

## Sustainability as Process: Community Education and Expansive Collaborative Activity

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*For most of their history, two separate, but related, after-school education programs operated independently, coordinated by separate teams of university and community partners. When the existence of the programs was threatened, a community-university coalition formed in an effort to sustain them. This coincided with the university-community teams' joint response to a reorientation of the statewide university system's policies on affirmative action. This article uses Cuban's framework of sustainability and cultural-historical activity theory to analyze a process of communication, collaboration, creativity, and continuing that resulted in sustaining the two programs as well as the expansion and development of multiple new programs (Cuban, as cited in O'Neil, 2000; Cuban, 2001; Tyack & Cuban, 1995).*

**Keywords:** *sustainability of educational innovations; university-community collaboration; cultural-historical activity theory*

THE ISSUE OF the sustainability of educational innovations is a persistently hot topic in educational policy and leadership conversations. In an interview in *Educational Leadership* titled "Fads and Fireflies: The Difficulties of Sustaining Change" (O'Neil, 2000), Larry Cuban suggests that "the innovations

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that have the best chance of sticking are those that have constituencies that grow around them" (p. 7). Cuban characterizes reforms that have the least potential for sustainability as those proposed by policy makers and officials who know little about the day-to-day practices of the workplaces they seek to change. To avoid the so-called firefly phenomenon—"that is, shining brightly for a few moments, then disappearing"—Edens, Shirley, and Toner (2001) argue that "partnerships should work diligently at fostering deep conversation—productive conversations about issues, conflicts, and differences that culminate in mutually satisfying resolutions. Hearing is not enough. The voices should be heeded" (p. 31). This call for ongoing conversation and responsive leadership is echoed by Hargreaves and Fink (2003), who describe sustainable innovations as those that "enable people to adapt and prosper in their increasingly complex environment" while "building long-term capacity for improvement" (p. 694).

In their 1995 volume, *Tinkering toward Utopia*, Tyack and Cuban note that those reforms that have been sustained "have typically been gradual and incremental—tinkering with the system" (p. 5). They suggest that three common, but unsatisfactory, criteria for measuring the success or failure of educational innovations and reforms are fidelity to the original model, achievement of predetermined goals, and longevity, in and of itself. They argue that

fidelity to plan without continuing attention to unintended by-products masks mistakes... some of the most significant dimensions of actual programs, both positive and negative, may not be captured by measured outcomes... [and], longevity does not necessarily equate with benefits to students [and others]. (pp. 61-62)

Following Dewey (1938/1963), they advocate that "aims and practices... should be in continuous interaction" (p. 63). Similarly informed by Dewey, as well as Brown's (1992) work with educational design experiments, Cole (2001) argues that "all such systems are emergent products not only of factors identified as internal to the system, but factors that involve the necessary openness of such systems to the social systems in which they are embedded" (p. 7). Therefore, Cole continues, "it is important that researchers [and educators] continuously attempt to formulate whatever principles appear to be essential to the operation of the system, expanding and modifying the set as they go along" (p. 7).

Cole's (2001) and Tyack and Cuban's (1995) definitions of sustainability include elements of flexibility or responsiveness to changing contexts as well

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University of California, UC Links Office. The author would like to thank Michael Cole and Olga Vásquez for their generous support in all phases of this project as well as the members of the Coalition for Community Education, who so openly shared their expertise.

as evolving goals in the interest of continued relevance as the contexts of educational innovations change. Consistent with these definitions, Hargreaves and Fink (2003) define sustainability as improvement that is enduring and that draws on resources and support at a rate that matches the pace of change without compromising the development of the surrounding environment. Additionally, they suggest that "promoters of sustainability cultivate and recreate an educational ecosystem that can stimulate ongoing improvement on a broad front" (p. 694). Although their position on "standardized reform" is diametrically opposed to that of Fullan (2001a), they concur with Fullan's position that change is about building committed relationships that contribute to shared learning and growth.

Fullan (2001b) argues that for change to be sustainable, participants must come to a clear shared understanding of the meaning of change. Hargreaves and Fink (2003), Tyack and Cuban (1995), and Cole (2001) appear to have a greater tolerance for ambiguity. They argue that committed participation in and ongoing attention to change must accompany ongoing evaluation and reconsideration of the meaning of innovations as the complex contexts in which change is initiated also undergo change. In spite of the daunting complexity of change efforts and the ubiquitous validation of Sarason's (1990) "predictable failure of educational reform," Cuban (as cited in O'Neil, 2000) reminds us that there are educational innovations that have been sustained in relatively recent history, including kindergarten and secondary school, the meanings of which have changed over time.

For Cuban (2001), time is a major factor in the perception and test of sustainability. The development of universal access to kindergarten in the United States was a process requiring 100 years. The development of universal access to secondary school was a process requiring 50 years. In terms of sustainability, both these innovations benefited from changes in the political economy of the United States as well as policy changes (e.g., responses to immigration, child labor laws, etc.) that did not specifically target the educational innovations.

Cuban's (2001) examples suggest three things. First, sustaining educational innovations is a complex process requiring long-term and distributed investments of time and energy. Second, factors beyond the sustainability efforts (e.g., policy shifts, economic changes, etc.) play a major role in sustainability. Third, the sustained nature of educational innovations will not necessarily be visible except after substantial time. This implies that to understand the meaning, as opposed to the measure, of the sustainability of educational innovations, we need to adapt an historical view of the process by which educational innovations become sustained.

Cultural-historical activity theory (CHAT), provides an analytical tool for studying changes in complex systems over time. Now a multidisciplinary and internationally developed approach, CHAT has its roots in the work of the Russian school of cultural psychology, founded by L. S. Vygotsky, A. N. Leont'ev, and A. R. Luria in the 1920s and 1930s. Although there are numerous approaches to activity theory,<sup>1</sup> the analysis here draws on Brown and Cole's (2000) approach, which "assumes that individuals are active agents in their own development but do not act in settings entirely of their own choosing" (p. 198). Additionally, and consistent with the approach of Engeström (1987), Brown and Cole's approach assumes that learning in activity is distributed among such important elements as the participants, the artifacts they use, and the social institutions within which they are housed (p. 197).

