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Innovative Manuscript Reviewers for 2023 AAAE North Central Region Research Conference.

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Innovative Ideas

Diversifying Graduate Student Experiences Through Campus Connections

Hannah C. Parker, Erica Summerfield, Forrest Lang, Joy Rumble, Benard Walumbe

Glocal Lessons for School-Based Agricultural Education

Leslie Fairchild, Ken Fuelling, Dr. Sarah E. LaRose

The \$100 Solution: A Service-Learning Project for Students Enrolled in an Undergraduate Agricultural Leadership Course

Lucas D. Maxwell, Ph.D., Jay K. Solomonson, Ph.D

Using Laerd Statistics as a Data Analysis, Interpretation, and Reporting Tool in Agricultural Education Research

Trent Wells, Ph.D., Jay Solomonson, Ph.D

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Trent Wells, Ph.D, Jay Solomonson, Ph.D.

Using Photovoice as a Reflective Practice to Evaluate Preservice Teacher Professional Development

Dr. Amy Leman, Dr. Jay Solomonson

Video Capturing Tools in Student Teaching

Jon Davis, Scott Smalley, Michael J. Martin, Greg Miller

Diversifying Graduate Student Experiences Through Campus Connections

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Need for Innovation

The graduate student experience can be a challenging, complex process that can be isolating, demanding, and stressful. However, in recent years, research suggests supporting graduate students needs within their program is beneficial for the individual, as well as their home department (Collier & Blanchard, 2023). This project stemmed from a call to action by international students who have never experienced American agricultural practices. Providing a variety of experiences to all graduate students supports the mission of graduate studies at The Ohio State University (OSU). Beyond academic related work, experiential learning can benefit adult learners who will enter a career or faculty position post-graduation (Morris, 2020).

The Department of Agricultural Communication, Education, and Leadership (ACEL) Graduate Student Association (GSA) identified the need for diversification of their graduate school experience. Often, graduate students are siloed into their home departments throughout the duration of their graduate program, limiting the diversity of experiences. To help solve this issue, ACEL GSA members proposed a day trip to the Wooster campus of OSU.

How it Works

A GSA committee was created to plan, organize, and execute this day trip. The trip incorporated visits to academic departments, research facilities, and local industry partners. The ACEL GSA took point on planning, organizing, and implementing this experience, with faculty support from both campuses. ACEL GSA used one of their monthly meetings to gather ideas and recommendations from members on what they would like to experience. This exercise was important for student buy-in and personalizing the experience for the group (Evans & Boucher, 2015).

ACEL graduate students met on the main campus the morning of the trip and loaded two vehicles that were rented for the day. ACEL GSA officers were volunteer drivers for the day trip. Students arrived on the Wooster campus where they were met by a local graduate student and ACEL faculty member. Students were led on a tour of the academic campus, including classrooms, laboratories, and student resource centers. Along the tour, students had the opportunity to interact with Wooster campus faculty, staff, and students. After tours of the academic campus were complete, students had lunch at a local farm-to-fork market to experience regionally produced agricultural products.

In the afternoon, students were taken on tours of the Wooster campus agricultural research facilities, including facilities for horticulture, dairy, beef, and equine. At each facility, students interacted with local staff and faculty to learn about the workings of the facility, as well as future teaching and research opportunities. As students drove back to the main Columbus campus, group discussions took place about what they learned and what they would change for the next graduate student day trip.

Results to Date/Implications

In the spring of 2023, 12 graduate students from ACEL signed up for the graduate professional development experience to travel to the Wooster campus of OSU. Students were able to interact with faculty and graduate students during their time spent on the satellite campus. One graduate student stated:

I knew the Wooster campus existed, but I didn't realize the extent of facilities, research, and opportunities students had on this campus. I enjoyed talking to the dean of the campus and exploring. It is very different than OSU's main campus. (Student 1)

Students also reflected that this trip was memorable and a favorite part of their graduate experience thus far:

The Wooster trip I took with my cohort is one of my favorite graduate school memories so far. It was an incredible learning experience to see all the different aspects that Wooster campus has to offer. There's so much to see from exploring the arboretum to touring its several livestock research and production facilities. I look forward to any opportunity to go back for a visit. (Student 2)

Graduate students who participate in diversifying experiences are competitive against other candidates for future careers and graduate school opportunities (Hansman et al., 1999). Additionally, graduate students who have varying degrees of experiences tend to have a broader world view (Hansman et al., 1999). One student reflected on the innerworkings of the Wooster campus:

We need more of these trips! I am glad the trip materialized after two years of talking with graduate students and faculty. I have a better understanding of the Wooster campus operations. As I go into my final year of my graduate program, this trip will help me as I interview for a faculty position at other universities. (Student 3)

Future Plans/Advice to Others

GSA plans to make the Wooster campus trip an annual event for any graduate student who wishes to attend. Plans are also in the works to expand the program to additional departments, facilities, and campuses to continue to add diversity into the graduate experience.

