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227 The Missouri Pathways Partnership—Inroads in distance education. E. L. Walker*¹, S. P. Webb¹, J. D. Ulmer², and A. Evert³, ¹Missouri State University, Springfield, ²Texas Tech University, Lubbock, ³Redlands Community College, El Reno, OK.

The Agriculture Pathways Partnership was developed in 2004 to offer place-bound students the opportunity to earn Bachelor's of Applied Science (B.A.S) degree from Missouri State University (MSU). The ultimate goal of the Partnership is to increase the number of 2-year college students earning B.A.S. degrees and as a result improve the trained workforce in the agriculture industry. Students earn a B.A.S. degree in Agriculture after completing up to 85 h at a community college and a minimum of 40 h of upper division hours, with a minimum of 30 upper division hours through MSU. Students taking courses through MSU have the option of taking courses offered via interactive television (ITV), internet, weekend, intersession, and internship experiences. Faculty, staff, and students from 5 Missouri and 2 Oklahoma locations participate in the program. An evaluation was conducted to determine the impact of the program on student learning, satisfaction, and suggestions for improvement. The mixed-methods evaluation design was used and included student surveys, focus groups, and personal phone interviews. According to student surveys, courses offered via ITV are perceived as comparable to the face-to-face courses. Over 73% of student participants agreed or strongly agreed that Pathways courses were successful, that they liked the course format, and felt they would continue to take other courses through Pathways. Eighty-five percent of the faculty participating in Pathways agreed or strongly agreed that the Pathways courses were as rigorous as traditionally taught courses. However, students reported problems in student support ranging from enrolling, gaining access to blackboard, and applying for graduation. Students have also reported lack of motivation when no instructor was present in the classroom. Other factors which are challenges to the Pathways Program include regional weather variation, non-matching site academic calendars, ITV technology, personal student conflicts, and state-wide differences in degree requirements and regulations.

Key Words: distance education, teaching, agriculture degree

228 The effect of supplemental online resources in distance education format on undergraduate animal science laboratory instruction. J. Q. Bing*, S. E. Pratt-Phillips, and C. E. Farin, *North Carolina State University, Raleigh.*

The objective of this study was to determine if using supplemental online resources (SOR) in a distance education (DE) format would be effective in enhancing student learning. Seventy-two students in an undergraduate animal science laboratory course completed a pre-test on anatomy as well as completed a pre-survey to determine their experience with, and attitudes toward, SOR. The SOR were made available for randomly selected laboratory lessons through online modules. Two laboratory practical exams were administered, one mid-semester and one at the end of the semester, and included questions from labs for which SOR was made available as well as labs that had no SOR. Questions from the pre-test were included in the exams and these responses generated the "post-test" scores. At the end of the semester, students completed a post-survey regarding their opinions of the usefulness of SOR. Student learning and performance was evaluated using an ANOVA model that included test scores, SOR availability and their interactions. Results are presented as mean \pm SEM. Post-test scores ($87 \pm 2\%$) were higher ($P <$

0.0001) than pre-test scores ($34 \pm 2\%$), indicative of student learning. On Lab Practical 1, students scored higher ($P < 0.0001$) on questions from SOR laboratories compared with non-SOR laboratories ($77 \pm 2\%$ and $74 \pm 2\%$, resp.). In contrast, on Lab Practical 2, students scored higher ($P < 0.0001$) on questions from non-SOR laboratories compared with SOR laboratories ($86 \pm 2\%$ and $83 \pm 2\%$, resp.). In the post-survey, 62 of 72 (86%) of students believed the SOR was at least somewhat useful for improving their grade; however, student perceptions of the value of SOR to impact their performance were not consistent with actual performance. Factors other than SOR may play a greater role in influencing student performance.

Key Words: anatomy, online, supplemental online resources

229 APPLAUSE—A tool for improving student presentations. M. M. Beck* and R. Johnson, *Clemson University, Clemson, SC.*

Increasingly, clear and effective communication skills are sought by professional schools, potential graduate mentors, and employers; as educators of both graduate and undergraduate students, we are remiss if we fail to impart techniques that enhance the ability of our students to communicate effectively. Many resources exist for developing PowerPoint presentations with effective use of color schemes and fonts. Fewer resources exist for students to use in developing effective presentation skills and such techniques are typically not a curricular focus. APPLAUSE is a conceptual framework for students to use in developing and giving effective oral presentations. Using the letters of the acronym as a guide, students have the following prompts: A – Audience analysis; P – Pause then grab; P – Pointer precision; L – Lively voice; A – Adjust in action; U – Use appropriate gestures; S – Simplicity; E – Expect questions. These simple but straightforward prompts are useful regardless of the context; most speakers at scientific meetings know their subject matter well and, with attention to these details, could turn mediocre or good presentations into great presentations. Paying particular attention to the 2 P's – the first at the beginning to better ensure audience connection and the second, precise use of the pointer – can have immediate and marked effects on the presentation; misuse of both are among the most common distractions to effectiveness. Student feedback from 6 classes of ~15 students each, primarily senior undergraduates, indicates that use of the APPLAUSE framework made a positive difference in the effectiveness of their presentations.

Key Words: student presentations, communication effectiveness

230 Student performance is enhanced by pedagogical shift to lecture podcasts. J. J. Parrish* and R. L. Monson, *University of Wisconsin, Madison.*

The study examines the effects in reproductive physiology of comparing traditional lecture to use of enhanced podcasts. The course was taught at the junior-senior level and consisted of 2, 50-min lectures and a 2-h wet lab, for each of 15 weeks in the fall semester. Baseline data from the traditional course was from 2006. In 2007, enhanced podcasts replaced traditional lectures, which allowed replaying the broadcast in iTunes software so that viewing was computer platform independent. No change was made to the laboratory over the course of the study. Due to a sabbatical leave of the instructor in 2007, all students were required to view the podcasts for the lecture material. In 2008 and 2009 students had the option of viewing the podcasts or attending live lecture. Scores on 3

lecture exams were recorded in years 2006 – 2009, with years hereafter referred to as year 1–4. There were 44, 61, 53 and 67 students completing the class in years 1 - 4 respectively. Exams consisted of multiple choice, true-false, and essay questions. However no change was made in the exams over the 4 years and while students could review exam results in class, no exams were returned to students during this period. There were significant effects of exam, year and exam by year interaction, $P < 0.05$. The lsmean percentage scores on exams over the course of the 4 years were 80.8, 83.1 and 82.2 for exams 1 – 3 respectively. While exams scores were different ($P < 0.05$) and there was some variation over the years ($P < 0.05$), differences were minor. When the lsmean percentage

overall exam score for each year was examined, the scores were 78.8, 82.7, 83.9, and 82.9 for years 1 – 4 with year 1 different ($P < 0.05$) from years 2 - 4 but no difference was found between years 2 - 4 ($P > 0.05$). Attendance in live lectures was 98%, 0%, 15% and 1% in years 1 – 4 respectively. In year 2 no live lecture was offered. However, in years 3 and 4 a live lecture was offered but attendance was low. The results demonstrate that lectures given via an enhanced podcast improve exam performance and given the choice, students chose to take the podcast over the live lecture.

Key Words: podcast, learning assessment, reproductive physiology