According to Engeström (1999b),

activities are social practices oriented at objects. An entity becomes an object of activity when it meets a human need... In this constructed, need-related capacity, the object gains motivating forces that give shape and direction to activity. The object determines the horizon of possible actions (Engeström, 1995). (pp. 380-381)

For Engeström (1990), dynamic interaction is an activity when it is

collective in nature and driven by a complex motive of which the individual actors are seldom aware. Activity manifests itself in the form of goal-oriented individual actions in which the subject is consciously aware of what he or she is trying to accomplish. (pp. 172-173)

The subject of activity is the individual, group, or organization engaged in the activity. The object of activity organizes the individual goal-directed actions of those who participate in an activity system. For example, people who work in a school or informal education program may have different roles and goals for their actions within those activities, but both the informal and formal education activities are driven by the complex motive of educating the young, and this complex motive, which might include replicating culture and social relations and providing tools to participate in democracy, organizes the individual actions of teachers, administrators, support staff, and youth workers, even when they are not consciously aware of that complex motive.

Kuutti (1997) emphasizes that activities are not static or rigid. Their

development is not linear or straightforward but uneven and discontinuous. This means that each activity also has a history of its own. Parts of older phases of activities often stay embedded in them as they develop, and historical analysis of the development is often needed to understand the current situation. (p. 26)

This historical view suggests that CHAT is particularly relevant for an analysis of sustainability that draws on Cuban's (2001) framework, which emphasizes both time for sustainability to become visible and change or adaptation to factors beyond the sustainability efforts themselves.

The analysis presented here draws on this combined analytical frame to understand the development of an educational innovation from 1986 through 2003, during which time the innovation has proliferated in California, the Americas, and Europe. The implications of this historical case study of sustainability—of particular interest to policy makers and educational leaders—are then addressed.

### EDUCATIONAL INNOVATION AS A SYSTEM OF ACTIVITIES

In the early 1980s, The Laboratory of Comparative Human Cognition (LCHC) at the University of California, San Diego, began implementing informal after-school learning programs for children in community settings. The programs were built on a model that used computer games and the presence of college students to mediate collaborative, exploratory learning. Following Vygotsky (1978), the programs mixed play and learning and were designed to allow very diverse participants to operate within their multiple zones of proximal development.<sup>2</sup> The programs placed emphasis on children's potentials and engagement with problem solving tasks. Progress through the programs' content was self-paced and voluntary. The early work provided evidence of the programs' effectiveness as productive learning contexts where diverse children could experience success in dealing with academic content (Cole, 1996; Griffin & Cole, 1984, 1987; LCHC, 1982, 1983). In 1986, the laboratory began to explore the question of sustaining successful educational innovations using these programs as test sites. Four programs were initiated, and their development as both learning contexts and organizations was tracked and compared over 3 years (Cole, 1995; Nicolopoulou & Cole, 1993).

Based on a model of university-community reciprocity, the programs were designed as collaborative organizations relying on interinstitutional cooperation between the university and the community hosts. The university provided seed money and ongoing support in the form of trained undergraduates. The community partners provided space and supplies. Community partners entered into the relationship with the understanding that after the seed money had been used, their institutions would take up responsibility for administrative and financial support of the programs. The university partner, for its part of the bargain, would continue to send trained undergraduates.

After 3 years, only one of the four programs remained. The others had closed because of conflict with regulatory policy, scarce resources, and lack of perceived fit on the part of the community participants, respectively. The program that survived, the Fifth Dimension, was not judged by the researchers to be the most productive learning context. Its location in a Kids Club, which had an open-door policy, led to lots of potentially disruptive noise and movement. However, a number of factors contributed to it being the most stable organization (Cole, 1995). These included club staff members who took a personal interest in the program, institutional flexibility that allowed the club to welcome changing cohorts of college students, the club's need for adult volunteers, and the desirability of the computers the partnership offered. Of particular importance, the host institution enthusiastically embraced the innovation as a valuable asset.

In 1990, a new program based on the Fifth Dimension, *La Clase Mágica*, was implemented in the same community by another researcher from LCHC (Vásquez, 1993, 1994). Whereas the primary goal of the Fifth Dimension was to provide a model for sustaining productive, informal learning contexts, the primary goal of *La Clase Mágica* was to empower an ethnic enclave through informal education. Although the programs had the basic design and certain tools in common, they operated as separate but linked, entities.

### *University of California (UC) Links: Springboard for Expansion*

By 1995, the success of both programs had been documented and the innovative after-school program had expanded to 10 other universities and their local communities in California, the United States, the Soviet Union, and Mexico (Cole 1996; Vásquez 2003). Meanwhile, financial and administrative uptake of the Fifth Dimension by its community partner, a Kids Club, had been accomplished, though issues facing that community-based institution resulted in ongoing renegotiation of the relationship. *La Clase Mágica*, however, though very successful in empowering members of the ethnic enclave, was facing eviction from its community setting and had no formal institutional support from its community partners. The two community host institutions, a local church (hereafter, the Mission) and a federal preschool program, (hereafter, the Preschool) provided space and some equipment but did not actively participate in *La Clase Mágica*'s operation and were not forthcoming with funding for personnel, services, or supplies. One possible solution, combining the Fifth Dimension and *La Clase Mágica*, was considered but resisted based on the concern that *La Clase Mágica*'s appeal to *Mexicano* children would be compromised by a move from the neighborhood Mission to the more culturally and geographically distant Kids Club.



In 1995, as conversations about a merger of the programs advanced, the UC system eliminated affirmative action as a consideration in the acceptance of new students. In response to this change in the UC's policy, as well as a concurrent call for programs that linked university and community in the service of groups underrepresented at the university, members of the Fifth Dimension and La Clase Mágica research teams began to share their models with other UC campuses to develop a system-wide university outreach effort. As a result, a statewide network or system of programs based on shared elements of the Fifth Dimension and La Clase Mágica, UC Links, began to develop.