It is advised to others to keep this a student-organized program where students contribute heavily to the planning and executing of the experience. Allowing students the opportunity to take ownership of the experience increased participation and motivation to engage in the graduate student day trip.

Costs/Resources Needed

This program did not have a cost for graduate students in attendance. GSA funds covered the cost of two rental vehicles and fuel for the day. The cost of lunch was covered by a graduate organization grant provided through the university.

To successfully implement this program, departments will need an active GSA or graduate student body to take ownership of planning and execution. Faculty support and participation from both campuses is also required to provide a successful experience. Also, planning the event on a day when most graduate students are available to take a day away from their home campus. We suggest the use of a university in-service day or equivalent.

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Glocal Lessons for School-Based Agricultural Education

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Introduction/Need for Innovation or Idea

Developing an appreciation for multiculturalism and global competence is important in agricultural classrooms for many reasons, but primarily to shift how individuals learn about others to also learning about themselves and the history of their own culture. This change can help broaden the ideas of multiculturalism and increase acceptance of the discussions that occur within a class (Markus & Rios, 2018). This means education has a powerful position in promoting peaceful coexistence among cultures with differences (Stavenhagen, 2008). Inclusion of globally competent education will help to create a culture of compassionate and respectful communication between differing opinions, a skill critical to agriculture, an increasingly globalized industry that impacts and reaches everyone regardless of beliefs (Van Winkle, 2021).

In school-based agricultural education (SBAE), the agricultural pathways and classes offered are easily influenced by external factors. In many programs, the influence of the community and even systematic inequalities dictate what courses and pathways are offered in the program (Stewart et al., 2021). In most areas, student preference determines what courses are offered and the way content is taught in each class. In most cases, successful agriculture programs are dependent on student-teacher relationships. Agriculture teachers utilize the building of this connection with students throughout all three components of the three-circle model, although this connection lacks any critical depth (Wood et al., 2022). As Wood et al. (2022) said: “Perhaps while SBAE teachers care for their students and want to build rapport with them, terms like culturally responsive, culture, and diversity are not received well by some teachers because of how these terms have become politicized” (p. 3). Approaching diversity and inclusion work from the perspective of utilizing global competency can help agriculture teachers better navigate the development of critical connections with students through culturally responsive teaching, without the use of terms that have been highly politicized (Wood et al., 2022).

How It Works/ Methodology/Program Phases/Steps

For this project, we developed 11 student-centered glocal lessons that begin with thinking globally and learning about culture in general, to the end lessons of creating a final project that acts on a local community issue. Topics related to careers, economics, safety, and food security are all taught from a glocal perspective. Glocal is taking global perspectives and awareness to local focus and action (Niemczyk, 2019). Teachers can access these lessons through Canvas, Google Classroom, and the US agricultural educators email listserv. In our state’s Canvas and Google Classrooms, educators have sections to provide feedback and ideas, so lessons continue to adapt to what is needed. Each lesson follows the same template and describes how the teacher should facilitate it. Resources and descriptions for teachers are included to help build confidence in teaching global competence. Each lesson can be inserted into any introductory curriculum within an agriculture program where the teacher feels that it fits best into their scope and sequence.

The glocal lessons focus on differences and similarities between students and their peers, showing students that even with differences we can find ways to work together and get along while respecting what everyone brings to the table. One way the lessons accomplish this is by teaching students what culture is and asking them to think about their own cultures. Allowing students to learn more about cultural and global differences will help them build their own cultural and global competencies.

