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## The Development and Evaluation of Experiential Learning Workshops for 4-H Volunteers

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## The Development and Evaluation of Experiential Learning Workshops for 4-H Volunteers

### Abstract

A series of three Experiential Learning (EL) workshops was designed by county- and campus-based researchers with the goal of improving the understanding and application of EL among volunteers in the University of California's 4-H Youth Development Program. The workshop series was implemented and evaluated using surveys and focus group interviews. Outcome data showed improved participant understanding of EL, the learning cycle, inquiry-based methods, and curriculum development. Additionally, volunteers' competence and confidence in delivering and developing experiential learning opportunities increased.

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## Introduction

A subcommittee of the Science, Technology, and Environmental Literacy (STEL) Workgroup of the University of California (UC) developed, tested, evaluated, and published a series of three Experiential Learning (EL) workshops that can be used to train volunteers in 4-H Youth Development Programs (UC-STEL, 2005). These workshops scaffold upon one another and provide volunteers with essential information and experiences necessary to enhance their knowledge and abilities to more effectively integrate EL opportunities in the projects and programs they lead.

## Experiential Learning

The basis of all experiential learning (EL) is that experience matters. Many educators believe that without an experience, there can be no true learning or real understanding of a concept or situation (Andresen, Boud, & Cohen, 2000; Kolb, 1984; Dewey, 1938). However, not all experiences are equally educative (Dewey, 1938), and experience alone does not necessarily lead to learning or mean that learning will take place. Without the opportunity to reflect upon an experience and apply new knowledge, experiences may be miseducative (Dewey, 1938). The educator must create an atmosphere in which experiences are reflected upon by the learner so they become meaningful and positive (Dewey, 1938; Enfield, 2001).

To accomplish true learning and real understanding, a sequence of three discrete components is

needed: 1) A "concrete experience" (Enfield, 2001; Kolb, 1984) where the learner is involved in an exploration, actually doing or performing an activity of some kind; 2) a reflection stage (Enfield; Kolb; Pfeiffer & Jones, 1981) whereby the learner shares reactions and observations publicly and processes the experience through discussion and analysis; and 3) an "application" or "conceptualization" phase that helps the learner deepen and broaden their understanding of a concept or situation by cementing their experience through generalizations and applications (Carlson & Maxa, 1998).

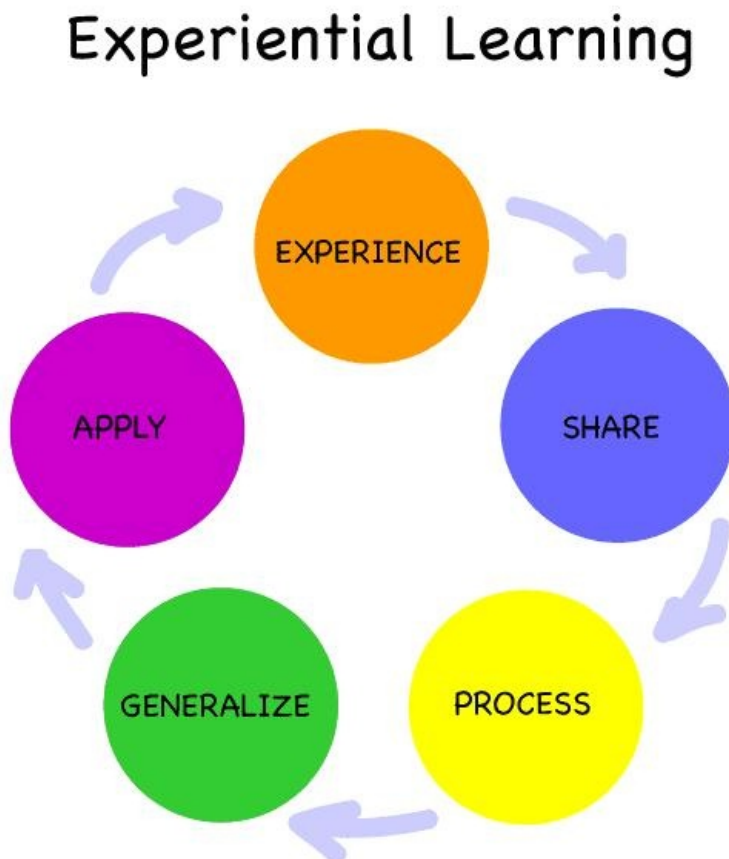
Another key point of the EL process is that it is a "recurring cycle" (Kolb, 1984). As a result of the reflection and application phases from one experience, new concepts, hypotheses, and/or impressions arise that lead the learner to further explorations, thus restarting the EL cycle. As John Dewey discussed so cogently in *Experience and Education* (1938), previous experiences affect current experiences, which naturally influence future experiences. The learning that takes place on one day will evolve into additional learning as time progresses.