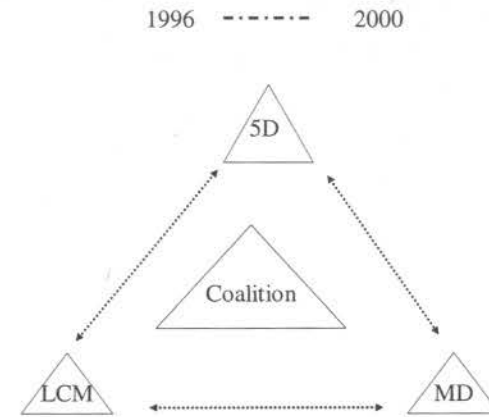
In the process of development of the statewide UC Links network, team members from the Fifth Dimension and La Clase Mágica also observed models of university-community relations at other universities. One relationship in particular was of interest to both teams because it linked a Kids Club, a university, and a local school. Based on that model from the UC Links network, a third university-community program, the Magical Dimension (Nocon, 2000), emerged in the same community as La Clase Mágica and the Fifth Dimension. The Magical Dimension, which was located at a local school attended by children from both the Fifth Dimension and La Clase Mágica, also provided a potential solution to La Clase Mágica's need for space.

#### COALITION FOR COMMUNITY EDUCATION

The normal start-up time for developing a Fifth Dimension—or La Clase Mágica—inspired program site was approximately 6 months to 1 year. In response to the principal's wishes and the prevailing political climate in the school district, the new school-based Magical Dimension site was set up in 5 weeks. The only way the new site could be built so rapidly was through intense communication and collaboration with the Fifth Dimension and La Clase Mágica site staffs and research teams.

The Magical Dimension, which represented a merging and expansion of the efforts of the Fifth Dimension and La Clase Mágica project teams at the operational level, opened in January, 1996. The result was a three-site triangle of communication that supported a network of relations between the three programs (see Figure 1). The collaborative relations developed in building the Magical Dimension drew in club and community partners as well as university staff and students.

During late 1995, the La Clase Mágica site coordinator, a member of the local Mexicano community, spearheaded a successful effort to retain space at the Mission for La Clase Mágica. In a call to the regional office of the Preschool, she made contact with a regional director who, as it happened,



**Figure 1. Three-Site Triangle of Communication**

Note: 5D = Fifth Dimension; LCM = *La Clase Mágica*; MD = Magical Dimension.

serendipitously spoke Spanish. Through further contact, the director became interested in the philosophy of La Clase Mágica and in the possibility of having university students use the La Clase Mágica model to work with the children at the Mission Preschool.

Meanwhile, intensifying communications between the Fifth Dimension, La Clase Mágica, and Magical Dimension research teams and representatives of their host institutions, along with a growing sense of urgency about La Clase Mágica's lack of funding for a site coordinator and other operating expenses, provoked a diverse group of interested individuals to gather at the club on March 20, 1996. The following is an excerpt from a field note written by an upper division student research assistant from La Clase Mágica. The field note was written according to an established template used by both the La Clase Mágica and the Fifth Dimension research teams and sent to team listservs and an archival database:

I didn't have a clear idea of the goal of the meeting, except that overall we were forming a coalition to find outside funding sources. But, the way the meeting was going, I got the feeling it was also about the Kids Club's upcoming budget plan. Whatever the case, I caught a glimpse of Kevin's [club's Director of Outreach] notes. He had a diagram, like a triangle, showing the [Fifth Dimension], Magical Dimension, La Clase Mágica/Preschool, which he seemed to be using to guide us through the meeting, beginning with the commitment for Fifth Dimension. The discussion moved to talk about the school and how much it would take to keep that site running. The Magical Dimension team and Kevin went through the budget list and agreed that the school

would basically need to add about five more hours to Nadine's position. I interjected to add something that maybe [La Clase Mágica Site Coordinator] could also help at the Magical Dimension, or the Kids Club. . . . Kevin kept saying "we'll get to the Preschool, hang-on" as they finished talking about the needs for the Magical Dimension ideas about how the school could provide additional resources, how the coalition could function zapped across the table. The room was buzzing with ideas. (ZK, March 20, 1996)

The following excerpt, from the same field note, illustrates that budget needs for La Clase Mágica were also discussed, as was the emerging coalition:

The consensus that we are a coalition, that we are all working together for the benefit of each other evolved throughout the meeting. We didn't begin by stating it, but it was clear towards the end. There was a genuine excitement towards the end about the fact that we have a very special, unusual coalition. . . . We started to talk about next steps we decided to have a more detailed budget and a list of funding sources for the next meeting. La Clase Mágica staff will find large/federal funding sources, while the Kids Club will list local sources. [A La Clase Mágica faculty researcher] suggested we start to think about a name to formalize the coalition. (ZK, March 20, 1996)

The next meeting occurred on April 2, 1996. This time, the regional director of the Preschool ran the meeting. In addition to club representatives, the coordinators of La Clase Mágica, the Magical Dimension, and the Fifth Dimension were there as well as a representative of the Mission and two parents from La Clase Mágica. The meeting was spontaneously bilingual. At this meeting, the group began to coalesce around the shared interest or object of community. The Preschool regional director started the meeting by posing three questions that the new coalition should consider: (a) Why does the community need a program like the Fifth Dimension or La Clase Mágica? (b) What do we, as community partners, already have to support it? And (c) What do we need to make this a fully sustained community project in the future? (This information, as well as the excerpt below, was drawn from a field note written by a graduate research assistant at LCHC who was also employed as site coordinator at the Fifth Dimension.)

The fledgling coalition, an emergent social formation, assumed the task of sustaining the Fifth Dimension and La Clase Mágica as well as the Magical Dimension. The task involved defining the needs of the existing programs and the resources necessary to address them. It also involved expanding on the existing programs in response to collectively identified community needs. At this early meeting, the participants had agreed that they should

think of the so-called "ties that bind" all of these different groups together. The first was an interest in the community. . . . Next, was teaching this community through the use of new technologies. Third was adapting this group to different individual communities, across age span and language. (OE, April 2, 1996)

As the participants continued to meet in subgroups and as a whole throughout the month, the new object or shared interest of community education continued to emerge. In early May, the Kids Club's Director of Outreach shared his notes from the April 29, 1996, general meeting:

We are a group/coalition of community institutions and people that serve the families of [our community]. Our goal is to provide education enhancement to families in our community through education and technology often not accessed by some members of our community. . . . Our challenge is sustaining existing programs and reaching more members of our community. . . . Currently we are providing primary computer education to preschool children (the Preschool) . . . and education enhancement for primary and secondary grade youth (Magical Dimension, 5th Dimension, La Clase Mágica). . . . In addition to computer education enhancement, [these programs] enhance children's social interaction by the one-to-one involvement with [the university] students as well as the interaction with their peers. . . . Involving parents gives them the tools to be part of their children's education experience longer and more completely.

