

John Dewey's Philosophy of Education Is Alive and Well

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Abstract

Offering an introduction to both John Dewey's philosophy of education and the 4-H Youth Development Program, this paper draws clear connections between these two topics. Concepts explored include Dewey's principles of continuity and interaction, and contagion with respect to learning. Roles of educational leaders (including teachers) are investigated in the context of a discussion about the structuring of opportunities for students to develop habits of meaningful and life-long learning. Specific examples are described in depth to demonstrate, from a Deweyan perspective, the educational process and value of 4-H participation. Brief comments are made about the place of 4-H in the U.S. system of public education.

Introduction

We assert that, contrary to popular belief, John Dewey's philosophy is alive and well, in practice, and affecting the lives of millions of children and teenagers in the United States alone. Furthermore, practice consistent with Dewey's philosophy of education is perfectly normal in *public* education. However, to find strong evidence of this assertion, you may have to look beyond the walls of public schools. You may have to look at a public education program that engages more than six million youth on an annual basis and is compelling enough to recruit more than 100,000 parents and other community members as volunteers, many of whom receive training and teach in the program.

The program we have in mind supports the U.S. Department of Education's goal of improving students' academic achievement in verbal, mathematical and scientific literacy (2003). It fosters the development of life skills that were identified by the U.S. Department of Labor's (DOL) Secretary's Commission on Achieving Necessary Skills (SCANS) Report (1991). It has a track record for effectively supporting youth in learning to make decisions that support their health and well-being (National Research Council and Institute of Medicine, 2002). Interestingly enough, this

program is not administered by the U.S. Department of Education, the U.S. Department of Labor, or the U.S. Department of Health and Human Services. We are talking about the 4-H Youth Development Program. It has been funded through cooperative agreements among county governments, land-grant universities, and the U.S. Department of Agriculture since the turn of the twentieth century.

While the roots of this program are in rural America, the majority of participants exposed to 4-H programs in the twenty-first century live in urban areas. The 4-H Youth Development Program is available to youth in every county in the United States. In this paper, we will provide an overview of the 4-H program, an interpretation of key elements of Dewey's philosophy of education, and with the use of specific illustrations, we will show why we believe that education consistent with the implications of Dewey's educational philosophy is alive and well, thriving on the periphery of the U.S. public education system.

Dewey's Philosophy of Education

Before proceeding, we want to clarify the scope of our analysis with respect to Dewey's philosophy, as well as our key assumptions as we enter into this work. First, we recognize that while educational programs that have been influenced by John Dewey's philosophy are often referred to as experiential education programs, the expression "experiential education" is not one that comes from Dewey's writings. While it is true that one cannot have education without experience, "experiential education" has come to have particular meaning because of its emphasis on the conscious inclusion of student experience as part of a core curriculum.

Our second point is that Dewey's philosophy provides a lens for seeing the quality of educational experiences. It does not provide a template for building an educational program. By providing a lens for examining education that focuses on certain qualities of educational programs, Dewey (1938) provides educational theory that can be used for developing and assessing practice.

For the purposes of this paper, we will focus primarily on what Dewey (1938) puts forward in *Experience and Education*, and to be more precise, we are focusing on Dewey's principles of interaction and continuity. In *Experience and Education*, Dewey maps out what he means by an "experience," and what it takes for an experience to carry "educational" value. One of Dewey's premises is that student experience results from the interaction between the student and the environment. This is Dewey's "principle of interaction." Factors that affect student experience include those that are "internal" to the student, and those that are "objective" parts of the environment. The students' perceptions of, and reactions to, the objective factors are influenced by their attitudes, beliefs, habits, prior knowledge, and emotions. The other premise of Dewey's theory is called the "principle of continuity." It states that "every experience both takes up something from those which have gone before and modifies in some way the quality of those which come after" (p. 27). Dewey explains that people develop habits of emotional response, perception, appreciation,

sensitivity, and attitude. These habits, developed from past experiences, affect future experiences.