The introductory lesson should be one of the first lessons in the classroom to establish the culture of the classroom for the rest of the semester and encourage critical thinking from the start so that students have time to learn and grow. This change in classroom culture will eventually lead

to multiculturalism in the content, representation in the class, and even in the completed activities. However, this could also be a challenge, not only because this is challenging content, but because it involves change. Thandeka (1999) described this pushing back as a “battle by a self against itself in order to stop feeling what it is not supposed to feel: forbidden desires and prohibited feelings that render one different” (p.12). This hidden battle may require more community support to implement the program. Some programs may experience community pushback; therefore, incorporation of these lessons will need to carefully consider the unique needs of community members, students, and administration.

Results To Date/Implications

Initially, these lessons were developed as part of a graduate-level course assignment on incorporating multiculturalism into education. From there, these lessons and the importance of their integration into SBAE have been shared through a workshop at a state-level meeting of agricultural educators. At this workshop, many educators signed up for future contact about our plans with the global lessons later. Implications and impact will be seen in the future of this work. These lessons will involve changing the entire culture and norms of an educator’s classroom. Acknowledging the history of agriculture playing a role in continuing systemic issues allows for a space for challenging norms and a more comfortable environment for marginalized communities.

Future Plans/Advice to Others

To implement this plan, we have the following advice: The educator will need professional development on how to approach politicized or charged content objectively, which is different from approaching the content neutrally. The educator will also need to be aware of community needs and values, to make the content culturally relevant and applicable to students while being sensitive and respectful to any information discussed. The needs and values should come from businesses in the area and the family and community norms that built the program. The global lessons developed here have been aligned with national agriculture standards to make the lessons applicable to each community with minimal changes. Content will need to be scaffolded and information needs to be approached as more than simply facts to pass on, but information to interact with and influence. To obtain the most influence from these lessons, the classroom's culture may need to be addressed, too. This content “relies upon a safe and accepting learning environment that engages students in social interactions and excitement and encourages students’ success that the teacher integrates into each tirelessly planned learning activity...” (Marsh, 2022, p. 12). As with any other lesson in a classroom, the effectiveness of the material depends on the delivery (Blumberg, 2019).

Costs/Resources Needed

Developing these lessons took time and energy from staff and graduate students, although no other outside costs were necessary for development. Lessons are free of charge for educators to access, and many of the lessons themselves will have low or no cost for the educator to facilitate in their classroom. There are resources necessary that may result in the educator or school needing to purchase materials, but all activities are optional and able to be edited to best fit the situation.

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The \$100 Solution: A Service-Learning Project for Students Enrolled in an Undergraduate Agricultural Leadership Course

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The \$100 Solution: A Service-Learning Project for Students Enrolled in an Undergraduate Agricultural Leadership Course

Introduction

Due to the nature and diversity of the discipline, secondary and post-secondary instructors of agriculture often use a variety of teaching methods and instructional strategies within their courses (Talbert et al., 2022). Some of the most commonly applied methods in agricultural education include lectures, demonstrations, guest speakers, field trips, discussions, case studies, inquiry-based instruction, and experiential learning activities (Blackburn & Stair, 2022). One form of experiential learning frequently used, known as service-learning, was developed as a means to intertwine the principles of civic engagement and the educational process (Binard & Leavitt, 2000). While not necessarily a new idea, service-learning as a teaching method continues to evolve and is increasingly being implemented in our agricultural education programs (Roberts & Edwards, 2015).

Roberts et al. (2019) defined the service-learning method as a “form of reciprocity in which students extend classroom learning into society to resolve communal problems while also accruing distinct benefits for all members” (p. 37). Further, researchers have reported many benefits to using this method of instruction such as the development of teamwork, leadership, and communication skills in their students (Lemons & Strong, 2016, Meyers et al., 2014; Robinson & Torres, 2007). While there are many advantages of using this method of instruction, one disadvantage has been the lack of a clear instructional framework for educators to use in planning, implementing, and evaluating their service-learning projects. This was the case until we learned about the \$100 Solution service-learning project model.

How it Works

The \$100 Solution project utilizes course learning objectives combined with the five principles of service-learning to answer a central question for students: with a \$100 bill, what can you do to enhance the quality of life for others? The \$100 Solution teaches students to ask what they can do rather than self-determining the needs of others. Further, it demonstrates that many social problems exist that can be solved with small amounts of money, or rather, by even thinking beyond monetary solutions to make a difference in their communities.