Work continued at regular meetings during the spring and summer of 1996. Representatives from the three programs, their community hosts, and other community institutions participated regularly. The coalition developed a mission statement and a formal budget to use in writing proposals and adopted the name *Coalition for Community Education*.

During summer and fall 1996, the immediate need to sustain La Clase Mágica became the coalition's driving concern. The Fifth Dimension site coordinator had been funded for the 1996-1997 school year by the Kids Club. The club had also budgeted to support the assistant site coordinator at the Magical Dimension who walked children to the club after the program finished for the day. There was no direct link between the club and La Clase Mágica, and La Clase Mágica funds were expected to expire in September 1996. The La Clase Mágica team, both university and community sides, provided much of the labor needed to formalize the coalition's efforts. By August 1996, a sense of urgency pervaded the coalition's work. While the coalition was preparing to seek general funding of an annual operating budget of \$50,000, an immediate need for \$10,000 to fund the La Clase Mágica site coordinator's position starting in September 1996 was the major focus of activity.

At the end of August 1996, the coalition received an anonymous contribution of \$2,000. This was enough for the Kids Club, acting as the coalition's fiduciary agent, to hire the La Clase Mágica coordinator to run the program for several weeks. In September, the club agreed to cover any shortfall of funds, effectively keeping La Clase Mágica running for the academic quarter in anticipation of receipt of funds by the coalition.

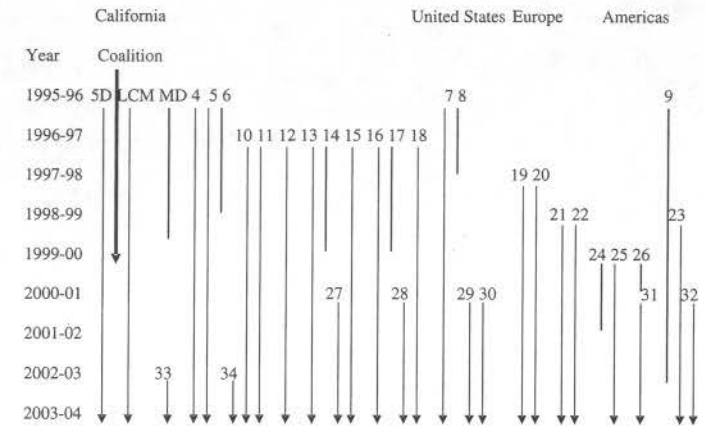
Fundraising efforts were stepped up. A collaborative effort between the LCHC staff, the Preschool, and the Kids Club resulted in the first proposal to a private foundation going out in mid-September. As the proposal went out, the club's unit director was appointed acting coordinator of the coalition. At the same time, the club hired a grant writer and offered her services to the coalition. In short order, two more proposals were sent out.

In academic year 1996-1997, the coalition continued to meet to organize appeals to local churches, rotary clubs, PTAs, and small businesses. The club's grant writer continued to send out proposals to foundations. As of June 1997, the coalition had raised \$35,000 for operations and equipment. La Clase Mágica continued to operate, and the collaboration among the sites and between the university and community partners intensified.

Foundation funds for La Clase Mágica ended in September 1996. For the Fifth Dimension, they ended in September 1997. Uptake of financial responsibility for the Fifth Dimension by the Kids Club had occurred in 1995 and continued through crises and personnel changes. As of January 1999, the coalition and the Magical Dimension had operated continuously for nearly 3 years. Fundraising had declined as the Preschool and the Kids Club incorporated line items for La Clase Mágica operations into their organizational budgets. The coalition stopped meeting in early 2000 (see Figure 2).

By 1999, every person at the Kids Club who had worked with the coalition and/or the local sites had moved to other employment. In early 2000, the long-term representative of the Preschool announced that she was relocating. When one of the community initiators, Kevin, the former Kids Club director of outreach, returned in 2002, he and some of the former partners attempted to reactivate the coalition. After several meetings, however, the effort was not successful.

In academic year 1999-2000, La Clase Mágica continued, but the program had once again been displaced. The Preschool, which had operated a class at the Kids Club, saw its lease cancelled on short notice and was forced to use the space donated to La Clase Mágica for Preschool operations. The original La Clase Mágica, a preschool version, and a new related program for adults operated during academic year 1999-2000 in the Mission's institutional kitchen.



**Figure 2. Timeline of Coalition and Fifth Dimension and La Clase Mágica Expansion**

*Note:* 5D = Fifth Dimension; LCM = La Clase Mágica; MD = Magical Dimension; 4 = University of California, Santa Barbara; 5 = Whittier College, California; 6 = California State University, San Marcos; 7 = Appalachian State University, North Carolina; 8 = Elon College, North Carolina; 9 = Benemérita Universidad Autónoma de Puebla, México; 10 = University of California, Berkeley; 11 = University of California, Davis; 12 = University of California, Irvine; 13 = University of California, Los Angeles; 14 = University of California, San Francisco; 15 = University of California, Riverside; 16 = University of California, Santa Cruz; 17 = California State University, Fullerton; 18 = San Diego State University; 19 = Blekinge Institute of Technology, Sweden; 20 = Universitat Autònoma de Barcelona, Spain; 21 = University of Oulu at Kajaani, Finland; 22 = University of Umea, Sweden; 23 = Universidad Nacional Autónoma de México; 24 = Archangel University, Russia; 25 = University of Petravosk, Russia; 26 = Vilnius University, Lithuania; 27 = Mira Costa College, California; 28 = Southwestern College, California; 29 = University of Miami, Florida; 30 = University of Colorado at Denver; 31 = Copenhagen University/Roskilde University, Denmark; 32 = University of Sao Paulo, Brazil; 33 = California State University, Long Beach; 34 = California State University, Sacramento. → = continuing project; — = closed project.

This arrangement, however, was temporary. The La Clase Mágica programs reclaimed their classroom when the Preschool opened a new classroom in a temporary building at the Mission in fall 2000. As of 2004, relations with the Preschool remain productive.

The Magical Dimension officially closed down operations in June 1999. In January 2000, the school, the Kids Club, and the university renewed their collaboration by opening the Homework Club at the Kids Club. Children were referred to the Homework Club by the school. After completing their homework, they were guided to the Fifth Dimension where they joined other community children.

