Learning by Doing and the Youth-Driven Model

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In the nonformal setting of 4-H Youth Development, it has long been the motto that youth learn best when they are actively involved in relevant, real-world situations. This "learning by doing" is often associated with the type of learning model encouraged by 4-H and other nonformal youth development organizations. In it, youth are actively engaged (hands-on) and having fun exploring a variety of topics with minimal rewards or extrinsic motivators.

The self-directed learner is the foundation of the youth-driven model. In a nonformal setting, self-directed learners take control of both the outcome and the means of learning (Mocker & Spear, 1982). They can choose the topic of study because the choice is relevant to their future (Rodin, Schooler, & Schaie, 1990). Youth often participate in activities because of internal motivation, internal rewards or satisfactions, and/or lack of evaluation. Samdahl (1988) refers to intrinsic motivation as self-motivation that can strongly influence the outcome of one's experience. Even as early as 1918, Kilpatrick suggested that intrinsic motivation leads to lifelong learning.

Learning by doing requires youth involvement or interaction with the objects they are studying.

Photo by Deborah Curry, Iowa State University Extension

Csikszentmihalyi's (1975) flow theory is closely tied to intrinsic motivation and intrinsic reward. Developed from the stimulus-response paradigm (Csikszentmihalyi, 1975), flow theory adds the component of mental control. The stimulus is the activity and the reward is the flow experience. Flow is described as the harmony of mind-body experienced through the loss of awareness of time. The theory of flow is identified as the ratio or relationship between an individual's skills and the challenge of the activity. As skills improve, so should the challenge to maintain the flow experience. The flow experience results in a sense of discovery, higher level of performance, engrossed attention, perceived control, loss of a sense of self, and intrinsic rewards. Flow experiences are goal-related, require skill or action equal to one's opportunity, and include a motion or action that becomes almost effortless. Recently, flow has been applied to educational/recreational experiences that occur in a variety of settings (Csikszentmihalyi, 1988, 1990).

Involvement

Learning by doing requires youth involvement or interaction with the objects they are studying. Chaiken (1980) found that levels of involvement correlated with minimum or maximum levels of cognitive processing. The use of hands-on devices such as self-scoring quizzes, interactive exhibits, tape cassettes, or interactive computers has been correlated with increased learning in educationally oriented recreational settings (Screven, 1969; Shettel, 1973; Salomon & Leigh, 1984; Morrissey, 1989).

Involvement acts as an introductory request to the cognitive process. It helps stimulate the need to know. Compliance theory ("foot-in-the-door") states that people are more likely to comply with a larger request if given a small request first (Freedman & Fraser, 1966). Physical involvement acts as that small request leading to compliance with the larger request for cognitive processing or thinking (Carlson, 1993). Hands-on activities can provide a way that unmotivated youth can become engaged in learning (Greenglass, 1986). Physical involvement appears to act as a catalyst or spark to the cognitive mind set. When combined with a high level of self-control (perceived control), it appears to encourage cognitive processing (Carlson, 1993).

Perceived Control

Youth must feel in control of their environment to be mindful or engaged in learning (Langer, 1989). Making decisions, feeling in control, or manipulating possible outcomes results in more engaged or mindful experience (Langer, 1989). Choices motivate youth to control their own learning outcomes. Greater levels of perceived control encourage high levels of both cognitive processes and pleasure in learning (Langer, 1989). Conversely, externally controlled environments have negative consequences. Studies show that controlled environments lower the creativity of children, impair cognitive learning of college students, and create negative feelings in general and a less positive view of others (Deci & Ryan, 1985).

Self-efficacy

The individual's judgment or perception of his/her own ability in executing different levels of performance is self-efficacy. Self-efficacy is strong in the self-directed learner. A precondition to a sense of control is a perception of ability or self-efficacy (Bandura, 1977). Self-efficacy can influence levels of motivation, cognition, emotions, and behavior in coping with adverse events (Rodin, Schooler, & Schaie, 1986). Self-efficacy is made up of contingency judgment (degree to which individuals perceive they will make a difference) and competence judgment (capacity, ability, or skill to do the intended action) (Weisz, 1990). Both of these grow with age and mental development. The opportunity to experiment or tinker in a hands-on environment can increase self-efficacy and learning. This is often found when youth play on computers with educational programs.