The \$100 Solution model incorporates the following five principles of service-learning: partnership, reciprocity, capacity building, sustainability, and reflection (English, 2014). English (2014) denoted both the students and community partner should work closely together to determine the needs and assets of the organization, plan and implement solutions, and evaluate efforts. Further, the students involved, and community partner should both benefit from the chosen service-learning activity. While this will look different for each project, the ultimate goal is for each party to learn and grow personally and professionally (Jacoby, 2003). Regarding capacity building, English (2014) emphasized helping the community partner learn and become self-sufficient so the project can continue beyond the time the students are involved. Related to self-sufficiency, the project should also be sustainable with a lasting impact (English, 2014). Finally, unlike basic volunteerism, a continued oral and/or written reflection component should be used as a tool for awareness, deeper understanding, analysis, and interpretation in order to transform the experiences into meaningful learning for the students (English, 2014).

At our institution, the \$100 Solution project is incorporated into our AGR 391 Team & Organizational Leadership, Communication, and Change course taught each spring semester. This is a required course for all students majoring in Agricultural Teacher Education and Agricultural Communication and Leadership and is offered as an elective for all other agriculture majors. At the beginning of the semester, the students in the course are divided into groups of 4-6 students depending on class enrollment. Each group then identifies a community partner in which to volunteer their time and work with. During the time volunteering, the group identifies a specific need of the organization or agency and works with them to find a sustainable solution for their problem. The students will then develop a proposal that incorporates the five principles of service-learning and make a presentation to the class. If their proposal is approved, their group is awarded \$100 which is used to fund supplies and materials for their project. The students then implement their project throughout the semester. Finally at the end of the semester, each student completes a written reflection assignment, and the group collectively creates a poster presentation, which is then presented during an open house during one of the final class sessions.

Results and Implications

This course has been offered for six semesters at Illinois State University and during that time, nearly 100 students have partnered with 14 different community organizations. Community partners have included local municipalities, assisted living centers, museums, and a food insecure family, just to name a few. One semester, a student team partnered with the Town of Normal, the Little Library company, and several local libraries to provide the community easier access to books, especially for younger children. Throughout the project the team had to overcome numerous issues including obtaining permission to place the little library along a popular local recreation trail, building the actual little library, and finding libraires and individuals to donate books to stock the library. Throughout this process the students were guided by the five principles of service-learning discussed above and applied leadership, communication, and change theories discussed in the course. In reflecting on the experience, one student stated, "I learned not only about working with others, but also about myself. I learned how to be a better teammate, as well as how to keep a level head. I see this project as something to be proud of, as when we first started it seemed an impossible, gargantuan task, but slowly piece by piece we were able to overcome."

Future Plans and Advice to Others

We plan to continue to utilize this service-learning framework during future offerings of our AGR 391 Team & Organizational Leadership, Communication, and Change course. When implementing this project, it is critical to provide the student teams with adequate guidance and resources to help them identify potential community partners and to plan and implement their projects without being overly prescriptive. We recommend pushing students to first identify a partner that aligns with their interests and then, collaboratively, identify a problem or issue they face and work to find a solution.

Costs and Resources Needed

Beyond the \$100 budget for each team, the only other direct costs associated with this project have been the printing of posters for the final presentation. We have been lucky that our department alumni association has been willing to support this course project each year. Campus offices that support service learning, civic engagement, and sustainability could all be a useful resource to fund project ideas.

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**Using Laerd Statistics as a Data Analysis, Interpretation, and Reporting Tool
in Agricultural Education Research**

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Using Laerd Statistics as a Data Analysis, Interpretation, and Reporting Tool in Agricultural Education Research

Introduction

Field (2018) expressed that competence in correctly interpreting data is fundamental to producing high-quality quantitative research. However, researchers sometimes fall victim to misusing statistics in their academic endeavors (Gardenier & Resnik, 2002; Marino, 2014). As outlined by Gardenier and Resnik (2002), statistics misuse can come about through various means, including: (1) limited competence with the subject, (2) unintentional errors that may result due to limited competence, (3) negligence when using statistics, and (4) deliberate research misconduct. Interestingly, researchers' misuse of statistics has a long and substantial history, as Cohen (1938) wrote about the topic over 80 years ago. More recently, Marino (2014) highlighted that researchers' motivations to achieve statistical significance "has hampered research via the publication of incorrect analysis driven by rudimentary statistical training" (p. 78), which thus compromises the integrity and value of scholarly research.