In 2000, the Fifth Dimension, in response to increasing demands on the school and the university to quantify program outcomes, continued program



redesign and evaluation. In addition to the redesigned Fifth Dimension and the Homework Club, efforts were underway at the Kids Club to develop teen programming in collaboration with the university and a local junior high.

Between 2000 and 2004, both *La Clase Mágica* and the Fifth Dimension continued to operate and evolve. As of June 2003, *La Clase Mágica* had expanded to include programs at schools close to the U.S.-Mexico border and at local Indian reservations. The Fifth Dimension had expanded to local community college-based sites. All of these sites are operating in 2004. In 2002 and 2003, the relations built in developing the Magical Dimension and the later change to a homework program led to a new Fifth Dimension at the school, opened at the request of the fourth principal since 1995. This program closed in June 2003; however, a new Fifth Dimension program for teens continues to run at the local junior high. Additionally, a program at another local university, developed with the support of LCHC, has been running in a different part of the county since 1998, as has an in-school version of the Fifth Dimension initiated in 1998 and funded in 2002 by UC Links.

In addition to these local expansions, the UC Links 1998 Annual Report states that by fall 1998, UC Links had grown to include 33 Fifth Dimension- and *La Clase Mágica*-inspired California sites and a number of sites outside the state of California and the United States. Within the UC system alone, the report states that 30 faculty, 890 undergraduates, and 1,500 K-12 youth participated. In September 1998, the UC Links programs operating at UC campuses received permanent funding from the university's Office of the President.<sup>3</sup>

The UC Links 2001 Annual Report states that 31 California sites were serving 2,125 K-12 students and approximately 1,000 undergraduates. These sites were affiliated with eight UC campuses, all of which are still operating UC Links programs, as well as Whittier College, which has been formally integrated into the UC Links California network. As of 2002, two California State University campuses joined the network.

There has also been national and international expansion of the Fifth Dimension and *La Clase Mágica* innovations. Programs are now running in Brazil, Denmark, Finland, Mexico, Russia, Spain, and Sweden. A process of expansion that accelerated in 1998 increased the number of sites in the United States and abroad and continues in 2004. In 1997 and 1998, for example, new sites opened in Mexico, Sweden, and Spain. In 1999, expansion continued with development of sites in Finland, Lithuania, and Russia, as well as additional sites in Sweden.

In 2000, two new sites associated with the University of Sao Paulo opened in Brazil. In Europe, contact and support from Sweden factored in

expansion to Denmark. Additionally, researcher exchange and the relocation of researchers contributed to expansion to Colorado and Florida. In 2001, the fledgling site in Lithuania closed, but the researchers met with others from Europe and the United States at a conference in Sweden. The intent was to reopen with an expanded number of programs. The other sites that opened in 2000 continue to operate, as do two sites in Australia and sites in Delaware.

Five networks of Fifth Dimension collaborations and a dissemination center formed between 1996 and 2001.<sup>4</sup> In addition to UC Links, the Nordic Network, which includes sites in Sweden, Russia, Lithuania, Finland and Denmark, formed in 1999. The EU-Fifth Dimension, formed in 2000 and funded in 2001 by the European Commission, includes Denmark, Spain, and Sweden. The European Union-Fund for Improvement of Post-Secondary Education and MEXLINKS are international linkages for student and researcher exchange between U.S. Fifth Dimension sites and sites in Europe and Mexico. As of 2004, the networks continue and new Fifth Dimension program sites continue to proliferate (see Figure 2).

#### PROCESSES OF EXPANSION AND SUSTAINABILITY

To better understand the processes of expansion that accompanied and ultimately sustained the Fifth Dimension and *La Clase Mágica* while leading to the development of multiple new programs, CHAT provides a useful tool. Engeström (1987, p. 78) produced a model of activity that includes subject, object, mediating artifact, rules, division of labor, and community. The model is altered in Figure 3 to illustrate processes of communication, collaboration, creativity, and continuing, which emerged as important factors in the process of sustainability analyzed here.

As does Engeström's (1987) model, the model in Figure 3 connects the subject and a community of persons who share an interest in producing the object of activity. According to Bellamy (1997),

the subject's relationship to the community is mediated by the rules and the community's full collection of tools. And, in turn, the community's relationship to the object of activity is mediated by the division of labor—how the activity is distributed among the members of the community, that is, the role each individual in the community plays in the activity, the power each wields, and the tasks each is held responsible for. This last relationship occurs because in order for a community to achieve a common objective, the activities of the individuals in it must be organized, and the paths of communication coordinated, so that together they form a set of actions that will achieve the common objective. (p. 125)

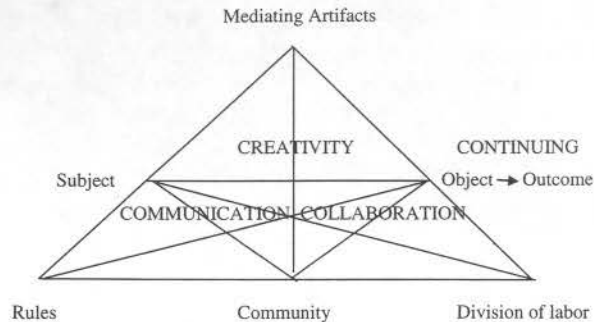


Figure 3. Model of Expansive Collaborative Activity

For example, the actions of the site staff and research team members who were engaged in the Fifth Dimension activity were organized by the complex motive of ongoing development and sustainability of the Fifth Dimension. In less direct relation to that objective or motive, there were other people who shared an interest in the Fifth Dimension's ongoing development, for example, the parents of participating children. By driving their children to the Kids Club and allowing them to stay for the Fifth Dimension, the parents participated in a set of actions that were directed at achieving the common objective of the Fifth Dimension.

It is useful here to recall that the subject of activity can be individual or collective (i.e., the individual, group, or institutions engaged in the activity). Cole (1996) describes the community in activity as "those who share the same general object" (p. 141). Engeström (1996) includes both multiple individuals and/or subgroups that share the same object (p. 67). According to Engeström (1999b),

The artifact-mediated construction of objects does not happen in a solitary manner or in harmonious unison. It is a collaborative and dialogical process in which different perspectives (Holland & Reeves, 1996) and voices (Engeström, 1995) meet, collide, and merge. The different perspectives are rooted in different communities and practices that continue to coexist within one and the same collective activity system. (p. 382)

Rather than a clearly defined goal, the object is contested, negotiated, and transient. Engeström (1996) calls the object of activity the "raw material" or "problem space" at which the activity is directed (p. 67). The object of activity, then, like the activity itself, is always changing; it is emergent.

