on GMOs and administer it to their family and friends. There was strong evidence of learning according to the analysis of the survey results and student reflection. The significant improvement in this final assignment in the intervention course further supports the importance of explicating each assignment's purpose and establishing criteria for success in advance.

**GENERAL BIOLOGY COURSE**

**Implementation and Results.** This course utilized a set of six assignments to make connections across biology while focusing on insulin and diabetes. The assignments were created to progressively strengthen students’ critical-thinking and problem-solving skills. The second of these assignments was chosen as the initial sample and the last assignment was chosen as the final sample. For both courses there was a small improvement when the average scores across rubric dimensions were compared. Additionally, 70 percent of students in the experimental section improved their score in at least one dimension as compared to 55 percent of control section students.

**Lessons Learned.** Since this was a freshman-level course, the instructor struggled with designing a content-specific assignment that would meet all rubric criteria without exceeding the expectations of the freshman-level students. Therefore, the assignments addressed only the first four dimensions of the rubric. A more open-ended and less content-driven assignment will likely allow for a better assessment of rubric dimensions. There was a marked change in how students in the intervention course interacted with the instructor and reflected on their performance in these assignment sets. There was a shift from the traditional “Why did I lose points?” attitude to a “What would make it better?” attitude. This change was apparent in course evaluation comments, where students in the intervention courses focused more on what and how they learned from the course than on likes or dislikes about the course or instructor, as was seen previously and in the control course.

**INTRODUCTION TO SPECIAL POPULATIONS COURSE**

**Implementation and Results.** For problem solving, there were six assignments that were content specific and required students to differentiate instruction for six different disability groups. Each assignment asked students to develop one accommodation in five different domains (content, instruction, setting, behavior, and affect) to foster a positive learning environment for students with that disability. Each activity met the criteria of open-ended and real-world applications. The first assignment, learning disabilities, was used for the initial sample and the fifth assignment, Autism, was used for the final sample. Comparing the rubric scores, 90 percent of students in the experimental section improved their score in at least one dimension as compared to 55 percent of control section students.

**Lessons Learned.** The findings indicate that students could be more engaged in the problem-solving process based on all dimensions of the rubric. This has led to adopting a more backward design that will provide a more mindful approach to the activities specified in the problem-solving process.

Both the General Biology and Introduction to Special Populations courses exhibited an increase in transparency as measured by the transparency survey. To gain a better understanding of how students’ perceived transparency related to their self-assessment and course assessment in final course evaluations, we mined data from the IDEA Students Ratings of Instruction (IDEA SRI), the current course evaluation system in place at UHD, and analyzed components related to three separate areas: transparency, motivation and metacognition, and perceived progress by the student. Table 2 summarizes these results. Overall, students from intervention sections reported feeling that they received more meaningful feedback, that instructors had a personal interest in their learning and were more available outside of class, and that instructors encouraged students to reflect on their own learning and progress. Most notably, and relevant to the problem-centered aspect of the project, students noticed a marked increase in “learning to analyze and critically evaluate ideas, arguments and points of view.” These data suggest that our existing course evaluation system (IDEA SRI) can be used similarly to the transparency survey utilized in this project to shed light on students’ perception of transparency. High transparency as perceived by students appears to correlate with their self-assessment of critical-thinking and problem-solving skills.