Such issues are not lost on the discipline of agricultural education. Johnson and Shoulders (2019) recently indicated that some traditional practices (e.g., using incorrect statistical analysis procedures, etc.) passed along from one generation of agricultural education researchers to the next may negatively impact the overall rigor and quality of agricultural education scholarship. As an example of this, Johnson and Shoulders (2019) noted that "[a]gricultural education researchers often seem addicted to inferential statistics and their associated p values! So much so that we often force the square pegs of our data into the round holes of inferential statistics" (p. 300). Johnson and Shoulders (2019) further explained that vague descriptions of research methods written by researchers (perhaps due to some limited understanding of the appropriate methods) can inadvertently undermine the value of agricultural education scholarship.

As a discipline, we should continue to hone the quality of our scholarship by adhering to best scholarly practices. Doing so will help to ensure both current and future researchers make appropriate decisions that ultimately impact the quality of scholarship produced (Johnson & Shoulders, 2019). Considering the preceding literature, perhaps Laerd Statistics could be a valuable resource for helping to positively impact both agricultural education researchers and their scholarship.

How it Works

As a continuously-updated platform that is intended for researchers of all experience levels, Laerd Statistics is a subscription-based statistics education resource (Lund Research Ltd, 2023a). The subscriptions vary in duration and price yet provide the same level of content access. Further, Laerd Statistics is geared toward IBM® SPSS® Statistics software and provides expansive details for a wide range of both parametric and non-parametric statistical tests, such as a Mann-Whitney U test, a one-way analysis of variance (ANOVA), and an ordinal regression. The details for each statistical test include: (1) correctly setting up the data, (2) meeting statistical test assumptions, (3) procedures for running the statistical test, and (4) details for properly writing-up the results in a manuscript. The website makes use of screenshots to help users

navigate the processes. The website also includes a “Statistical Test Selector” that details step-by-step instructions to ensure researchers are using the appropriate data analysis procedures (Lund Research Ltd, 2023b).

Regarding our own initial experiences with Laerd Statistics, the lead author of this abstract was informed about this resource by a member of his doctoral program committee. He subsequently used Laerd Statistics extensively while completing his dissertation research in 2019. Afterward, he continued using Laerd Statistics during subsequent research projects that he led. During one such project, he collaborated with the second author of this abstract and shared information about Laerd Statistics with him. In turn, he likewise began using it when planning, conducting, and documenting his own research projects. To date, we have both used Laerd Statistics to help us successfully conduct several state- and national-level research projects.

Implications

Our experiences using Laerd Statistics have led us to conclude that this resource can be particularly valuable for both graduate students and early-career researchers who are still working to build their statistics knowledge and skill sets. We would even suggest that this resource would be valuable for mid- and late-career researchers as well, particularly when attempting to use new and unfamiliar statistics. We found that this resource has, on numerous occasions, provided us with practical advice regarding analyzing and interpreting our data and reporting our results. When considering Johnson and Shoulders’ (2019) advice regarding improving the quality of scholarship produced within our profession, we believe that Laerd Statistics could very well be an innovative and impactful tool for helping to heed their advice.

Future Plans and Advice to Others

We plan to continue using Laerd Statistics in our scholarly endeavors for the foreseeable future. While both of us currently work with very few research-oriented graduate students, we do plan to advise our current and future graduate students who are completing their thesis projects to use Laerd Statistics. Further, as the lead author will soon advise his first doctoral students, he plans to have them use the resource extensively. Based on our experiences, we do advise that other agricultural education researchers consider using Laerd Statistics not only when conducting their own studies but when working with graduate students’ projects as well. We acknowledge that an online resource should not be a substitute for formal graduate-level coursework in either research methods or statistics. However, we likewise believe that introducing yet another tool into researcher’s toolboxes could help to overcome some of the agricultural education scholarship issues that have been documented in our profession (Johnson & Shoulders, 2019).

Costs

A single-user license subscription ranges in price from \$5.99 for one month’s access to \$40.99 for three years’ access. Each plan type provides the same level of access to the website’s resources (Lund Research Ltd, 2023c). Moreover, we found that faculty members can have free access to Laerd Statistics in perpetuity simply by contacting the company directly via e-mail and requesting such.

