NICHE ADAPTATION OF INTERNATIONAL CORPORATE EDUCATIONAL PHILANTHROPY: A CASE STUDY OF INTEL LEARN IN CHILE

Denise Sauerteig  
SRI International  
Estados Unidos  
denise.sauerteig@sri.com

Isabel Obrien  
c/o SRI International  
Estados Unidos  
isabel.obrien@gmail.com

Abstract

Critiques of corporate philanthropy and technology transfer often are based on notions of mismatch with respect to target contexts, citing self-interest for donor agents and the unintended impacts on local communities, among other concerns (Michael, 2003; Porter & Kramer, 2006; Sharp, 2006; Steiner-Khamsi, 2008; Wulfson, 2001). In this paper, we dig deeply into the adaptive implementation of one corporate philanthropic effort sponsored by the Intel Foundation that represents, on the one hand, an extreme of centralized global educational offerings and, on the other, a model of effective transfer with support for appropriate and highly localized adaptation. This study examines social and contextual factors surrounding the implementation of the programs in multiple sites in Chile and uses a learning sciences framework to consider impacts on individuals and communities. We show that the digital inclusion, critical thinking, and collaborative learning goals of the program are met, though sometimes in ways unintended by the program sponsors. We also argue that the aggregate effect on the communities involved leverages the core and essential elements of the curriculum, training, and other aspects of the program, taking advantage of the opportunities Intel’s support and materials afford for social good.

Objectives and Theoretical Framework

Supports for learning how to use digital tools have been shown to be critical in increasing digital inclusion and providing the concomitant individual and social benefits associated with digital equity (Kozma, 2008; Michalchik et al., 2006). As with any new tool, learning how to use technology occurs most effectively in well-designed learning environments. Such environment generally include opportunities to address real problems or create real products; to build on the foundation of existing experiences that bridge of prior and new knowledge; and to create possibilities for further development and application of new knowledge (Bransford et al., 2006; Gutierrez & Rogoff, 2003).

The Intel® Learn Program fits squarely within these criteria: promoting the development of new technological skills in service to broader goals that connect to real-world issues and future possibilities for action (Michalchik et al., 2007). The program was designed to bring hands-on, computer-based learning activities to underserved young people ages 8 to 16 in informal, community technology settings throughout the world. To date, 1.2MM children have participated in the program. The program’s pedagogy, which represents a shift from the didactic “transmission” models of teaching, stresses the following approaches: thematic instruction, problem identification and solution, relevance to learners’ lives, active exploration, choice and autonomy, cycles of creation, collaboration and communication, authentic feedback, teachers as facilitators, and the use of 21st-century tools. Core strengths of the Intel Learn program are the vividness of its exemplification of progressive pedagogy and the wide adaptability of essential program elements across ages and contexts, making it a model for new forms of community-based and, even, grass-roots education worldwide.

Until recently, although evaluation studies had shown individual cognitive outcomes, no research had been conducted on life trajectory or community impacts of the program. In this paper, we focus our analysis on evidence of the types of benefits Chilean communities experience as a result of members participating in Intel Learn programs. We position these benefits in the context of the adaptations Intel and partners made to successfully scale and contextualize the program in Chile.

We argue that beyond learning outcomes, digital access and technological skills can have powerful community impacts. For example, positive relationships built between adults and underserved youth can provide clear role models for educational attainment and possibility, potentially shaping the youths’ expectations for what they, too, can achieve (Holland & Farmer-Hinton, 2009; Martinez & Klopott, 2002). Studies of resilience and youth development show that building external resources in informal education programs can have significant positive effects in helping at-risk youth overcome obstacles to higher education (Botrell, 2009).

Intel Learn programming in Chile has developed during the 5 years of its implementation from an informal program for rural youth boarding at high schools to an offering for broad age ranges in a wide array of contexts—including adult education programs, vocational training, and university orientations and curricula. Youth outcomes are one example of results we present within a typology of community impacts that derive from the program as locally adapted and implemented across diverse communities in Chile.