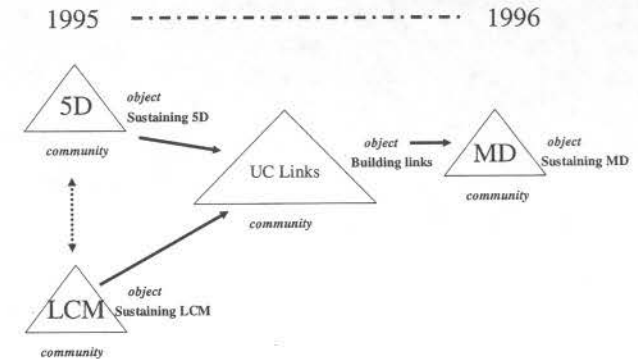


Figure 4. System of Expansive Collaborative Activities

Note: 5D = Fifth Dimension; LCM = *La Clase Mágica*; MD = Magical Dimension.

In looking at change over time in human activity in which the object or shared motive is always emergent, CHAT is consistent with Cuban's framework for sustainability. CHAT assumes an historical analysis useful in exploring the long-term and distributed investments of subjects—individual, collective, and institutional—in educational activities. It considers these investments in terms of external factors that affect sustainability, which itself becomes visible only over time.

Using the model of expansive collaborative activity, the Fifth Dimension and *La Clase Mágica* can be looked at as separate activity systems (early 1995), the collective subjects of which generated a new object activity, the statewide expansion (UC Links) in late 1995 (see Figure 4). An event in that expansive process, a meeting between team members from the Fifth Dimension and *La Clase Mágica* with representatives of another university, was the springboard for the expansive development of the Magical Dimension, which opened in January 1996. During the developmental process of building the Magical Dimension activity system, increased contact and communication among the people with an interest in each of the three local programs (i.e., people in the communities of the three activity systems associated with the Fifth Dimension, *La Clase Mágica*, and Magical Dimension) led, in April 1996, to the emergence of a new organization, the coalition, the object of which was sustaining and expanding the Fifth Dimension, *La Clase Mágica*, and the Magical Dimension. (see also Figure 1).

The expansive processes of building UC Links, the Magical Dimension, and the coalition were processes of communication about the educational innovations and building collaboration through building relations. This is



consistent with the position espoused by Fullan (2001a) and Hargreaves and Fink (2003) regarding the key importance of relationships in developing sustainability. In the case of the Fifth Dimension and La Clase Mágica, those relationships had the direct impact of saving La Clase Mágica from eviction, sustaining the Fifth Dimension and La Clase Mágica financially, and providing the basis for expansion to multiple, geographically distributed instantiations of the innovative educational programs.

The importance of building relationships is clear from this case study. However, the path to sustaining the Fifth Dimension and La Clase Mágica lacks clarity, except in retrospect. Although there was a great deal of meaning making in the form of ongoing conversations, the coalition, as an independent entity and activity, disbanded before ever achieving a clear, shared meaning or robust nature. Its emergent object loosely organized actions of the collective subject around the goals of fundraising and continuing to meet. These goals were not adequate to account for the eventual outcomes of the coalition activity.

Data from 4 years demonstrate processes of creativity and "visibilization" (Engeström, 1999a) in terms of making the coalition's changing goals and nature as an organization visible or explicit. Although one cannot assume that visibilization makes meaning clear, as Fullan (2001a, 2001b) would require, it does make visible the process of meaning making (i.e., development of shared understanding—a shared object or motive).

In the early meetings described in the field note excerpts above, a sense of shared mission was made visible. At a meeting almost 3 years later, the nature of the coalition's work was still being made visible and, once visible, was under negotiation. The following two excerpts are from audiotapes made at a coalition meeting on December 16, 1998. The first speaker is the founding director of La Clase Mágica:

Here's something else. And I think it goes back to when you're . . . we're sort of trying to establish conceptualization of where we are at this stage as a decision making body. And one of the things that I see happening is we're going all over the place with trying to get into that picture. . . . But you made a point about something that I think is really important . . . and that's again putting this body into *the* major decision-making body in the community. Well, doing . . . we, here, I'm being part of this . . . Do we here decide how the three different projects [programs] should be organized or do we . . . outside . . . continue to tweak it from the outside in?

Later in the same meeting, the regional director of the Preschool added the following:

And what's interesting about . . . what [La Clase Mágica director's] saying is true. We're an advisory group, but we're not supervisory. . . . It's not like we can say to somebody . . . "You must do it *this way* because this is the way it must be done!" . . . We're sort of developing our curriculum[,] . . . but we're not . . . not setting . . . y'know . . . rules. We're really not setting rules. . . . We're not really able to . . . because [Magical Dimension staff] works for the [school district]. . . . [She] has other people . . . y'know, each one of us has other . . . also entities . . . that we need to be responsible for.

"Visibilization," or the public representation of the issues, interests, and complex contexts of the participants in the coalition, was ongoing, as was visibilization of the evolving coalition's mission. Unfortunately, the coalition never got beyond visibilization, and yet the process of continuing to come together and expanding beyond the Fifth Dimension and La Clase Mágica effectively sustained the two programs and contributed to their expansion and continued sustainability. This process of continuing and creating through misdirection is discussed further below.

## DISCUSSION

Cuban (as quoted in O'Neil, 2000) claims that those innovations that are sustained grow constituencies. In the case of the Fifth Dimension and La Clase Mágica, both local and global constituencies expanded as the educational innovation spread. The expanded development of the Fifth Dimension, after local testing and false starts between 1987 and 1990, began slowly and then accelerated in response to changes in university policy in California. Other policy shifts, both in the United States and abroad that contributed to the expansion of the Fifth Dimension model, were increased interest in and support for university and community collaboration and rising interest in educational after-school programming.

