actually hear them. It's a haunting sound.

Being in a snow cave at night is an experience in itself, totally quiet and dark, cut off and independent with nothing to do but sleep, think, talk or eat. I noticed that it's a great place just to lie and wonder.

Two of these examples happened at night. There were other statements about wonder-filled night experiences, such as watching the brilliant night sky sparkling on the snow-covered lake, and hearing a guest teacher read winter poetry. One perceptive student was struck by the incongruity of a remote lake's superficial beauty while its waters were so polluted as to require being purified. Other students marvelled at discovering sources of hidden strength and will within themselves. As one of the recent graduates said, "It touched

my heart to be so deeply aware of nature.” The sense of wonder is always wakened during multi-day encounters outdoors.

Conclusion

I’ve shown how prolonged outdoor education activities are made possible by integrating it into a curriculum package. The control of time and space provides an unprecedented richness of learning. The evidence is anecdotal. And to whatever extent acts of observation and analysis change the phenomena, these are skewed. My own tracks and biases are present. Some aspects of integrated curricula have not been explored. For example, running these programs requires extraordinary knowledge, skills and dedication from the teachers. I have simply taken all that for granted. In addition, there is very little information as to what extent the benefits gained by students persist into adulthood. Nevertheless, I remain convinced that Tamarack, and programs like it, are extremely beneficial to students. In the case of Tamarack, there is also no doubt that there is a greatly appreciated benefit to the community.

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