Research Questions

The primary purpose of our case study was to investigate the community impacts of the Intel Learn Program in Chile, which is currently in its fifth year. Because this type of research has not previously been conducted in relation to the Intel Learn Program, we approached the site visit with a purposely broad, open-ended, and interrelated set of research questions that aligned with the exploratory nature of the research. In developing research questions, we relied on a set of concepts and themes based on our knowledge of the Intel Learn Program.

The research questions that informed our approach included the following:

- What are the short- and long-term impacts on participants of Intel Learn?
- Are members of the community, outside of the participating learners themselves impacted? If so, how?
- Is the community as a whole impacted as a result of Intel Learn? If so, how?
- What are the impacts on program facilitators, both professionally and personally?
- Does the “new pedagogy” impact facilitators and learners outside the Intel Learn classroom? If so, how?
- Do learners take on new roles in the community after participating in the program? If so, how?
- Do learners gain a different sense of their role/agency in the community as a result of Intel Learn? If so, how does that change manifest itself in their lives?
- Does the community service aspect of Intel Learn impact learners’ or facilitators’ relationships with their communities? Does their interest in other community activities change?
- Does gaining digital literacy help learners communicate and access resources online to create new, positive life outcomes?
- Does the gain in digital literacy affect learners’ ability to navigate among online communities?
- Do relationships change across facilitators, administrators, learners, and their families as a result of Intel Learn? If so, how?
- How do stakeholders view the program? Do stakeholders’ relationships in their professional communities change as a result of administering Intel Learn? If so, how?
- Does the value to the community of the facility or space in which Intel Learn is conducted shift after holding Intel Learn courses? If so, how?

Methods

We relied on our research questions in preparing the interview and observation guides that we used for data collection, which took place within the methodological framework of rapid ethnography. Rapid ethnography takes its basic research methods from classic ethnography, but applies them within a time-constrained evaluation context. In the rapid ethnographic approach, members of the community participate in the study even as the conceptual framework for the study is evolving. Thus the approach capitalizes on the knowledge and capabilities of collaborative teams, including local specialists and insiders in the field, and on the use of local teams for data collection and interpretation of findings. This approach is iterative: the preliminary data gathered is then used to help guide subsequent decisions about additional data collection in the field.

Taking this approach, we spent significant time gathering data before entering the field. We held extended discussions with the Chilean Intel Learn team, read all materials available about the program (including several reports and data from annual internal evaluations of Intel Learn Chile), and familiarized ourselves with the landscape of Information and Communication Technology (ICT) educational interventions in Chile over the past two decades. We also administered surveys (using SurveyMonkey™, an online survey administration tool) to youth alumni and facilitators of the summer camp program to gather background information. As mentioned, 292 learners and 31 facilitators completed our surveys.

In the field, we generated more than 200 pages of field notes based on discussions and observations across the dozen or so sites visited. We conducted semistructured interviews with learners, facilitators, parents, administrators, and researchers affiliated with the program, and audio-taped several of those interviews. For the most part, group interviews were held, often following recent program participants’ presentations of their final projects. Data have been analyzed using a grounded-theory approach (Strauss & Corbin, 1998).

Results

Typology of Programs

Keeping in mind that the Intel Learn program was designed as an after school youth program, we identified four major types of Intel Learn programming in Chile: (1) out-of-school youth programs, (2) in-school youth programs, (3) specialized university trainings for preservice education students, and (4) adult education, either as a stand-alone offering or as a supplement to more comprehensive adult vocational programs.

Youth Programs in Out-of-school Time

The out-of-school implementation of the Intel Learn Program follows the original program design and curriculum. These programs are typically held in school buildings after school, on weekends, or in the summer and are sponsored by many different funding and support sources. Facilitators for these programs include schoolteachers, adult volunteers, university students, and high school students (working with elementary students). The
program has been adopted for use in technology programs offered outside of school time because, as one project leader said, it includes “the best mix of fun and structure for learning.” One interesting adaptation of the Intel Learn programming was a summer camp serving hearing and speech-impaired children. Recognizing the responsiveness of Intel’s implementation agency—a small, local NGO named Corporación El Encuentro—to the needs of the community, an Intel Learn facilitator whose daughter is hearing and speech impaired proposed adapting the program for her and her classmates.