In addition to the historical circumstances of a shift in the mission of institutions of higher education toward community partnership and the growing interest in after-school programming, particularly programming that includes educational components, other factors doubtlessly contributed to sustaining the Fifth Dimension and La Clase Mágica. These included time for the Fifth Dimension and La Clase Mágica work to be disseminated, increased contact with interested educators and researchers facilitated by telecommunications, and the presence of dedicated individuals who, within their constraining contexts, took time to continue communicating and collaborating in the interest of their communities and their communities' children (Nocon, 2000; Nocon, Nilsson, & Cole, in press). Although discussion of

this last factor is beyond the scope of this study, these individuals appear to have been engaged in a shared activity organized by the motive of service to children and community—an activity that was concurrent with and related to their engagement in the Fifth Dimension, La Clase Mágica, Magical Dimension, and coalition activities.

Consistent in the various and diverse implementations of the Fifth Dimension was active inclusion of those whose day-to-day practices in workplaces were undergoing change. These included, by design, university researchers and community agency and institution workers, as well as college students and children. Thus, in the original innovation and the later expansion of the Fifth Dimension, collaboration and communication were essential elements.

The emergent activity and social phenomenon of the Coalition for Community Education made visible the deep conversation espoused by Edens, Shirley, and Tomer (2001). The coalition embodied collaborative, reciprocal relations among peers of diverse expertise. University researchers were expert in research, and community hosts were expert in youth work and early childhood education as well as the needs of local community members. Together, they continued meeting in a shared effort to sustain La Clase Mágica and the Fifth Dimension. Along with continuing communication and collaboration, the coalition created networks of relations and shared meanings that effectively sustained the programs.

The coalition and the programs it formed to support, did, as Hargreaves and Fink outline (2003), enable people to adapt and prosper. The coalition activity as a process did build long-term capacity for empowerment. It did so, however, through a form of misdirection. In its 4-year history, the coalition focused on fundraising as the primary need for program sustainability. In acting toward this goal, the coalition was not very successful. In 4 years, only \$48,000 was raised. And yet the Fifth Dimension and La Clase Mágica were sustained. What transpired was adaptation of the Fifth Dimension and La Clase Mágica to community host needs and eventual incorporation of Fifth Dimension and La Clase Mágica operating expenses in the host institutions' operating budgets. Recalling Tyack and Cuban (1995), this significant by-product would have been missed in an assessment based on achievement of predetermined goals. That assessment, made on the basis of funds raised and timely financial uptake of the programs by their host institutions, would have missed the key role played by the coalition in building relations between La Clase Mágica and the Kids Club. The sustainability effort would have been judged a failure. Similarly, given the misdirection of the coalition's efforts to generate external funds versus inclusion in collaborating institutions' budgets as line items, by the measure of fidelity to plan, sustainability would not be assessed as having been achieved.

Longevity is also an issue in this case. The Fifth Dimension has been sustained for 17 years. La Clase Mágica has been sustained for 13 years. Although this is not adequate time in Cuban's (2001) framework to be assured of sustainability, it is a substantial start further supported by geographic expansion of the program and networks of related programs. The longevity of the Fifth Dimension and La Clase Mágica, as well as the programs that have expanded from them, has not, however, been related to static implementations of the educational innovation. Consistent with Cuban's framework, both programs have evolved over time in response to participant needs and structural changes in the economy and political climate. In doing so, the expansion of the Fifth Dimension and La Clase Mágica is a clear case of what Hargreaves and Fink (2003) call the cultivation and recreation of an ecosystem that can stimulate improvement on a broad front.

## CONCLUSION

This case study of a community-based after-school educational innovation suggests that sustainability is reasonably and productively viewed as a process of expanding and sustaining. The study also suggests that when productive, the process of sustainability is collaborative, communicative, creative, and continuing. It is collaborative in that participants have strong relationships and direct involvement in planning and implementing the educational innovation. They also participate actively in ongoing evaluation and refinement of the innovation. The process is communicative in that participants have voice and opportunities to make visible needs, concerns, and potential solutions to the shared problems of productive integration of the reform. The process is creative in that it remains open to change in the educational innovation and attentive to changes in the local and structural contexts of implementation. It is a continuing process in that innovations are sustained through long-term commitment.

The implications of this case study for policy makers and educational leaders relate to the form that educational innovations and change efforts can take. The creativity required to respond to ever-changing contexts is developed in continuing communication and collaboration organized by objects or motives that are transient and/or emergent, not linear and straightforward. The horizon of possible actions is always moving. Consequently, educational innovations and reform efforts that are short term, limited, highly defined, and narrowly measured are at best ill conceived and at worst predictable failures. On the other hand, this case study demonstrates that change efforts that are long term, expansive, broadly defined, and broadly evaluated can succeed.

## NOTES

1. For discussion of activity theory in analysis of educational programs and settings, see Gutierrez and Stone (2000), Jonassen (2000), and Hedegaard (1990).
2. The "[zone of proximal development] is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, p. 86).
3. Due to California's budget crisis, the UC Links office closed and funding ended in 2004. However, the network and projects continue.
4. For information on the Fifth Dimension and La Clase Mágica and related programs, see <http://www.uclinks.org> and <http://www.5d.org>.

## REFERENCES

- Bellamy, R. K. E. (1997). Designing educational technology: Computer-mediated change. In B. A. Nardi (Ed.), *Context and consciousness: Activity theory and human-computer interaction* (pp. 123-146). Cambridge, MA: MIT Press.
- Brown, A. L. (1992). Design experiments: Theoretical and methodological challenges in creating complex interventions in classroom settings. *Journal of Learning Sciences*, 2(2), 141-178.
- Brown, K., & Cole, M. (2000). Socially-shared cognition: System design and the organization of collaborative research. In D. H. Jonassen & S.M. Land (Eds.), *Theoretical foundations of learning environments* (pp. 197-214). Mahwah, NJ: Lawrence Erlbaum.
- Cole, M. (1995). Cultural-historical psychology: A meso-genetic approach. In L. Martin, K. Nelson, & E. Tobach (Eds.), *Sociocultural psychology* (pp. 168-204). UK: Cambridge University Press.
- Cole, M. (1996). *Cultural psychology: A once and future discipline*. Cambridge, MA: Harvard University Press.
- Cole, M. (2001, June). *Sustaining model systems of educational activity: Designing for the long haul*. Paper presented at the Symposium Honoring the Work of Ann Brown, University of California, Berkeley.
- Cuban, L. (2001, May). *Answering tough questions about sustainability*. Paper presented at the First Virtual Conference on Sustainability of Local Systemic Change. Retrieved July 26, 2003, from <http://sustainability.terc.edu/indix.cfm.keynote/paper>
- Dewey, J. (1963). *Experience and education*. New York: Macmillan. (Original work published 1938)
- Edens, K., Shirley, J., & Toner, T. (2001). Sustaining a professional development school partnership: Hearing the voices, heeding the voices. *Action in Teacher Education*, 23(3), 27-32.
- Engeström, R. (1995). Voice as communicative action. *Mind, Culture, and Activity*, 2, 192-214.
- Engeström, Y. (1987). *Learning by expanding*. Helsinki, Finland: Orienta-Konsultit Oy.
- Engeström, Y. (1990). *Learning, working, and imagining: Twelve studies in activity theory*. Helsinki, Finland: Orienta-Konsultit Oy.
- Engeström, Y. (1996). Developmental studies of work as a testbench of activity theory: The case of primary care medical practice. In S. Chaiklin & J. Lave (Eds.), *Understanding practice: Perspectives on activity and context* (pp. 64-103). UK: Cambridge University Press.
- Engeström, Y. (1999a). Expansive visibilization of work: An activity-theoretical perspective. *Computer Supported Cooperative Work*, 8, 63-93.