The principle of interaction and the principle of continuity determine, for Dewey, the quality of an educational experience. He describes them as “longitudinal and lateral aspects of experience” (Dewey, 1938, p. 42) that intercept at any situation. Understanding the quality of a person’s experience by using this theory requires consideration of how the experience contributes to the development of that person’s habits (principle of continuity) and the immediate nature of that person’s connections with her/his environment (principle of interaction). Finally, we are in full agreement with the following statement by Dewey:

Perhaps the greatest of all pedagogical fallacies is the notion that a person learns only the particular thing he is studying at the time. Collateral learning in the way of formation of enduring attitudes, of likes and dislikes, may be and often is much more important than the spelling lesson or lesson in geography or history that is learned. For these attitudes are fundamentally what count in the future. The most important attitude that can be formed is that of desire to go on learning. (p. 49)

Therefore, we view the quality of an educational experience as being intrinsically connected with its long-term consequences and including the effects of both collateral learning and the results of directed lessons. Further, we believe this perspective is consistent with what Dewey set forth in *Experience and Education*.

On the 4-H Educational Program

To understand how learning takes place in 4-H programs, it is important to be familiar with the different components of 4-H, how they are structured and how they operate. In general, the youth involved in 4-H programs are from 5 to 19 years old. Very often, the younger or primary members (those from 5 to 8 years old) participate differently than the older youth, especially in terms of competitive events, project involvement and awards. Regardless of age, youth belong voluntarily to 4-H.

Youth are involved in many types of 4-H programs, such as in-school and after-school programs, camping programs, teen-teacher programs, and 4-H clubs. For the purpose of this paper, we will confine discussion to the 4-H club. While the specific details in our examples would be different, the points we are making could be made with reference to any of the program types listed above.

4-H clubs are usually neighborhood or community-based and are governed by youth officers, who are elected by the youth members of each club. The officers are assisted or guided by adult volunteer leaders who take on different positions to support the work of youth in the club. Within the structure of the club, youth members, usually with volunteer adult assistance, form and volunteer to serve on committees that take responsibility for planning and implementing club activities—such as fundraising activities, membership drives, field trips, family nights, food drives,

community clean-ups and beautification activities, clothing and toy drives for homeless children, and so forth. In general, these activities tend to fall in the categories of service projects, fun and educational events for the 4-H community, and 4-H business.

Usually it is the older youth members of a club who become elected officers and chairs or co-chairs of the various committees. Younger members begin to serve on committees in various capacities and are increasingly given more responsibility as they gain experience and their organizational and leadership skills progress. Ideally, all of the members who are in leadership roles (officers and committee chairs) are working and reflecting on their work experiences under the direction and guidance of a trained adult volunteer leader. The main focus of club membership in 4-H is on the development of leadership, citizenship, and other life skills, as depicted by the Iowa Life Skills Model (Hendricks, 1998).

As members of 4-H clubs, youth are invited to join project groups. These groups meet throughout the course of a year. The project groups are smaller social units that support youth in their personal development and exploration of common interests. Youth develop and complete individual and group projects in these smaller groups with the ongoing support of adult volunteers. For instance, a gardening or horticulture group might work on developing a community garden. Individuals within the group might plant, tend to, and harvest particular crops and then contribute them to a food bank, take some to a fair for exhibition, and/or use them as ingredients for a cooking project.

The 4-H project group is extremely important in the life of a 4-H member. All 4-H club members participate in at least one project group each year, and many youth in 4-H participate in several projects at a time. In 4-H, young people can choose from more than 100 projects in eight cluster areas: animal science, engineering, family and consumer sciences, leisure education and health science, plant science, resource science, and social science. In fact, 4-H members or groups of 4-H'ers may design their own projects.

The 4-H program utilizes a unique approach to its project-based learning. The program's infrastructure and methods, which have been cultivated over decades, present youth with opportunities to develop skills that transcend their work on individual projects. For many members, this leads to a cohesive experience over the course of several years. Specifically, the 4-H program creates structured opportunities for youth to develop record keeping, project management, peer teaching, group leadership, and public speaking skills, regardless of whether youth remain focused on a single project area or sample from a variety of project offerings. Youth can gain cumulative credit for work that they do over a period of several years with respect to public speaking, leadership, and participation in club and community activities.

In discussions with hundreds of adults who were 4-H members, record keeping and public speaking are often mentioned as most meaningful in their personal development. In fact, many adults talk about how these skills, developed in 4-H, have helped them in other capacities in their lives and well into adulthood.