It is also important to note that different EL cycles with varying numbers of stages or quadrants (three, four, or five) are described in the literature (Kolb, 1984; Pfeiffer & Jones, 1985; Marek & Cavallo, 1997; Usher, Bryant, & Johnston, 2000). However, all EL cycles share common features, and the number of stages is not critical. What is significant is that there is an opportunity for interplay between previous, current, and future experiences and between the learner and the environment (Dewey, 1938). Furthermore, it is essential to understand that active reflection and the application of knowledge are what make experiential learning different and more powerful than the models commonly referred to as "learn-by-doing" or "hands-on-learning" (Proudman, 1995).

## Experiential Learning in 4-H

Cooperative Extension/4 H faculty and county-based academic staff have been developing and promoting EL for use in 4 H for several decades (McCarther, Shields, & Zurcher, 1987; Horton & Hutchison, 1997; Horton, Hutchinson, Barkman, Machtmes, & Myers, 1999). Although a variety of models have been utilized in designing curricula and in developing training for 4-H volunteers and staff (Enfield, 2001), an EL model using a five-step learning cycle (Figure 1) based on the work of Kolb (1984) and Pfeiffer and Jones (1985) is the most common one currently used in the 4 H Youth Development Program as evidenced by the National 4-H Cooperative Curriculum System's materials.

**Figure 1.**  
5-Step Learning Cycle (UC-STEL, 2005).



## STEL EL Workshops

Training volunteers is essential to 4-H Youth Development Programs (Snider, 1985; Hoover &

Connor, 2001; Van Winkle, Busler, Bowman, & Manoogian, 2002; Smith, Meehan, Enfield, George, & Young, 2004). According to Diem (2001), 4-H volunteers need to understand the EL process in order to use it effectively. Additionally, 4-H volunteers who lead projects need to provide youth with time and opportunities for EL to occur (Ponzio & Stanley, 1997; Seibold, 2005).

To meet the essential need of training volunteers, the STEL team developed three content area independent EL workshops that can be downloaded at <http://www.experientiallearning.ucdavis.edu/default.shtml>. The workshops use the five-step learning cycle and follow an incremental design that targets the scaffolding of participants' confidence and competence (Smith & Enfield, 2002). Each workshop ranges in length from 2 to 3 hours and provides participants with relevant experiences to hone their understanding and application of EL.

### **STEL EL Workshop I: Understanding Experiential Learning**

Workshop I targets participants' understanding of EL and the five-step learning cycle by using hands-on activities, structured reflection, and modeling through practice. The workshop's content and organization, adapted from McArthur, Shields, & Zurcher, (n.d.), also provide opportunities for participants to relate EL and the learning cycle to the delivery of youth development projects and programs.

### **STEL EL Workshop II: Inquiry-Based Learning and the Experiential Learning Cycle**

Workshop II is designed for individuals who have attended Workshop I. Specifically, Workshop II reinforces the concepts of EL and the Learning Cycle while targeting participants' understanding of inquiry-based methods of instruction and distinguishes between hands-on learning and hands-on learning using inquiry.

### **STEL EL Workshop III: Developing and Adapting Curricula to Integrate Experiential Learning**

In Workshop III, participants build upon their understanding of concepts put forth during Workshops I and II. They review existing curricula for elements essential to EL and inquiry (e.g., open-ended questions, opportunities for reflection, authentic applications) and are taught how to modify curriculum materials to be more inclusive of these requisite components using the "Backward Design" approach (Wiggins & McTighe, 1998). Workshop III uses an interactive format that provides opportunities for peer-group reflection, modeling through practice, and coaching from facilitators.

## **Evaluation of STEL EL Workshop Series**

### **Data Collection**

In order to determine the effects of the STEL EL Workshops on participants, outcome data specific to the goals of each workshop were collected using multiple sources for the purpose of triangulating results. Data were collected from 4-H adult volunteers and teens who participated in STEL EL Workshops held at a variety of sites across California. Participants were from urban, rural, and suburban regions of the state and represented club-based and after school enrichment programs.

### ***STEL EL Workshop I: Understanding Experiential Learning***

Workshop Goal: To improve participants' understanding of EL and the five-step learning cycle.