**In-School Classes for Youth**

The success of Intel Learn in out-of-school time has motivated in-school implementations. These include: (1) mandatory and elective courses offered at boarding schools throughout the country, originally supported by the Chilean Ministry of Education (Mineduc)’s Enlaces initiative and now continuing only with local funding, (2) in the municipalities of Alto Hospicio and Vicuña, locally funded programming for public high school and elementary students (with high school students as facilitators) overseen by Corporación El Encuentro, and (3) at two schools in Puerto Montt, courses held during morning class periods that technology teachers offered to university student facilitators to implement Intel Learn course.

**University Programs**

A particularly valuable and adaptive use of Intel Learn in Chile has been as specialized programming for undergraduates at universities around the country. Universities are using the program to provide incoming preservice teachers with experience in progressive, student-centered pedagogy and 21st-century skills to lay a solid foundation for the rest of their higher education. For many students, the Intel Learn Program serves as the main focus of their orientation when they arrive for their first year. In some cases, students who participate in Intel Learn serve as facilitators with youth in the area; in other cases, preservice teachers’ participation in the program serves as a basis for learning how to incorporate technology and new pedagogies in classroom teaching. We visited two of the universities that use Intel Learn: one in Puerto Montt, where university students facilitated the program with local primary schools, and a second in Talca, where faculty as well are taking the program to become familiar with the Intel Learn pedagogy and tools.

**Intel Learn for Adults**

Through Mineduc’s Enlaces initiative, Intel Learn is offered to adults as part of programming available to the public; the shortened version of the traditional format—18 hours for each of the 2 Intel Learn units instead of 30, preceded by two additional 18-hour preparatory units—provides adults with basic technological skills and literacy. The shortened versions of the course have removed some content deemed less relevant, such as the nursing unit in Technology at Work. The program is typically implemented at school sites that also offer Intel Learn to children. Piloted in 2008, the program had more than 8,200 participants in 2009, after pilot study results showed that more than 95% of the participants rated the program very highly and would want to continue taking additional Intel Learn courses. Intel Learn has also been successfully incorporated into adult vocational programs, typically delivered in community centers by municipal agencies or nonprofits administering state and federal vocational programs. A 100-hour, business-oriented course, Technology, Accounting and Work (Tecnología, Contabilidad y Trabajo), sponsored by Chile’s national job retraining agency (National Service for Training and Employment [Servicio Nacional de Capacitación y Empleo—SENCE]), includes basic digital literacy training, 30-hour versions of both Intel Learn units, and additional accounting content. A stand-alone version of the course using an unmodified curriculum was implemented by the Catholic University of Maule (Universidad Católica del Maule) with adults at Villa Baviera, who, as discussed in detail on p.19, below, had recently been freed from a highly restrictive and repressive cult to rejoin Chilean society. Other unmodified versions of the program have also been included in literacy training for the elderly and offerings for adult small business entrepreneurs.

**Community Adaptations and Impacts**

Based on our analysis of our field notes, survey, and interview data, we found that:

1. The program has been adapted to fit a wide variety of social needs and niches.
2. The program has been transformative across contexts not just at the level of individual learning, but also at the level of community impact.

These two findings are highly interrelated. As the program has met the needs of populations ranging from elementary children in school, to university faculty, to adults with minimal education, it has also promoted collective changes in pedagogical vision, community action, and social development.

Youth programming with Intel Learn in Chile has been far-reaching and impacted children’s lives by:

- Empowering them to take on new challenges using digital tools and systematic approaches to create useful products with the tools
- Providing them with distinct and meaningful connections to people and groups with resources to offer.

Adult programming of Intel Learn in Chile has had dramatic impacts on the lives of participants. Adults we spoke with were committed to using their Intel Learn experiences for:

- Developing personal tools for microenterprises and other practical benefits
- Enacting social change in their communities and better addressing the needs of their families.