In 4-H, youth take responsibility for what they want to learn by choosing which project groups to join, setting their personal project goals, and planning their particular projects.¹ As members' interests change or expand, they can choose to become involved in new projects at any time. Most 4-H project groups meet from 8 to 12 times over the course of the project, which may take anywhere from 2 to 12 months to complete. Usually, youth experience a process of exploring a topic of interest, planning a specific project to carry out, implementing the plan, which culminates in the presentation of a product or performance, reflecting on the experience and producing a written evaluation in the form of a project report. Often the report is then reviewed by several adults, who provide feedback to the youth with the intention of supporting the 4-H member's further development, whether in a 4-H project or other areas of life. Embedded in this sequence of activities is a cycle of planning, preparing, practicing, and performing that has been linked to the successful engagement of inner city youth in authentic learning activities, even youth who are disaffected in school (Heath & McLaughlin, 1994). It is interesting to see how the core elements of a program developed for rural youth are equally effective for engaging urban youth in educational experiences. It is also worth noting that the 4-H program has an additional phase in the cycle, one which is relatively unique to 4-H and central to the strength of the organization's effectiveness: formal reflection and reporting by the youth on what they have learned during the course of a project. There is a long tradition of keeping a record book with a specific format for noting what was tried, what was accomplished, how much the project cost, what was learned, and how the youth feel about their performance in their project areas.

As members progress through a particular project, developing knowledge and skills, as well as developing leadership skills through 4-H club involvement (e.g., committee work, serving as officers), they can volunteer to play an important teaching or administrative role in a project group. This new and expanded role, referred to as a junior or teen leader, is in addition to or in place of being a regular project group member. Junior and teen leaders participate in leadership development through a planned program approved by an adult volunteer leader. Whereas a junior leader assists an adult volunteer, a teen leader is assisted by an adult volunteer in providing leadership for the project. From the authors' experiences, this expanded role is one reason for some members' continued involvement in 4-H from year to year.

Another reason for remaining in a particular project is the effectiveness of the adult volunteer leader working with a project group. As Dewey (1938) discussed, the role of a teacher (or in the case of 4-H, an adult volunteer leader), is to create an appropriate environment for students (4-H members) to learn, and to provide guidance for the students (4-H members) to make their interactions with the environment positive and meaningful. A 4-H leader who manages to keep the 4-H members interested and motivated also keeps 4-H members coming back.

In 4-H projects, it is the role of the adult volunteer to facilitate the learning process. Volunteers can help 4-H members process new information on a higher

and more meaningful or knowledge-building level by first setting the stage for youth to have experiences with a minimal amount of direction, then by asking appropriate questions at timely points in a learning cycle,² and finally, by encouraging true reflection. This facilitation and guidance leads to a better understanding of the new knowledge than would be the case without the leader facilitation. In order to be effective, the leader must “be skilled in structuring the intellectual and social climate of the group so youth discuss, reflect on, and make sense of their learning” (Carlson & Maxa, 1998, p. 48). Ponzio and Stanley (1997) extend this idea by noting what results when a 4-H leader does not help guide members through the experiential cycle:

By not encouraging this process of inquiry during “hands-on” experiences, youth can be cheated out of skills that encourage them to be competent and capable. Being a true leader is about sharing your worldview with the youth you work with as well as trying to understand their view of the world. Through collaboration of feelings during the sharing of experiences, we all expand our knowledge. (p. 6)

Interaction and Continuity in 4-H

In the 4-H club structure, 4-H members of all ages have numerous opportunities for successive experiences in leadership, community service, and other life skill areas. Leadership and civic involvement is occurring all around them, and whenever members are ready to become involved, they have opportunities to do so. In fact, members who volunteer for the first time to join a committee probably have seen many of their 4-H friends join in to make a difference. Sometimes members have waited to raise their hands to volunteer until a specific committee or other function caught their attention—possibly a toy drive for children in a low-income housing complex moved them to action, or a walk-a-thon raising funds for an ill community member was the motivating force. Perhaps a friend volunteered to be on the committee, and they wanted to work with the friend. There are dozens of opportunities for meaningful involvement throughout the 4-H year.

Once 4-H members join committees, they continue with the process of an educational experience by constantly gaining and modifying bits of information through activities of service and reflection. Also, the interaction with their environment in this situation—including peers, the youth chairperson and an adult volunteer providing guidance to the committees—contributes to the “overall educative significance and value” (Dewey, 1938, p. 43) of the experiences. Once their committee’s work is completed, the 4-H’ers will have ample opportunity to use their new skills in leadership and civic involvement by serving on other committees. Possibly, they will become a committee co-chairperson and then a committee chairperson. Their progression of developed leadership experiences can be understood in terms of Dewey’s principle of continuity, while their specific engagement in leadership experiences can be understood in terms of Dewey’s principle of interaction.