Data Sources:

- Post-survey, administered immediately after the completion of STEL EL Workshop I; included Likert-type Scale (E = Excellent; VG = Very Good; G = Good; F = Fair; and P = Poor) and free-response questions. Surveys were administered to participants at six (6) EL I workshops (N = 120).
- Follow-up survey, administered approximately five months after the completion of STEL EL Workshop I; included Likert-type Scale (E = Excellent; VG = Very Good; G = Good; F = Fair; and P = Poor) and free-response questions. Follow-up surveys were sent to all persons who completed an EL I post-workshop survey; 57% (N = 68) replied.

### ***STEL EL Workshop II: Inquiry-Based Learning and the Experiential Learning Cycle***

Workshop Goal: To improve participants' understanding of the differences between hands-on learning and hands-on learning using inquiry.

#### Data Sources:

- Post-survey, administered immediately after the completion of STEL EL Workshop II; included Likert-type Scale (E = Excellent; VG = Very Good; G = Good; F = Fair; and P = Poor) and free-response questions. Surveys were administered at six (6) EL II workshops (N = 80).
- A focus group interview was held with a subset (N = 19) of adult volunteers and teens who had participated in one of the six EL II workshops (N = 80). Interview questions were open-ended and designed to encourage discussion around the goal of the workshops, as well as gain an understanding of how participants believed workshop concepts applied to their county-based programs.

### ***STEL EL Workshop III: Developing and Adapting Curricula to Integrate Experiential Learning***

Workshop Goal: To improve participants' understanding of how to evaluate and modify curriculum materials relative to EL, the learning cycle, and inquiry methods.

#### Data Sources:

- Post-survey, administered immediately after the completion of STEL EL Workshop III; included Likert-type Scale (E = Excellent; VG = Very Good; G = Good; F = Fair; and P = Poor) and free-response questions. Surveys were administered at six (6) EL III workshops (N = 33).
- A focus group interview was held with a subset of adult volunteers and teens (N = 19) who had participated in one of the six (6) EL III workshops (N = 33). Interview questions were open-ended and designed to encourage discussion around the goal of the workshops, as well as gain an understanding of how participants believed workshop concepts applied to their county-based programs.

## **Results**

### ***STEL EL Workshop I***

Outcome data from post-surveys and follow-up surveys indicated a strong gain in participants' knowledge and understanding of EL and the learning cycle and the application of EL concepts to their programs. Specific results from post-workshop Likert-type Scale and free-response survey questions included:

- Over 99% of the Workshop I participants (N=120) improved their knowledge of EL.
- Seventy-one percent of the participants ranked their post-workshop understanding of EL as "very good" or "excellent," as compared to 16% prior to the workshop experience.
- Only 20% of the participants rated their knowledge of the Learning Cycle as "very good" or "excellent" prior to Workshop I. Post workshop, participants' knowledge of the Learning Cycle improved to 58%.
- Ninety-four percent of the participants reported that they would be confident in applying EL to activities in their own work with youth as a result of participating Workshop I.
- Representative free responses to open-ended reaction questions included:
  - I feel more confident about applying the experiential learning model.
  - Now that I've done [the workshop] I feel confident enough to try it [EL] out.

The follow-up survey was sent to all 120 Workshop I participants within approximately 5 months. The survey focused on whether or not participants had applied the concepts of Workshop I to their education programs. Of those who replied (N=68), 57% indicated that they had changed their practices when working with youth by using skills and knowledge learned in Workshop I.

### ***STEL EL Workshop II***

Outcome data from post-survey and post-workshop focus group interviews indicated a strong gain in participants' understanding of inquiry-based learning. Specific results from the survey included:

- When asked about their knowledge of inquiry-based learning prior to Workshop II, only 8% of the participants provided a ranking of "very good" or "excellent." After their participation in the Workshop II, this increased to 67%.
- Overall, 80% (N=51) of the Workshop II participants confirmed feeling confident in applying

inquiry-based instruction to activities in their program as a result of their participation.

- Representative free responses to open-ended reaction questions included:
  - I feel confident enough to begin applying inquiry-based instruction at project level and would like to share what I learned with other project mentors in my club.
  - I feel that I can go and do a presentation on it [inquiry] with my own group.

Survey data were supported by responses to post-workshop focus group interview questions. To assess their understanding of inquiry-based learning, participants were asked *how they might recognize if an activity uses inquiry, or not*. Characteristic responses included:

- Inquiry allows you to ask the questions: "How can I achieve this goal or solve this problem?" "How can I make this happen? "
- [In inquiry], you use your own thinking and processing of information to figure out a problem yourself.
- An [inquiry-based] activity is one that gives you 'space' to work in; you get to use your imagination to solve a problem or question.