The environment for the self-directed learner needs to incorporate self-efficacy, involvement, and high levels of perceived control in order to make learning meaningful. The self-directed learner is motivated by choice, intrinsic reward, a sense of discovery, and a "flow" experience.

Youth-Driven Model

The 4-H Youth Development Program provides a wide range of projects for young people to choose from, turning the learning over to youth and allowing them to decide what they want to learn and how they want to learn it. Thus, the youth-driven model is based on a learner who is self-directed and involved and has a sense of choice within the learning environment (perceived control). Youth become engaged because they can be involved both physically and mentally with the topic. The model assumes that youth are intrinsically motivated with choices that are fun and relevant to their futures, and that youth can complete the task or project at hand (self-efficacy). Young people who participate in 4-H activities are often self-motivated to learn when they have a choice in what they learn.

Physical involvement encourages cognitive processing in youth.

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Youth-Driven Model

Using questions to engage learners

What do I want to learn?

Identify a theme: make connections to different aspects of the knowledge base, work with a diverse group of people

How do I want to learn it?

Strategies: brainstorming, storytelling, data retrieval chart, simulation, advance organizers, lecture, collaborative problem solving

How do I want to show what I've learned?

Alternative assessments: multimedia presentations, computer-generated presentations, skits, puppets shows, murals, debates, models, speeches, magazines, journal writings, simulations

In an ideal youth organization, young people take a primary role in making decisions about what projects they or their group will pursue. The volunteer leader facilitates the project and shares leadership with the youth. The volunteer leader guides the learning experience by helping youth answer questions: What do I want to learn? How will I learn it? How will I share it? (Pate, 1996). This approach to nonformal education leads to increased relevance and a greater connection between the daily lives of youth and what they are learning. The fact that the young person is motivated greatly influences the outcome of his or her experience and contributes to a successful interaction with the subject area. New meaning or ideas come from making connections to real-life experiences, and this information becomes available for recall at a future time.

In the youth-driven model, youth engage in self-discovery in an atmosphere where there are no right or wrong answers. Youth thrive in an atmosphere where they can learn at their own pace and can evaluate themselves. Activities such as demonstrations, exhibit design, project work, and working with models accommodate individual learning styles and invite feedback for self-evaluation and reflection. These types of projects produce a tangible product that youth can look at, ask questions about, study, and celebrate when completed. The "My 4-H Stuff" binder is an ideal way to operationalize the youth-driven model because it captures the interest of the learner, helps identify how the 4-Her wants to learn, and shows how they can share this experience.

The youth-driven model implies that youth and adults learn together. It has proven effective when the leader is an active listener and learner in the situation (Joplin, 1995). Youth learn by helping to choose projects, sharing in discussions, participating in activities, and being active in the group, as well as by making decisions about how they will be evaluated and by what standards (Pate, 1996).

At the same time, volunteer leaders learn from the youth with whom they work, as well as from the activities they prepare and share. Leaders develop their own self-esteem, confidence, communication skills, and leadership skills by facilitating youth through their chosen project. With this approach, adults and youth each bring something to the environment and leave with a new experience.

Some resources for shared learning between youth and leaders include the World Wide Web, community experts, libraries, museums, extension services, telephone contacts, and science and technology centers.

Who Is Responsible for the Learning?

	Youth	Adults
Subject of interest	X	
How to learn	X	
How to share the learning	X	
Assessment		X
Resources		X

By giving youth responsibility for their own learning, youth development professionals and volunteer adults foster lifelong interests that will help youth gain the skills necessary to become literate, intelligent beings. To create mutually beneficial learning experiences, both youth and volunteer leaders need to understand each of their responsibilities and work together.

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