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**Using Mock Interviews with School Administrators to Prepare Pre-service Teachers
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Using Mock Interviews with School Administrators to Prepare Pre-service Teachers to Successfully Navigate the Teaching Position Interview Process

Introduction

The teacher selection process is complicated and often has numerous steps. One of the most common and important steps in selecting a teacher for a vacancy is interviewing with building-level personnel, such as school administrators (Strong & Hindman, 2006). The interview process itself can be quite rigorous and comes with its own set of advantages, such as an in-depth examination of a prospective candidate, as well as disadvantages, such as subjectivity to interviewer bias. Ideally, interviewers seek to hire high-quality, effective teachers who can adequately serve their students, their schools, and their community at-large. However, when considering newly-certified teachers for positions in comparison to experienced teachers, interviewers may sometimes encounter challenges when asking questions, such as those related to experiences with classroom management and successful student motivation techniques (Strong & Hindman, 2006). Likewise, newly-certified teachers may encounter unexpected challenges in the teaching position interview process if they are not adequately prepared (Talbert et al., 2022).

Talbert et al. (2022) provided several recommendations for newly-licensed teachers when preparing to interview for a teaching position, including: (1) preparing an organized, quality application materials packet, (2) dressing professionally for the interview, and (3) engaging in mock interviews to both help overcome potentially bad habits and to anticipate possible interview questions. Considering the preceding literature, perhaps engaging pre-service teachers in mock interviews with current school administrators would be valuable for helping them prepare to navigate their first teaching position search.

How it Works

During the Fall 2022 semester, the lead author of this abstract taught 13 pre-service teachers in a senior-level instructional methods course. Within this course, he developed and implemented an activity that focused on preparing his pre-service teachers to interview for actual teaching positions during the Spring 2023 semester and beyond. To initiate the process, the lead author collaborated with another agricultural teacher educator at his university to identify prospective school administrators who would be willing to work with his pre-service teachers. He originally sought current administrators who were previously school-based agricultural education (SBAE) teachers. However, he found the pool of administrators with such experience who were simultaneously located within reasonable driving distance from the university was rather limited. Instead, he reached out to school administrators who have strong ties to the SBAE programs at their schools and who likewise openly value the programs. Two administrators from two different high schools approximately two hours away agreed to travel to the university and conduct the mock interviews.

The lead author scheduled the mock interviews to take place between 10:00 A.M. and 12:00 P.M. on Thursday, November 10, 2022. On Tuesday, November 8, 2022, the lead author led an in-class discussion about the teaching position interview process and posed several example interview questions to the pre-service teachers to stimulate their thinking about the

topic. He further instructed the pre-service teachers to be prepared to ask their own questions, to dress professionally for the interview, and to bring an updated copy of their resumé with them.

The school administrators arrived at the university shortly before 10:00 A.M. on November 10th. Prior to their arrival, the lead author staged two interview areas for each one. These interview areas were placed in separate rooms and consisted of a collapsible metal classroom table and two office chairs. After the school administrators and the pre-service teachers arrived in the classroom, they introduced themselves in a large group setting. The lead author then assigned seven pre-service teachers to one school administrator and six to the other. To make the best use of the available timeframe, the lead author asked both school administrators to restrict each one-on-one interview to a maximum length of 15 minutes. The school administrators then called each pre-service teacher in for their mock interview. After the 13 mock interviews concluded, the school administrators debriefed all the pre-service teachers as a group and shared their advice regarding further interview preparation strategies. The lead author requested that the pre-service teachers ask any questions they had. He then dismissed the pre-service teachers and took the school administrators to lunch as a token of appreciation for their assistance with the mock interviews.

Implications

The school administrators privately expressed to the lead author that they were impressed with the quality and preparation exhibited by all the pre-service teachers they interviewed. They were also appreciative of the opportunity to be part of the mock interview activity and desired to do so again during the 2023-2024 academic year. All 13 pre-service teachers indicated to the lead author that they believed this activity was helpful to them. Regarding the eight pre-service teachers who completed their student teaching experience during the Spring 2023 semester, four of them had been offered teaching positions prior to graduation. Anecdotally, all eight pre-service teachers reported that the mock interview activity had aided them in the teaching position search. However, they did advise him to consider selecting school administrators with more direct knowledge about, and experience with, SBAE in future activity iterations.

Future Plans and Advice to Others

The lead author plans to continue conducting this activity for the foreseeable future. He will use the feedback that he received to amend future iterations of the mock interview activity. If they are not already doing so, the lead author recommends that other agricultural teacher educators consider implementing similar activities with their own pre-service teachers to better-prepare them for the teaching position interview process.