- Engeström, Y. (1999b). Innovative learning in work teams: Analyzing cycles of knowledge creation in practice. In Y. Engeström, R. Miettinen, & R. Punamaki (Eds.) *Perspectives on activity theory* (pp. 377-404). UK: Cambridge University Press.
- Fullan, M. (2001a). *Leading in a culture of change*. San Francisco: Jossey-Bass.
- Fullan, (2001b). *The new meaning of educational change*. New York: Teachers College.
- Griffin, P., & Cole, M. (1984). Current activity for the future: The Zo-ped. In B. Roggoff & J. Wertsch (Eds.), *Children's learning in the "zone of proximal development": New directions for child development* (Vol. 23, pp. 45-63). San Francisco: Jossey-Bass.
- Griffin, P., & Cole, M. (1987). New technologies, basic skills and the underside of education: What's to be done? In J. A. Langer (Ed.), *Language, literacy, and culture: Issue of society and schooling* (pp. 110-131). Norwood, NJ: Ablex.
- Gutierrez, K. D., & Stone, L. D. (2000). Synchronic and diachronic dimensions of social practice: An emerging methodology for cultural-historical perspectives on literacy learning. In C. D. Lee & P. Smagorinsky (Eds.), *Vygotskian perspectives on literacy research* (pp. 150-164). UK: Cambridge University Press.
- Hargreaves, A., & Fink, D. (2003). Sustaining leadership. *Phi Delta Kappan*, 84(9), 693-700.
- Hedegaard, M. (1990). The zone of proximal development as basis for instruction. In L. C. Moll (Ed.), *Vygotsky and education* (pp. 349-371). UK: Cambridge University Press.
- Holland, D., & Reeves, J. R. (1996). Activity theory and the view from somewhere: Team perspectives on the intellectual work of programming. In B. A. Nardi (Ed.), *Context and consciousness: Activity theory and human computer interaction* (pp. 257-281). Cambridge, MA: MIT Press.
- Jonassen, D. H. (2000). Revisiting activity theory as a framework for designing student-centered learning environments. In D. H. Jonassen & S. M. Land (Eds.), *Theoretical foundations of learning environments* (pp. 89-121). Mahwah, NJ: Lawrence Erlbaum.
- Kuutti, K. (1997). Activity theory as a potential framework for human-computer interaction research. In B. A. Nardi (Ed.), *Context and consciousness: Activity theory and human-computer interaction* (pp. 17-44). Cambridge, MA: MIT Press.
- Laboratory of Comparative Human Cognition (LCHC). (1982). A model system for the study of learning difficulties. *Quarterly Newsletter of the Laboratory of Comparative Human Cognition*, 4, 39-66.
- Laboratory of Comparative Human Cognition (LCHC). (1983). Culture and cognitive development. In P. Mussen (Series Ed.) & W. Kessen (Vol. Ed.), *Handbook of child psychology: History, theory, and methods* (Vol. 1, pp. 298-356). New York: John Wiley.
- Nicolopolou, A., & Cole, M. (1993). The Fifth Dimension, its play world, and its instructional contexts: The generation and transmission of shared knowledge in the culture of collaborative learning. In N. Minnick & E. Forman (Eds.), *The institutional and social context of mind: New directions in Vygotskian theory and research* (pp. 283-314). New York: Oxford University Press.
- Nocon, H. (2000). *Developing hybridized social capital: Communication, coalition, and volunteering in non-traditional communities*. Unpublished doctoral dissertation, University of California, San Diego.
- Nocon, H., Nilsson, M., & Cole, M. (in press). Spiders, firesouls, and little fingers: Necessary magic in university-community collaboration. *Anthropology and Education Quarterly*.
- O'Neil, J. (2000). Fads and fireflies: The difficulties of sustaining change. *Educational Leadership*, 57(7), 6-9.
- Sarason, S. B. (1990). *The predictable failure of educational reform: Can we change course before it's too late?* San Francisco: Jossey-Bass.



- Tyack, D., & Cuban, L. (1995). *Tinkering toward utopia*. Cambridge, MA: Harvard University Press.
- UC Links Statewide Office. (1998). *University-community links to higher learning* (Annual report for 1997-1998). Berkeley: UC Links Statewide Office, University of California Office of the President.
- UC Links Statewide Office. (2001). *University-community links to higher learning* (Annual report for 2000-2001). Berkeley: UC Links Statewide Office, University of California Office of the President.
- Vásquez, O. A. (1993). A look at language as a resource: Lessons from La Clase Mágica. In M. B. Arias & U. Casanova (Eds.), *Bilingual education: Politics, practice and research* (pp. 199-223). Chicago: University of Chicago Press.
- Vásquez, O. A. (1994). The magic of La Clase Mágica: Enhancing the learning potential of bilingual children. *Australian Journal of Language and Literacy*, 17(2), 120-128.
- Vásquez, O. A. (2003). *La Clase Mágica*. Mahwah, NJ: Lawrence Erlbaum.
- Vygotsky, L. S. (1978). *Mind in society*. Cambridge, MA: Harvard University Press.

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