Their 4-H leadership experience may culminate in their serving as officers of the local 4-H club. Some 4-H'ers may become involved beyond the club by being part of the 4-H volunteer management organization at the county level, or they may become 4-H ambassadors at the state level. Later on in life, after their 4-H careers are over, the members may remember favorably all of their leadership experiences as 4-H'ers and decide to become involved in their communities (e.g., as a Parks and Recreation Board member, Arts Council coordinator, bike path committee member, 4-H leader), as discussed by Putnam (2000). 4-H members' journeys in the arena of leadership and civic involvement, and the experiences they call on and continuously modify, probably will continue throughout their lives.

A second example of how a 4-H'er may progress through a series of educative experiences (as understood in terms of Dewey's principles of interaction and continuity) is conveyed in a description of how a 4-H'er works through the development of an oral presentation. An example from one of the authors' counties can illustrate this point. A middle-school student has been involved in a horse science project with her local 4-H club for three years. She has worked under the guidance of an adult 4-H volunteer leader, learning about the world of horses and riding, and this past year she decided that she wanted to somehow have a horse of her own. Around the same time, she decided that she wanted to do "something different" for her upcoming 4-H public talk, commonly called a 4-H presentation.

After some literature and Internet research on how to obtain an inexpensive horse, she found out about Premarin horses and foals. (Preamarin is an estrogen replacement drug derived from pregnant mares' urine. There are questions about the conditions that these horses are kept under, as well as the urine collection techniques. In addition, after an abbreviated nursing period, the mares are returned to the collection barns, and the farmers usually dispose of surplus foals. A few female foals may be kept for possible Premarin production in the future, but most foals are slaughtered after reaching a desirable weight and enter the foreign horsemeat market.) There is a movement to purchase these horses in order to save their lives. This past year, the 4-H member became involved in this movement. Meanwhile, she used her gained knowledge from her experiences with the 4-H horse project and her related activities to prepare a 15-minute 4-H presentation for delivery at the countywide 4-H Presentation Day. Her presentation, entitled "Preamarin Babies," was judged to be very interesting and well presented. The judges offered some constructive written criticism after the standard question-and-answer period following her presentation.

After receiving and reflecting on the judge's comments, the member had to decide whether to take her presentation to the next level, the regional level. After considering the comments, her feelings, knowledge, commitment, and time frame, she decided to rework her presentation and offer it at 4-H Regional Presentation Day. After presenting at this event, she once again received input from judges and decided to take her presentation to the next level—4-H Statewide Presentation Day. At this time, she changed the title of her presentation to "Preamarin Babies: Why I Oppose the Use of Premarin."

The shift in title reflects both a moral and intellectual development in the 4-H member's educational process. The 4-H member's educational journey took her from an investigation of how to obtain an inexpensive horse, to the research and preparation of an oral presentation (on Premarin babies), to advocacy work for the welfare of mistreated horses. Through her participation in the 4-H program, the young woman came to see a significant obstacle in her life—lack of financial resources to secure the horse that she dreamed of owning—as an obstacle that she could overcome with hard work, clever thinking, and the support of others. By welcoming the challenge of her situation, practicing creative problem-solving skills, and engaging in service-learning activities with fellow community members, the 4-H'er supported others while fulfilling her own dream. She became a valuable resource in her community and an effective public speaker who acts in accordance with the values she has learned to articulate. As of this writing, she has rescued five horses, keeping two of them for her very own. This 4-H member plans on continuing to rescue horses and find new homes for them. She also has set a goal of becoming a large-animal veterinarian.

We are of the opinion that the two examples presented above are indicative, at the core, of the many types of high-quality educational experiences that 4-H members enjoy during their 4-H careers. These experiences are not only transferable across 4-H projects or between 4-H club and 4-H project experience, but also from 4-H to school, and to other situations in everyday life both during one's youth and into adulthood. As discussed earlier, the practices of record keeping and making oral presentations, under the mentorship of peers and adults, are commonly remembered by 4-H alumnae/alumni as being part of a valued continuum of learning. From the authors' observations of over 30 combined years in the program, many members seem to know that they are building on and increasing knowledge as they remain in 4-H and stay active in projects.