Costs

The lead author spent approximately \$60.00 to purchase lunch for the two school administrators. While he was unable to do so for this iteration of the activity, the lead author plans to offer mileage reimbursement to school administrators who participate in the future. The school administrators used approximately six hours of their time to participate in this activity. The lead author used roughly four hours of his time to plan and implement this activity.

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Using Photovoice as a Reflective Practice to Evaluate Preservice Teacher Professional Development

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Using Photovoice as a Reflective Practice to Evaluate Preservice Teacher Professional Development

Introduction

Teachers need to have tools to critically reflect on their teaching practices and interpret and evaluate their strategies to continually improve and meet the changing needs of students. Critical reflection is an important skill for preservice teachers to master (Horowitz, 2012). Kim and Kim (2017) posit that teaching critical reflection to preservice teachers will provide them with a skill to use in reflecting on their identities and understanding the relationships and experiences of their students. However, university students may not have the needed skills to critically reflect on events in their lives (Din, 2020).

Photovoice is a participatory research method that allows participants to take pictures of their experiences and reflect on the images to explain their version of the event in the picture. Photovoice as a research and evaluation method began in public health as a community needs assessment and participatory evaluation (Wang & Burris, 1997). The term Photovoice is defined as photos “voicing our individual and collective experience” (Wang & Burris, 1997, p. 381). In traditional research, words are collected. Photovoice allows both words and pictures to explain phenomena adding to the richness of the data.

In traditional photovoice work, participants take pictures of experiences in their community or surroundings, share, and process as a group, and then share with community leaders to influence change in their communities (Dahan et al., 2007). The joint reflection allows participants to dive deeper into the meaning behind why they chose to share their pictures and may lead to developed critical consciousness and a stronger sense of their identities and foundational beliefs (Horowitz, 2012).

The photovoice process has also been used with preservice teachers as a means to reflect on their experiences. Specifically, photovoice was used with preservice middle school teachers to explore literacy (Horowitz, 2012), with preservice physical education teachers to identify strengths and weaknesses of their student teaching programs (Langdon et al., 2014), and by preservice elementary teachers to explore their identities in relation to teaching social studies (Stanton & Hancock, 2021). Perhaps this process could also be used with preservice agriculture teachers as a method to critically reflect on their own professional development journey.

How it Works

During a recent Curriculum for Agricultural Science Education (CASE) Institute, preservice teachers were asked to take pictures of the training that would help them implement the curriculum once they began teaching in their own classrooms. At the end of the day, they were asked to submit one photo and answer some reflection questions about the photo. The

submissions were collected using a Qualtrics survey link, shared as a QR code to the training participants. They were able to access the survey on their cell phones and upload the pictures from their phone to the survey form. The reflection prompts were modified from the Horowitz (2012) PHOTO reflection questions to be more applicable for teaching content. Our questions were modified to include (1) Describe your picture. (2) What is happening in your picture? (3) Why did you take a picture of this? (4) What does this picture tell you about your role as the instructor when teaching the content to your students? (5) How can this picture help provide opportunities to increase the knowledge and understanding for your students?

Results to Date

We have used this practice with 11 preservice teachers from Illinois State University and the University of Illinois who completed the CASE Animal Science (ASA) pre-service teacher training during the summer of 2023. Their CASE institute lasted seven days. Each day the students received a reminder to complete their reflection photo upload and reflection prompts; however, they did not receive any additional incentives to complete the Photovoice reflection. Six of the participants (55%) completed all seven days of prompts. The other five participants completed between three and six days of prompts.

The reflection prompts that were completed included, at maximum, a one-sentence answer for each question. Some only included a phrase. Most reflections talked about information that could be useful when the participant was teaching, while others used it as a reminder for something related to the teaching process.

Future Plans and Advice to Others

We were successful in providing an opportunity for preservice teachers to reflect on their experiences during the CASE training and perhaps think more deeply about their connections between learning the lessons themselves and preparing to teach the lessons to their future students. However, we will not know if the photos were used or used in a way that helped inform the teacher's delivery of the material. We plan to follow up with the preservice teachers at the end of the next school year to determine the extent to which the photos were used.

Resources Needed

Using Photovoice in today's world, in which a majority of people have access to handheld technology, requires very few resources. We asked participants to use their own cell phones to take pictures and record their responses. The reflections were collected on the Qualtrics XM © platform. Another online data collection platform could be used instead of Qualtrics, and iPads could be provided if participants do not have access to cell phones. Note that in asking participants to take pictures during their training, we were allowing students to use their cell phones throughout the day, which could be problematic. It would be impossible to control when they are using their phones for training-related purposes or for personal purposes.