Impacts of the Intel Learn course extend to facilitators, as well. Our findings indicate that, because of the program, facilitators for Intel Learn in Chile become:

- Deeply engaged in providing service to the greater community
- Experienced in both learning and teaching with nontraditional pedagogy.

The program is supporting community change by:

- Promoting gains in human capital that readily translate into new capacities and improvements in the community
• Instilling appreciation of and interest in community service
• Benefiting from the combined effects of the participation of many people from the same community in capacity-building experiences.
• Supporting connections to networks of helpful people, useful organizations, and valuable information
• Creating linkages across communities and organizations, helping them grow and succeed
• Contributing to the infrastructure for modernizing Chile in the digital age, thereby creating powerful societal impacts.

Two Exemplary Cases of Community Impact

Case 1: Puerto Montt

Puerto Montt, a small port city in the scenic Lake Region of southern Chile, where the Intel Learn Program has reached more than 500 youth between the ages of 11 and 15. The program’s positive effects were apparent during our visit to area schools as children excitedly shared stories about their time in the course, their final projects, and their friendships with facilitators, who are first-year university students in the Department of Physical Education Sciences from the University of Los Lagos.

When asked how this program differed from the school’s computer classes, students answered with comments like the following:

I learned more deeply and a lot more.

We didn’t move on to the next thing until the whole class knew what was going on.

We loved working in groups, even though sometimes it was hard.

I like the facilitators a lot because they were patient in going through the lessons.

Students in the program were quick to point out differences between the type of education they had received in some of their courses—didactic, rote, memorization based—and the dynamic, student-centered approach in Intel Learn. Although held in school computer labs, but after school hours, the program nonetheless differed from their typical school classes. More than anything, the program encouraged these youth to develop ideas and content related to their own communities and interests. Course projects ranged from advocacy of simple physical improvements at the children’s school, to ways of caring for stray animals, to consideration of means for combating domestic violence and drug and alcohol abuse. The children noted how helpful the program had been for their schoolwork, and they showed great enthusiasm for extending what they had learned to blogs and Web pages about social issues that mattered to them and around which they could build shared interest communities—a powerful model for deepening children’s engagement in learning activities and technological skills (Ito et al., 2008).

Youth also repeatedly stressed how much they liked the facilitators personally, in addition to how exciting and interesting they found their teaching style. The relationships built between the facilitators and these underserved youth provided clear role models for educational attainment and possibility, potentially shaping the youths’ expectations for what they, too, can achieve (Holland & Farmer-Hinton, 2009; Martinez & Klopp, 2002). Many facilitators we spoke with noted that they continue to communicate with the children they have taught, answering questions about computers or academic work; the facilitators also felt it likely that these relationships will continue over time. One facilitator’s comments reflected others’ comments regarding their experiences with teaching the course:

The recognition and love the kids have given me is what I have enjoyed the most.

Studies of resilience and youth development shows that these kind of external resources can have significant positive effects in helping at-risk youth overcome obstacles to higher education (Botrell, 2009). These studies also point to the acquisition of problem-solving skills and the development of intellectual capacities as factors that improve youth outcomes, both of which the Intel Learn Program works to strengthen (Unger, 2009).

Case 2: Villa Baviera

Villa Baviera was formerly an isolated and cult-like German commune. It has an exceptionally dark history. Before the Chilean government dismantled the commune in 2005, its members were oppressed, forcibly shielded from modern life, and segregated from the Chilean society around them. For almost 50 years, residents of Villa Baviera had had little agency in making their own decisions. Dissenting opinions were not tolerated. The commune’s leader ordered that men and women be separated, that people work alone in their jobs, and that they speak German exclusively. Various types of abuses were prevalent.

Once “freed,” adults who had stayed in the community indicated that they wanted nothing more than to be accepted by Chileans—to be free as were other Chileans to live their lives as they wished and to be perceived of as normal, friendly compatriots. They also needed new sources of income to sustain the community and were developing the basis for bringing tourists to their rural wooded area. It was in this context that several of the adult members took the Technology and Community course as designed for youth, preceded by a few basic lessons on computer use, such as how to turn on the computer and maneuver the mouse. The adults who participated in the Intel Learn course had had no exposure to digital technology and were just beginning to learn Spanish when they took the course.