In addition, participants were asked *how their participation in the workshop influenced their confidence to teach using inquiry methods*. Representative responses included:

- The biggest part for me is remembering to 'let go.' When working with kids, you don't have to be in total control of their situation. The more I see inquiry and use it, the more confident I get.
- This workshop has given me more confidence. I'd be sure of myself in implementing inquiry-based activities."
- I think I'd do well. I would give them [youth] the time they need to explore using inquiry.

### ***STEL EL Workshop III***

Outcome data from post-survey and post-workshop focus group interview questions indicated a strong gain in their understanding of curriculum design, as well as their confidence to apply the Backward Design approach to their own programs. Specific results from the survey included:

- 97% (N=29) of the participants indicated an increase in their knowledge of curriculum development.
- When participants were asked to rank their knowledge of curriculum development before the workshop, 7% of participants gave a ranking of "very good" or "excellent"; post-workshop, this increased to 62%.
- Representative free responses to open-ended reaction questions about the Backward Design method included:
  - It actually makes sense to work backwards. If you know what your goal is you can establish the steps to get there.
  - Because it makes me think of the end result and what the kids will get out of it.
  - It will help me to evaluate curriculum and design activities.

Survey data were supported by responses to post-workshop focus group interview questions. To further assess participants' understanding of curriculum development using the Backward Design method, they were asked *how, if at all, their understanding of curriculum development had changed since their participation in the STEL EL III workshop*. Typical responses questions included:

- I think it [Backward Design] is a really good method. You can plan what your goals are going to be and you can design it [the curriculum] around that.
- The end result [desired results] was an easy thing. I struggled with determining the evidence of learning, but once I understood the end result, then it fit.
- Before I always just started working with the kids [in 4-H] without any specific [desired results]. Whatever they learned, we'd just go with the flow. By working backwards [using the Backwards Design method], it's going to help immensely.

Participants were also asked *how they might apply what they learned in the STEL EL Workshop III to their own education programs*. Representative responses included:

- We have a lot of new leaders in our county who . . . don't understand how to put curricula together. I can bring this [Backward Design] model back to them and help them to set goals and see how they are going to see if kids actually learned something from it.
- I found the Backward Design method helpful. I never thought of doing it like that before. The middle step of determining the evidence ahead of time will be helpful in planning my activities.
- I see it [Backward Design Method] as a great vehicle for Junior or Teen Leaders who are going to lead a 4-H project. It would be a helpful tool for them to realize the goals or outcomes of a particular project.
- I've been sort of using the Backward Design method in my 4-H projects, but I haven't been following through to see if the kids have learned anything, so it's been frustrating. What I learned in this workshop will really help me.

## Discussion

The STEL EL Workshop series is an effective method of training 4-H volunteers. Participants in this study gained new knowledge and skills that, in turn, had applications directly related to Extension programs or projects that they lead in their counties. The content and methods put forth in the STEL EL trainings served to support Kolb's (1984) statement that the EL process follows a "recurring cycle." As a result of their participation in one or more STEL EL trainings, novel experiences arose that provided volunteers opportunities to apply their newly acquired knowledge and skills to their own youth programs.

As mentioned previously, learning that takes place on one day will evolve into additional learning over time. Through their experiences in the STEL EL workshops, volunteer leaders' future experiences were affected, which is an illustration of Dewey's principles of interaction and continuity (1938). Dewey held that experience results from the interaction between the learner and the environment, and 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)." The structure of the STEL EL Workshop series provides opportunities for participants to explore, question, share, and reflect, processes that foster Dewey's principles of interaction and continuity. The volunteers then apply their newly acquired competencies in authentic contexts with 4-H members.

Through their participation in the STEL EL workshops, 4-H volunteers increased their capacity to work with their target audiences by enhancing their competence and confidence as educators. This is an example of Vygotsky's (1978) "zone of proximal development," in which learners advance beyond their current levels of ability by working with more competent peers or instructors. Through formal workshop activities facilitated by STEL members, as well as informal discussions and reflections with each other during workshops, the participants were able to scaffold upon their prior knowledge and experiences and assimilate new information and ideas that they then put into practice in their own programs.

## Conclusion

Volunteers are essential to the success of Cooperative Extension 4-H Youth Development Programs, and it is important to train them in effective methodology. By providing training that helps volunteers implement programs and projects using the EL sequence of experience, reflection, and application, we can better create environments where true learning and real understanding among 4-H youth can occur.

The research on the STEL EL Workshop series showed it to be effective in developing skills and enhancing the competency and confidence of 4-H volunteers relative to EL. Furthermore, because its design focuses on methods and not a specific content area, the STEL Workgroup members believe the EL Workshop series is applicable across all 4-H program areas.

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