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Video Capturing Tools in Student Teaching

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Video Capturing Tools in Student Teaching

Introduction and Need for Innovation

Pre-service student teachers in teacher education conduct a 14–16-week practicum that includes classroom environments and necessitates instruction in a variety of laboratories. University supervisors are required to conduct some visits to practicum sites in-person and remotely to fulfill the need for observation, feedback, and evaluation of lesson and delivery of content from student teachers. Due to the limitations that were imposed during Covid protocols, a need for remote observations was created. Using computer optics for stationary capture of student teacher delivery and performance was found lacking. A need for observation of student non-verbal communication, physical movement of practicum student teachers within their lab settings and interactions with students was a desired area for improving remote observations (Eck, Layfield, DiBenedetto, & Gore, 2021; Paulsen & Schmidt-Crawford, 2017). Additionally, our student teacher candidates must become proficient with the instructional strategies involved with remote learning, as many secondary schools now offer remote instruction during missed days due to inclement weather. This paper reviews the implementation of video capturing tool (i.e, Swivl technology) from the perspective of student teachers and university supervisors in context of after COVID-19 distancing in schools.

How it Works

Students receive set up instructions and practice with utilizing a Swivl (2023) in a teaching methods course prior to student teaching. Students obtain access to the equipment at the beginning of their student teaching semester. During student teaching practicum students receive a total of seven observations by university supervisors which is made up of a combination of face to face and virtual observations. State code requires university supervisors to conduct bi-weekly observations during the 14-week practicum. The Swivl will follow the student teacher and capture the individual as they move and talk while instructing the class. The use of Swivl technology allows the university supervisor to have a clearer image and volume as well as more of a direct image of the teaching experience compared to laptops, cell phones, and tablets.

Results to Date

The survey data from the student teachers (n=16) revealed that most believed Swivl was either easier or the same difficulty as using other video capturing technology, including cell phones, laptops, and tablets (see Table 1). Furthermore, while most student teachers thought that investing in Swivl technology was worthwhile, half of the student teachers experienced challenges when using a Swivl (see Table 2). The university supervisors (n=4) were interviewed about their experiences working with students who used Swivl. The university supervisors preferred the ability of the Swivl to track student teacher movements in the classroom as well as the microphone that student teachers had on their person while teaching. These features allowed supervisors to better observe what was happening in the lesson. However, the university supervisors indicated when students struggled with the technology, then time could have been lost and quality of the observation was less than ideal. This mimicked what the student teachers said in the survey.

Table 1
Student Teachers Comparing Using a Swivl to Other Video Capture Technology

Question	Easier		Same		Harder		No Experience Using Other Technology	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Swivl is __ to use than a cell phone for recording myself teaching	7	43.8	6	37.5	2	12.5	1	6.2
Swivl is __ to use than a laptop for recording myself teaching	5	31.2	8	50.0	3	18.8	0	0.0
Swivl is __ to use than a tablet for recording myself teaching	5	31.2	8	50.0	1	6.3	2	12.5

Note. *n*=16

Table 2
Student Teachers Usage of Swivl

Question	Yes		No		Maybe	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
I used the Swivl for the state licensor assessment (PPAT)	0	0.0	16	100	-	-
I used the Swivl for recording myself teach just to reflect and self-critique myself	13	81.2	3	18.8	-	-
Did you experience any issues when using Swivl?	8	50.0	8	50.0	-	-
Do you believe the Swivl is worth the investment in the technology?	11	68.7	2	12.5	3	18.8

Note. *n*=16

Future Plans

Continuing to work with practicum student teachers in the use of remote instruction is an important part of teaching methods in both classroom and lab settings as well as in program planning. Potential use for observing FFA and Supervised Agricultural Experience (SAE) instruction could also become incorporated. As opportunities for remote learning and skill attainment continue, planning for technology to meet the needs of both secondary and post-secondary instruction will continue to be a necessity.

Costs

The Swivl system costs around \$1260 for the Swivl, stand, and an iPad. There are time and organizational costs as well. Students need to be trained on how to use the Swivl, which we conducted in the methods course, as well as a system of checking out Swivl systems.

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