Undergraduates Gone WILD

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NEED FOR INNOVATION

Previous research has shown the importance of wildlife and environmental education and training for educators (Anderson et al, 2003; James & Williams, 2017). There has also been an evident lack of appropriate training for wildlife educators, especially at the K-12 level (Bleich & Oehler, 2000; Campbell et al., 2005; Johnston et al., 2001; Lopez, 2001). A review of agriculture teacher certification degree programs reveals that very few include wildlife ecology or habitat management courses; yet, high school agriculture teachers are increasingly expected to teach these topics and train wildlife teams. Research has suggested that a lack of scientific literacy could be due to the science taught our schools lacking relevant context for students to apply learned skills (Conroy et al., 1999; Smith & Rayfield, 2017).

HOW IT WORKS

To address the need for improved training in wildlife and ecology-focused topics, Texas A&M University-Kingsville offers an advanced, four-day training in . This takes place on a local 7,500-acre wildlife refuge. This training involves hands-on wildlife labs (small mammal capture, deer census, track & scat ID) lecture and project-based learning (Project/Aquatic WILD certification). This is led by university faculty in agricultural education & wildlife, rangeland extension experts and ecology educators. This takes place twice, late Fall and early Summer, each year.

The preservice teachers receive instruction in the curriculum, methods, and content found in the Project WILD K-12 Curriculum and Activity Guide (Project WILD, 2017). The day's agenda is centered around the conceptual framework of wildlife & environmental literacy within the contexts of agricultural education. This includes lining up the training with state standards, awareness of and concern about the environment, skills and knowledge needed to protect and improve the environment, and appropriate action towards the environment within the realm of agriculture. This training is unique compared to many WILD trainings, in that it also integrates aspects of lesson plan development, parallels directly to the state agriculture curriculum standards and the demonstration of hands-on labs that can be replicated at participants, schools.

Crosby (1991) found that participation in a Project WILD workshop significantly improved preservice teachers' attitudes toward teaching science and environmental education. Project WILD is sponsored by the state's Parks and Wildlife Department, and is one of the most widely used environmental education programs among K-12 educators. The mission of Project WILD is to provide wildlife-based conservation and environmental education that fosters responsible actions toward wildlife and related natural resources. Project WILD assists learners of all ages in developing awareness, knowledge, and skills related to the environment, as well as a commitment to its protection. The project uses developmentally appropriate and meaningful activities that can be integrated into any school curriculum or program.

Students who participate in this training are then offered the opportunity to lead a day long (6 hr) training at state teachers conference. During this training, the undergraduate students who have previously been trained in the WILD curriculum, will then lead a similar training for current AGSC teachers. Students used activities from both the Project WILD and Aquatic WILD books.

This helped to show the diversity in material and gave teachers a broader understanding of the curriculum available to them. They are supported in their training by the university teacher educator and a local wildlife educator. Before attending the training; all planning for the program agenda, collection of teaching materials and practice of lectures (WILD activities) has been completed by students and supervised by the university leader. Students team up and lead at least 5 different WILD activities during the teacher workshop, while the university leader guides the certification and curriculum training lectures. Advertisement for the training starts in early Spring, with the teacher conference usually held late July

RESULTS TO DATE

Over the past two years, the training has been offered at Texas vocational agriculture teachers' conference. The first year 55 teachers attended, with 48 students attending in year two. Summer 2023 currently has 45 teachers registered. Each year 6-12 undergraduate & graduate student leaders attend. Teachers have responded positively based upon post-workshop surveys distributed by the Texas agriculture teachers association. Follow-up emails with teacher attendees have shown positive results; with many teachers implementing the Project WILD training in their schools. Teachers appreciated the focus on WILD in connection with the state agriculture curriculum standards. The development of unit plans, hands-on labs that could easily be applied at their campuses and team-based approach were some of the highlighted positive aspects of the workshops.

Student WILD workshop leaders have expressed high levels of satisfaction with the program. Post-training interviews with students found that students appreciated the opportunity to network with current teachers and to apply their new knowledge in the WILD curriculum. They also mentioned that the further practice using the WILD activities helped them to increase their confidence and level of comfort in teaching overall.

FUTURE PLAN & ADVICE TO OTHERS

It is recommended that those who wish to host similar programs work with students to develop appropriate assessments and include ways to modify the lessons to fit agricultural science teachers especially (ex: modify WILD activity *Adaptation Artistry* to fit cattle breeds). Organization and time management are especially important, as these activities can get quite involved and keep participants engaged well beyond the time limits of the training.

COST & RESOURCES NEEDED

This project was funded as part of the USDA-PDAL Grant #2018-06065: *Beyond WILD*. The lodging, meals & educational materials at Welder Wildlife Refuge cost $10-$12k every Fall and Summer program. University vehicles are used to lower rental cost, but fuel costs are still incurred. The project WILD & Aquatic WILD curriculum costs $75 per participant. An undergraduate and graduate student are typically hired to support the project goals. The program directors goal is to continue this program; either through further grant support or as a pay-to-play based program.

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