



***An Intra-Campus Strategy* for Using Campus-Based Resources to Enhance Youth Curriculum Development**

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Land Grant Universities and the Cooperative Extension System

- The Cooperative Extension System (CE) links communities in each state to the resources and personnel at Land Grant Universities through research-based programs and materials.
- Overarching goal of CE: Meeting societal needs through research and education in the areas of agriculture, natural resources, and human resources.



Cooperative Extension: Meeting Needs of Education

- Nonformal education programs like 4-H can make valuable contributions toward meeting the educational needs of K-12 youth.
- Examples of roles 4-H can play:
 - Curriculum development
 - Educator professional development
 - Volunteer recruitment and training



Curriculum Development

- By definition, a **curriculum** is a “blueprint for learning”; a specific plan that directs learning through activities that are organized in a specific format and sequence.
- A curriculum shapes content into a plan for effective teaching and learning.
- The best curricula are developed from the learner’s point of view.



Curriculum Development

- Traditionally, the development of most curriculum materials in Cooperative Extension was done by subject matter specialists.
- Today, a team-based approach to the curriculum development process is most common.



**Curriculum Development and
Internship Program for
Undergraduates:
An Intra-Campus Strategy Utilizing
Student Curriculum Design Teams**



Internships:

General Information and Trends

- Recent literature calls for students to be more involved in participatory learning during their undergraduate studies.
- Increase in the number of college career centers offering assistance to students in finding internship opportunities.
- Internship possibilities vary from non-paid, non-mandatory, and without academic credit to paid, mandatory, and with academic credit.



Benefits of Internships to Students

- Enhance classroom learning through knowledge application.
- Gain authentic workplace experience.
- Network with professionals and discover career opportunities.
- Develop professional skills, such as teamwork, communication, time management, goal setting, and problem solving.
- “Audition” for potential future employment.



Benefits of Internships to Employers

- Important source of future employees.
- Can lower cost of new employee recruitment.
- Interns bring new ideas and fresh approaches to a project or workplace.
- Interns bring state-of-the-art technological knowledge.



Roles of Student Interns

- Curriculum Development – Assist in the design and pilot-testing of new curriculum materials.
- Curriculum Implementation – Work with classroom teachers and 4-H volunteers to implement curriculum materials with youth audiences.
- Research – Formative Data Collection.
- Data Scoring.



Nuts and Bolts: Operating an Undergraduate Internship Program



Recruitment

- Post flyers on campus.
- Send e-mail announcements via departmental administrative staff.
- Advertise opportunities through the Internship and Career Center (where available).
- Word-of-mouth advertising through current and previous interns.



Orientation

- Hold information sessions at the start of each academic term.
- Describe the internship with respect to:
 - Project background
 - Roles and responsibilities
 - Scheduling
 - Academic credit



Selection of Candidates

- Review the interests, experience and availability of each prospective intern.
- Coordinate schedules to form compatible intern teams.
- Provide appropriate paperwork for undergraduate unit credit.



Training

- Review important concepts and begin to develop skills relevant to the internship topic:
 - ❑ Pedagogy (e.g., inquiry; experiential learning)
 - ❑ Life skills development
 - ❑ Curriculum content (work with campus-based content experts).
 - ❑ Process skills (e.g., 4-H Science Abilities)
 - ❑ Data collection methods
 - ❑ Academic integrity relative to research and writing
 - *Also encourage participation in other professional development opportunities or coursework when available (e.g., conferences; academies; university courses).



Internship Structure

- Project staff meet with intern teams on a weekly or biweekly basis; staff members are also available via e-mail and office hours.
- Staff develop clear assignments with achievable objectives for interns.
- Interns work on assignments within their groups and submit work to staff for review.
- Project staff reviews interns' progress and make comments and edits on curriculum materials.



Student Intern Assessment

- Interns are reviewed based on their attendance at weekly meetings, contribution to the group effort, and by how well objectives were met.
- Grading is generally on a pass/fail basis, although there are opportunities for letter grades when applicable.



