The goal of physical education teacher education (PETE) faculty is to prepare preservice teachers to teach their physical education students the knowledge, skills, and competence to engage in physical activity for a lifetime (American Alliance for Health, Physical Education, Recreation and Dance, in press). Many PETE programs share similarities, as faculty members strive to develop knowledge of content, teaching, and student learning, also known as pedagogical content knowledge (PCK; Shulman, 1986). Although competence in teaching is often measured by preservice teacher performance during student teaching, this is a major programmatic outcome rather than a process. Physical education teacher education faculty must engage in assessment and reflection that examines the effectiveness of their programs and the processes that contribute toward preservice teacher performance.

Program assessment has four related and interdependent purposes: (1) accountability, (2) improvement, (3) understanding, and (4) knowledge (Galluzzo & Craig, 1990). Models of comprehensive program assessment for PETE programs have been presented (Metzler & Tjerdasma, 1998), implemented, and shown to be effective (Metzler & Tjerdasma, 2000). Program assessment is an ongoing process, made necessary by continuous changes in society (Gurvich, Lund, & Metzler, 2008). The increased reliance on technology, evolving health behaviors, and shifts in educational policy have all led to changes in schools. The profession is aware of these changes and of the evolving skill set needed by new physical education teachers. The initial Teacher Standards (National Association for Sport and Physical Education, 2009) presented new competencies for physical education teachers that dictated changes in PETE programs. These changes have caused some to modify previous program-assessment models in order to help PETE programs to meet these new competencies (Colquist, Pritchard, Collum, & Langdon, 2011).

Initial efforts of comprehensive program assessment in PETE programs have focused on the dispositions, pedagogical knowledge, and content knowledge of preservice teachers (Metzler & Tjerdasma, 2000). Measurement of physical education-related content knowledge is a commonality in all PETE programs, as typical data sources include course grades and certification exams.
What Is Photovoice?

Photovoice is a participatory action research technique introduced by Wang and Burris (1997). It has been used in several settings and among diverse populations to explore a variety of health and social problems. It has been used by groups such as Aboriginal health workers, rural Appalachian youth, Latino adolescents, mothers with learning disabilities, and children with autism (Booth & Booth, 2003; Carnahan, 2006; Clark & Zimmer, 2001; Downey & Anyaequunam, 2010; Hergenrather, Rhodes, & Clarke, 2006; Steng et al., 2004; Wilkin & Liamputtong, 2010). The basic premise of the Photovoice methodology can be summarized by three overall goals: (1) allow participants to photograph everyday phenomena that relate to a given question; (2) allow for group discussions about the photographs, giving special attention to issues that are of greatest concern; and (3) connect the ideas and concerns shared in the discussions with decision makers (Wang & Pes, 2004). In most cases, the decision makers are local policy makers or community leaders. Within the scope of PETE programs, the decision makers are PETE faculty and program administrators. Unlike other field-based techniques, Photovoice allows for collaborative feedback to both preservice teachers and PETE faculty, allowing for small-scale change in a relatively short amount of time.

Recommended Procedures

It will be important to provide preservice teachers with a background of Photovoice and its potential uses before beginning such a project. Photovoice methodology recommends that participants attend a training session (lasting 2–4 hours) to learn about Photovoice. The session is also devoted to answering participant questions, distributing cameras (if needed), reviewing methodology protocol, and brainstorming. Brainstorming is recommended to help facilitate discussion and to guide participants’ picture taking before they begin the project. Sharing resources, such as www.photovoice.org and previous examples of Photovoice projects during the training session, provides insight to the purpose, goals, and uses of Photovoice. For the purpose of the project, preservice teachers would take pictures that illustrate the strengths and weaknesses of the program in terms of how prepared they felt after their coursework was completed. This type of project is best suited for a seminar class during the student-teaching semester. If a program does not have a seminar class associated with student teaching, it can be completed through weekly meetings during the student-teaching semester.

To complete the project, PETE faculty must make sure that each preservice teacher has access to a camera. Cameras are an integral part of the methodology, so access to cameras can be a major limitation. While digital cameras are recommended, disposable cameras can be used as well. Additionally, most cell phones include digital camera capabilities. Digital photographs are easiest to upload to presentation programs such as PowerPoint, but print photos can be scanned as well. Regardless of the device used to take photographs, it is imperative that preservice teachers ensure that parental photo-release forms have been signed before taking photos of students.

It is recommended that the steps to the Photovoice technique developed by Wang and Burris (1997) be utilized to guide this project. Teachers should instruct students to record everyday realities through pictures, present and discuss photographs with other classmates, and discuss a plan of action to make positive changes (Wang & Burris, 1997). It is also recommended that preservice teachers be given at least seven days to take photographs. Students will take pictures throughout the day to document their everyday realities. Instructors should adjust the time allowed to take photographs according to class schedules and the overall goals of the project. The students are then required to present and discuss their photographs with the class using the SHOWEd method. The SHOWEd method is the recommended five-question outline to help participants discuss and describe their photographs. The five questions included in this process are: (1) What do you see here? (2) What is really happening? (3) How does this affect our lives? (4) Why does this strength or weakness exist? (5) What can we do about it? (Wang, Burris, & Xiang, 1996).