Several of the participants discussed how significant it was to work collaboratively and to develop their own agency in sharing their opinions and ideas for final projects—experiences new for them. During our interviews and focus groups, they presented their final projects to us with exuberance, addressing topics such as changing others’ perceptions of them, building single-family homes to be able to live with their spouses, and developing small business opportunities such as selling herbal tinctures and medicinal plants. The course structure for developing a final project and following specific steps to complete it was transformative for this community, given its members had not had the opportunity to do something like this previously. Even though they had taken the Technology and Community course 2 years before our visit, participants repeatedly referred to the project...
planning aspect of the course as having notable long-term impacts, especially as residents of Villa Baviera continued to work on learning how to take control of their lives as adults. Remarkably, participants attributed the transformation of an entire community to the project development cycle built into Intel Learn—plan, do, review, share.

**Factors of Program Success**

Both contextual and strategic factors have made the Intel Learn Program highly successful in Chile. Much of the Intel Learn Program implementation has occurred in conjunction with Enlaces, a national government ICT initiative begun in 1992 (Alzamora, 2009). At the same time, Intel and Corporación El Encuentro have developed strategic partnerships for adapting the program to a wider variety of niches in which it can function well. The strategic approach has entailed considering fit and potential impacts in multiple new geographical and programmatic areas, piloting Intel Learn in those areas, and adjusting implementation on the basis of the pilot results. The nimbleness of this approach has made it possible to use Intel Learn in Chile effectively across a wide range of environments.

A key factor in Intel Learn’s success lies in the compatibility between Intel’s operating principles and the capabilities, outlook, and ethical commitments of its implementation agency. We believe the following operating principles have allowed Intel Chile to produce the positive impacts we have documented:

- Make few assumptions about what will work, and try new approaches frequently.
- Maintain an attitude of ongoing reflection and learning.
- Work with organizations excited about and committed to the program. No one who is dragged, coaxed, or pushed into a partnership will have the dedication needed to make the program work.
- Be willing to alter or discard plans in favor of developing and maintaining appropriate relationships. For example, as one of its partner organizations underwent staffing changes, Intel Chile suspended joint activities for the year, allowing the new staff time to develop and the option of pursuing the partnership further or not doing so.
- Prioritize diversity and adaptation, taking seriously an ecological model of how the program fits in niches.
- Do not push for numbers or results. Instead, strive to attain healthy and sustainable relationships and the results will follow.
- Choose collaborators of clear and demonstrated capacity who share a similar value of dedication to those served and flexibility in approach.

**Conclusion**

Our study of the Intel Learn Program in Chile was intended to investigate the ways in which Intel Learn has been implemented and the types of impact it may have had on the lives of participants and the people and institutions most closely associated with the program. Accordingly, we looked for influences of the curriculum, pedagogy, and instructional approach on individuals, families, and communities. At the same time, we documented many of the strategies and principles that have guided program development and implementation systematically throughout Chile, noting the particular social needs the program has been geared to address. The types of program impacts and the choices made regarding whom to serve and how to do so are closely related issues. That is, how a program is designed—and implemented—the types of partnerships, adaptations, and supports that shape the program—are often critical with respect to whether or not it is a success.

The successes of Intel Learn in Chile when viewed in terms of its impacts on people’s lives are dramatic. Youth and adults, facilitators and faculty, community organizations, and local business endeavors all have been shaped by the course. It has repeatedly been adopted to fill particular niches by providing technology training that is engaging, rigorous, and relevant to specific personal and community goals. As such, it has fit within the ecology of offerings in municipalities across the country, and become a key tool for schools, universities, and community-based organizations to promote social and economic development by enhancing a broad range of attitudes, skills, and values that underpin positive community change.

This study can inform research on community impacts of informal education and provide a model for successful adaptation of an international development program in education. It shows the potential for diverse uses of this specific program towards social and economic development goals, the preparation of human resources, and the enhancement of social capital, and also provides a basis for examining how corporate philanthropic efforts can be adapted at the local level to the advantage of the target community.

**References**