Examples of Curricula Developed with Undergraduate Interns

- 2012. Smith, M. H., Meehan, C. L., Ma, J. M., Hisakawa, N., Dasher, H. S., Camarillo, J. D., & Techanun, J. *Sheep: From the Animal's Point of View 1 – What Does it Mean to be a Sheep?* University of California, Division of Agriculture and Natural Resources. 4-H Youth Curriculum; 209 pages. (in press)
- 2011. Smith, M. H., Meehan, C. L., Ma, J. M., Hisakawa, N., Dasher, H. S., Camarillo, J. D., & Techanun, J. *Swine: From the Animal's Point of View 1 – What Does it Mean to be a Swine?* University of California, Division of Agriculture and Natural Resources. 4-H Youth Curriculum; 226 pages.
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- 2009. Smith, M. H., Meehan, C. L., Ma, J. M., Dasher, H. S., Camarillo, J. D., Lau, T., & Liang, J. Youth Development through Veterinary Science Curriculum. University of California, Division of Agriculture and Natural Resources, 4-H Youth Curriculum.



Internship Program Evaluation

- Post-internship surveys and focus group interviews are useful tools for gathering feedback and evaluation information from participating interns.
- Sample results from internship evaluations performed at UC Davis.



Data from Interns: Reasons for Participation

- Interns recounted a variety of reasons for participating in these internships:
 - Exploring interests in teaching.
 - Preparing for graduate or professional school.
 - Increasing their subject matter knowledge.
 - Applying their knowledge and skills in a meaningful context.



Data from Interns: Reflections on Experience

- Most interns reported that they enjoyed working as part of a team. Benefits included:
 - ❑ Camaraderie and support.
 - ❑ Idea sharing and constructive criticism.
 - ❑ Making new friends.



Data from Interns: Reflections on Experience

- Challenges to working as part of a team included:
 - Difficulties with coordinating schedules
 - Handling group members who were not contributing equally
 - However, interns were usually able to address these challenges and move forward successfully with little or no intervention from project staff.



Data from Interns: Reflections on Experience

- Interns reported gaining knowledge and experience with the following pedagogical methods:
 - Backward Curriculum Design.
 - Iterative Curriculum Design (write, test, revise).
 - Inquiry-based learning.
 - Assessing change in student knowledge.



The “Pay Off”

- Most students reported that their favorite part of the internship process was pilot testing their activities with youth.
- Providing interns an opportunity to apply their work in a “real world” setting is a major benefit of internship experience.
- Interns gained confidence in their work, gained insight into how students learn, and were inspired to incorporate the feedback they received.



Impact on Educational and Career Goals

- Interns reported a positive influence on their career goals.
 - ❑ Half of the interns surveyed reported that the internship strengthened their commitment to becoming educators either on the K-12 or University level.
 - ❑ One-third of the interns indicated that they had gained skills that would benefit them in their pursuit of veterinary degrees.
 - ❑ Some students reported that the internship had caused them to re-evaluate their career goals: perhaps teaching was not the right field for them.



Enriched Academic Experience

- Interns reported the following benefits to participating in the program:
 - Learning to work independently.
 - Strengthening teamwork and communication skills.
 - Making a difference through meaningful work.
 - Extending their knowledge to youth audiences.
- Improving their abilities as students: applying inquiry-based principles to their own learning.



Tips for Creating a Successful Curriculum Development Internship Program

- Advertise appropriately given the nature and subject of your project.
- Clarify roles and responsibilities prior to enrolling interns.
- Clearly define goals, objectives, and timelines.



Tips for Creating a Mutually Beneficial Internship Program

- Allow sufficient time for training and support. Student interns can accomplish a great deal of work independently, but need guidance and feedback.
- If students are collecting and/or analyzing data, develop specific protocols to safeguard data quality.
- Provide opportunities for authentic experiences whenever possible.
- Collect feedback from participants.



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4-H is the youth development program of our nation's Cooperative Extension System.