

Animal Science Course Field Experiences Provide Opportunities to Incorporate Soft Skill Development

Introduction

People go to college for a variety of reasons, but one objective usually includes finding a job. Historically, most employers considered grade point average (GPA) as an important screening tool. Between 2014 and 2022, that changed considerably, and less than 40% of employers used GPA for that purpose (National Association of Colleges and Employers, 2022). A recent survey found that approximately one-third of employers still used GPA as a metric, but many employers were now more interested in the applicant's skills set (National Association of Colleges and Employers, 2022). Approximately 75% of employers also reported that college graduates are not learning "soft skills" (e.g., communication, listening, critical thinking, and interpersonal skills) as part of their education (Wilkie, 2019). The top six attributes that employers considered very or extremely important included problem solving, teamwork and interpersonal skills, a strong work ethic, analytical/quantitative skills, communication and listening abilities, and technical skills (Table 1; Wilkie, 2019; National Association of Colleges and Employers, 2022). Note that five of these six are soft skills. Hands-on training in animal science production courses are an excellent way to teach soft skills, even though students may not be aware of it. Many soft skills are embedded in class and laboratory curricula, but students often do not realize those skill competencies are incorporated until they are made aware.

Procedure

Poultry Science (AGR 321) was designed to teach fundamental poultry biology, behavior, and production practices. The most current revision of the class incorporated independent study, lectures, laboratories, and field experiences. Early in the course, enough fertile eggs were set in small incubators to provide birds for the semester activities. Students created a schedule for daily maintenance of the incubators. Teams of 3 students worked together on lab activities through the incubation period observing changes in embryos with each day of incubation. They learned how to troubleshoot issues with incubation processes and with their laboratory technique. Biweekly incubation/embryo development reports were written and turned in as a complete lab/project report at the end of incubation.

Students constructed simple brooding equipment in the classroom laboratory space to raise the hatched chicks to four weeks of age. They formed teams to handle daily observation, temperature monitoring and health checks for the birds. After four weeks, students constructed a modified battery cage environment in a small available outbuilding on one of the university farms. Students observed the growing broilers while taking care of feeding and watering, waste management, and environmental controls. They were given the opportunity to modify the cage environment to observe behavior differences in different caging environments.

At the end of the course, students slaughtered the birds and packaged them for use in a future meat processing course. Some of the products were used in an activity during finals week, where student teams prepared dishes utilizing distinct parts of the chicken (e.g., wings, breasts, legs, organ meats). This proved to be a valuable summative activity, as the students reflected on everything that went into these products, starting with the incubation environment.

Discussion

One way our department has approached soft skill development is through implementation of the QA Commons Essential Employability Qualities Certificate program (The QA Commons, 2022). The mission of QA Commons certification is to ensure all learners are prepared for the changing dynamics of the workforce and economy. Through cross-discipline professional educator peer review, programs are evaluated for effective communication, teamwork, critical analysis, problem solving, learning and adaptability, professionalism and responsibility, motivation and initiative, and digital literacy. After successful completion of the QA Commons program, students are awarded certificates.

Several agriculture instructors at Murray State have begun to include discussions with students on the soft skills they are learning while attending and participating in classes and laboratory activities. The Poultry Science course extensively addressed the soft skills that employers noted they seek in candidates (Table 1). Informal conversations with students, particularly in the months since the class, showed that they were better able to connect what skills employers are looking for and what they were doing in the classroom.

Once students are aware of what they are learning, they may need help showcasing it to prospective employers. Murray State University Career Services noted that many employers glean information on soft skills by asking questions like, "Tell me about a time when you did..." If students are more aware of the soft skills they are exposed to while doing assignments in classes, they will be better prepared to respond strongly to such questions from prospective employers. Career Services also recommends that students include key words that encompass soft skills on their resume and cover letter, to mention their QA Commons certificate, and to fill out skills in online career management platforms, to bring attention to those items.

Teaching a combination of core knowledge and soft skills in animal science courses can be done without costing a lot of money. It is not enough, however, to just expose students to knowledge and experiences in the class. Incorporating the greater understanding of what they are learning into teaching methodology will increase student confidence in their soft skills set and abilities, making them more marketable to employers.

References

1. National Association of Colleges and Employers (NACE). 2022. Job outlook for 2023. Accessed February 17, 2023. www.naceweb.org
2. The QA Commons. 2022. Eight total Murray State Certifications. Boulder (CO): Accessed February 17, 2023. <https://theqacommons.org/eight-total-murray-state-certifications/>
3. Wilkie, D. 2019. Employers say students aren't learning soft skills in college, Part 2: College grads are deficient in critical thinking, teamwork, speaking and writing, executives say. Society for Human Resource Management. Accessed February 17, 2023. <https://www.shrm.org/resourcesandtools/hr-topics/employee-relations/pages/employers-say-students-arent-learning-soft-skills-in-college.aspx>

Table 1. Top six attributes employers seek and how they are developed by field experiences in an undergraduate poultry science class.

Attribute ¹	Examples of application
Problem Solving Skills	Troubleshooting issues during production phase by finding causes and then discussing, choosing, and implementing solutions
Ability to Work in a Team/Interpersonal skills	Managing production assignments with daily feeding, temperature adjustment, and bird observation tasks
Strong Work Ethic	Persistence in carrying out routine tasks common to poultry production including consistent attention to bird care and observation throughout the semester-long project
Analytical/quantitative skills	Analysis of growth data to verify bird performance was within specifications.
Communication skills – written and listening	Semi-weekly written hatchery reports, frequent oral check-in throughout the semester to track progress, and real-time messaging strategies for team communication
Technical skills	Bird handling, posting, slaughter/processing, candling, microscopy

Submitted by:

Thomas Powell
Murray State University
Murray, KY, USA

Shea Porr
Murray State University
Murray, KY, USA