The advantage of using Photovoice as a tool for program assessment comes from its unique benefits for qualitative research. In qualitative-based research (like Photovoice), reliability and validity are achieved by increasing the methodology’s credibility, authenticity, transferability, and consistency (Appleton, 1995; Fade, 2003). Triangulation of data-collection methods through the use of photographs, focus groups, and member checking increases the method’s transferability. Photovoice achieves authenticity and
credibility because the methodology relies on the participation of the target population (i.e., preservice teachers) whose photographs represent their lived experiences, and consistency is achieved by following a stable protocol. For a more detailed description of Photovoice methodology, see Wang and Burris (1997).

As with any major assignment in a course, the Photovoice project should be evaluated on specific criteria related to the assignment's goals and objectives. Areas of evaluation might include number of photographs, categories for photographs, written explanation of each photograph, presentation format, presentation design, and grammar/spelling. The purpose of the evaluation should be to ensure that students adhere to the parameters of the project so that the students' presentations foster critical thinking. Evaluation should not emphasize the interpretation of the photographs since the purpose is to allow students to express their stories through their own experiences. Therefore, the evaluation criteria can be modified by the instructor. In addition to stressing the confidentiality of the process (i.e., no discussion about the project outside of class and information shared with stakeholders will not be identified by individual students), the use of a moderator outside of the program to conduct the assessment would be helpful. An outside moderator allows students to share information freely without fear that it will influence their evaluation. The project should be process-oriented and focused on the SHOWeD method. Table 1 provides a sample rubric for a college-level assessment.

### Photovoice Project Example and Timeline

In the Senior Seminar for Health and Physical Educators course at Georgia Southern University, Photovoice was used as a class

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<th>Table 1. Sample Rubric for College-Level Assessment</th>
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<td><strong>Rating</strong></td>
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project to identify PETE program strengths and weaknesses. The overall purpose of the project was to actively engage preservice teachers in a discussion about program needs and their perceived preparedness to teach in real-life situations. With the course meeting only once a week, the project as a whole took approximately six weeks, as outlined in Table 2. At the beginning of the semester, the instructor introduced the Photovoice project with the assistance of a faculty member who had experience using Photovoice as a research method (Photovoice moderator). The preservice teachers learned about the goals of Photovoice and how it has been applied in community health (one class session, 60 minutes). The instructor used a second class session (60 minutes) to allow preservice teachers to ask questions about the Photovoice project and to provide final instructions before preservice teachers began to take photographs. The preservice teachers were instructed to take at least eight photographs (i.e., four to represent program strengths and four to represent program weaknesses). During the second class session, the instructor asked the Photovoice moderator to also facilitate a brainstorming session to help provide ideas for photographs that would meet the project requirements. The instructor left the room during this portion to allow students to speak freely about photograph ideas.

Preservice teachers were given 14 days to take photographs. After the 14 days, two class sessions were dedicated to the presentation and discussion of their photographs, using slide-presentation software to display photos. To increase confidentiality, the instructor allowed the Photovoice moderator to conduct the two class sessions so the preservice teachers felt comfortable presenting their photographs. The instructor asked the preservice teachers to submit their pictures to an online class-management system so the projects could be evaluated based on presentation design as presented in the sample rubric. The moderator was asked to evaluate the rubric components specific to the photograph descriptions and student participation. During each photograph presentation, the moderator took notes on the major concepts the students identified.
as program strengths and weaknesses. Table 3 provides a summary of various strengths and weaknesses identified during the class discussions.

For example, “best practices” was identified as one of the program strengths during the in-class discussion among the preservice teachers. One such best practice discussed was lesson-plan preparation. Students agreed that because each PETE class requires such detailed lesson planning, it is beneficial when they are in the classroom because they were “better able to think ‘on their feet.’” Figure 1 represents this ability because the student had to quickly revise a lesson based on student class attendance. One weakness that arose from the discussions was that preservice teachers felt they needed more real-world preparation. For example, preservice teachers were given a good selection of equipment to use in PETE coursework but were forced to quickly change previous plans when faced with teaching in the real world with minimal equipment. They felt that the program could do a better job of preparing preservice teachers to use limited amounts of equipment (see Figure 2).

The Photovoice moderator used the notes taken during the preservice teachers’ presentations and the photographs submitted by each preservice teacher to discuss the outcomes of the PhotoVoice project with the Senior Seminar instructor and other PETE program faculty. At the end of the school year, PETE program faculty used the student PhotoVoice project to identify potential solutions for the weaknesses found within the program. The strengths within the program identified through the PhotoVoice project helped the PETE program faculty learn what the preservice teachers felt was most valuable in the program curriculum, course materials, and assignments.

Conclusion
The information gathered using this unique project resulted in an action plan for program changes and improvements. In this PETE program, assessment is ongoing and has previously included surveys. The use of PhotoVoice has the potential to provide a more in-depth look at the potential strengths and weaknesses of programs and to provide a starting point for conversations between preservice teachers and PETE faculty. Along with traditional assessments of PCK and dispositions, using unique methodologies such as PhotoVoice allows PETE faculty to see how effective their instruction has been. The information gathered using this method can influence programmatic changes and satisfies preservice teachers’ need to voice their perceptions about their PETE program.

References
Colquitt, G., Pritchard, T., McCollum, S., & Langdon, J. (2011, April). Meeting the NASPE Initial Teacher Standards through comprehensive


To learn more about this topic, refer to this AAHPERD resource at www.aaahperd.org/shop: National Standards & Guidelines for Physical Education Teacher Education, 3rd Edition.