The 4-H Link between Public Education and Dewey's Philosophy

Three broad themes converge to tell the story of how the 4-H Youth Development Program offers scholars and practitioners an opportunity to learn about a systematic approach to education of American youth that is consistent with John Dewey's philosophy. These themes are: the role of an educational organization, the political and social environment created therein, and curriculum both in terms of content and pedagogy. At this point, we will expand the scope of our discussion to include references to remarks that Dewey made in *The School and Society* (1902/1980), *Moral Principles in Education* (1909/1975), and *Democracy and Education* (1916/1966) as well as *Experience and Education* (1938). While we will only be able to begin this discussion, given the limitations of this format of communication, our hope is that by providing the in-depth description of the 4-H Youth Development Program above, explicating how the educational practices of the 4-H program are aligned with Dewey's philosophy with respect to the principles of interaction and continuity, and demonstrating the effectiveness of the program in positively affecting the

educational experiences of millions of youth, we are planting seeds for readers to grow their own ideas about the deeper connections among 4-H, Dewey's philosophy, and K–12 education. Before leaving the reader, however, we will take a few moments to step back from the specific examples of how the 4-H Youth Development Program operates, and briefly visit the three overarching themes that speak to areas in which the 4-H link between Dewey's philosophy and K–12 schooling might be fruitfully explored.

In reviewing several of Dewey's written works and thinking about how the 4-H Youth Development Program responds to the implications of Dewey's philosophy, the roles of educational organizations and institutions emerged as a recurring theme. Consider the following quotation from *Moral Principles in Education* (1909/1975):

The moral responsibility of the school, and of those who conduct it, is to society. . . . The educational system which does not recognize that this fact entails upon it an ethical responsibility is derelict and a defaulter. It is not doing what it was called into existence to do, and what it pretends to do. Hence the entire structure of the school in general and its concrete workings in particular need to be considered from time to time with reference to the social position and function of the school. (pp. 7–8)

In *The School and Society*, Dewey (1902/1980) shares more thoughts about the roles that schools do and can play as organizations that serve society:

To do this means to make each one of our schools an embryonic community life, active with types of occupations that reflect the life of the larger society, and permeated throughout with the spirit of art, history, and science. When the school introduces and trains each child of society into membership within such a little community, saturating him with the spirit of service, and providing him with the instruments of effective self-direction, we shall have the deepest and best guarantee of a larger society which is worthy, lovely, and harmonious. (pp. 19–20)

Whereas schools are governed by local, state and federal policies, and have as their primary mission to support the academic learning of students as evidenced by results on standardized tests, 4-H clubs are far more responsive to local needs and engaging of parents and other community members in supporting the social, moral, physical, emotional and intellectual development of youth. Children and teenagers are recognized as valuable members of the societies in which they are living. It is not our suggestion that schools emulate the 4-H club programs. Such a suggestion would reflect ignorance or insensitivity to the embedded contexts in which schools operate. What we are suggesting is that educational leaders explore ways of strengthening the connections between youth development programs such as 4-H and schools. In 2005, despite the growing research on youth development, there exists a great chasm between the field of youth development and the field of education. In universities, students preparing to serve as public school teachers and administra-

tors are seldom exposed to the expertise housed in departments of human and community development. If we are to take Dewey's work seriously, we need to consider that a false dichotomy has been socially constructed that separates youth development from education programs and is detrimental to the educational enterprises in this country. By inviting 4-H programs into schools, administrators open the doors to greater parent involvement and stronger connections with local communities. A 4-H program being housed at a school may be part of a successful strategy for the school to fulfill its lofty goals in serving society and guaranteeing "a larger society which is worthy, lovely, and harmonious" (Dewey, 1902/1980, p. 20).

As noted previously, when Dewey considers the role of an educational organization and, in particular, a public school, he emphasizes the importance of thoughtfully providing an educational environment as well as presenting students with specific opportunities for meeting particular curricular objectives. Our second theme in discussing the 4-H link between Dewey's philosophy and K-12 schools is the political and social environment constructed by 4-H youth and their volunteering adult partners. In the 4-H club, youth practice democracy. They are exposed on an ongoing basis to structured opportunities for providing service to the community of which they are members. They form social relationships with peers and people of different generations. The hallmarks of a 4-H career revolve around public speaking, project management, leadership development, and community service as well as the development of skills and knowledge in areas of interest. Consider how 4-H responds to the following statement of Dewey's (1916/1966):

Not only is social life identical with communication, but all communication (and hence all genuine social life) is educative. To be a recipient of a communication is to have an enlarged and changed experience. One shares in what another has thought and felt and in so far, meagerly or amply, has his own attitude modified. Nor is the one who communicates left unaffected. Try the experiment of communicating, with fullness and accuracy, some experience to another, especially if it be somewhat complicated, and you will find your own attitude toward your experience changing; otherwise you resort to expletives and ejaculations. The experience has to be formulated in order to be communicated. (p. 5)

After the introduction of the principles of interaction and continuity in *Experience and Education*, Dewey (1938) wrote:

The trouble with traditional education was not that educators took upon themselves the responsibility for providing an environment. The trouble was that they did not consider the other factor in creating an experience; namely, the powers and purposes of those taught. It was assumed that a certain set of conditions was intrinsically desirable, apart from its ability to evoke a certain quality of response in individuals. This lack of mutual adaptation made the process of teaching and learning accidental. (pp. 44-45)

The 4-H program engages tens of thousands of volunteers in order to respond to the individual needs of youth and provide many opportunities for youth to communicate and socialize with a range of adults as well as youth. While schools cannot bring in as many volunteers for the duration of the school day, by connecting 4-H with schools, the schools could employ research-based methods of engaging parents and other community members in developing educational opportunities of students. Even if the school promoted the formation of a 4-H club that met at a location other than the school and in the evening, by encouraging participation by students and parents, the school would be moving toward addressing Dewey's concerns about the need for youth to be educated in positive social contexts in which they practice expressing themselves and listening to others describe their experiences.

The third theme of connection between K–12 education and Dewey's philosophy that passes through the 4-H program is based on curriculum. There are vast quantities of 4-H curricula available through county offices, state offices, and national 4-H. The curricula can be used to support project-based, problem-based, and/or service-learning activities that are student-centered. Dewey (1909/1975) wrote:

The child is born with a natural desire to give out, to do, to serve. When this tendency is not used, when conditions are such that other motives are substituted, the accumulation of an influence working against the social spirit is much larger than we have any idea of,—especially when the burden of work, week after week, and year after year, falls upon this side. (pp. 22–23)

4-H curricula can be used to address content standards in virtually every subject and at every grade level. What will take some effort on the part of a teacher wanting to take advantage of these curricular offerings is the process of identifying what is best suited for a particular purpose and how it might be adapted to best respond to a particular group of students. Incorporating some 4-H curricula into a course offered to students in school can be a way of creating structured opportunities for students to engage in authentic learning about a topic that is also being covered through book learning, lecturing, or other forms of classroom learning. Rather than drawing on a set curriculum from 4-H, teachers may want to see what is offered in terms of structures for engaging youth in job internships, apprenticeships with craftsmen, and other forms of self-directed and group-directed learning projects. It may be that the structure for providing youth with these opportunities is more valuable to some teachers than a curriculum that covers a content area (such as nutrition, animal science, bread making). Again, we refer to Dewey's (1902/1980) words:

The great thing to keep in mind, then, regarding the introduction into the school of various forms of active occupation is that through them the entire spirit of the school is renewed. It has a chance to affiliate itself with

life, to become the child's habitat, where he learns through directed living, instead of being only a place to learn lessons having an abstract and remote reference to some possible living to be done in the future. (p. 12)

Schools can work with 4-H in three ways. The school can support youth and parents in getting involved with 4-H; the school can adopt a 4-H program, such as an after-school program, to be housed on the school site; and/or the school can adapt 4-H curricula and apply 4-H principles within the context of the regular school day. The 4-H Youth Development Program is often overlooked in discussions about K–12 education. While it serves the K–12 population, it is considered a youth development program and, as such, is often thought of as being disconnected from schooling. This perpetuation of a socially constructed distinction between “youth development programs” and “education programs for youth” is unfortunate because it obfuscates the connections between their purposes, and the potential of youth development programs to support the missions of schools.

Notes

1. For discussions about 4-H as a youth driven program in which members function as self-directed learners, see Carlson, 1998; Carlson and Maxa, 1998.
2. For more information on the learning cycle, refer to Carlson and Maxa, 1998; Horton and Hutchison, 1997; Karplus et al., 1980; Kolb, 1984; Marek and Cavallo, 1997; Pfeiffer and Jones, 1981; Ponzio and Stanley, 1997.

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