QIICC Analysis: Involving Students in Assessment Using Technology

This research was performed to determine the efficacy of the QIICC performance analysis protocol. The QIICC protocol is designed to elicit student feedback on the quality of items found on a quiz or test. By doing so, it allows the instructional staff to better analyze the effectiveness of the individual elements that are included in the assessment process. More importantly, the QIICC Analysis helps students analyze their own knowledge levels, and by doing so, understand "what they know, and what they do not know." In the QIICC protocol, students are scored on not only how accurately they answer a question, but also on how confident they are in the accuracy of their answer.

Oftentimes, assessments are used simply to determine the present state of an individual's knowledge, however, the true strength of assessment can be seen in its ability to act as a catalyst for further learning. The QIICC Analysis protocol attempts to foster this element of assessment by forcing a student to be critical about how confident they are in a specific answer that they have provided. This research, therefore, is significant in that it shows that the QIICC process can act in this catalyst capacity.

The QIICC Analysis protocol is a powerful tool for assessing student learning. This process collects five categories of information from a student for each item found on an assessment. These five categories are: Quality, Interest, Importance, Confidence and Challenge. The first three of these variables are used to judge the overall quality of the question, and the likelihood of a question being included on subsequent assessments depends on how students rate it on these three categories. The confidence variable is used in concert with the accuracy of a student's response to give credit for a question. The more confident a student is in his or her answer, the more credit they will receive if they are correct and the less credit they will receive if incorrect. Through the confidence variable, students are asked to take a much more critical role in the development of their knowledge. By asking for a confidence level and incorporating it into the grading rubric, it is much more important for a student to "know what they know" than is seen in other assessment strategies. The challenge option allows an individual student to remove any question they feel is a "bad" question from their assessment. By allowing for challenges, QIICC empowers students to feel comfortable with the assessment process and take control of the knowledge that is deemed important or worthwhile for learning.

The data was analyzed to find how actively students participated in the QIICC process, and which of the QIICC elements were most commonly changed by students. Student quiz results were analyzed to find out how often students changed the default answer for any of the variables on a given question. During the four semesters that QIICC has been incorporated in the assessment of Dr. Dwight Allen's introductory education class at ODU, approximately 1000 students have taken part in the testing process. Data for each of the quizzes taken during this time was collected and analyzed.

This research indicates that approximately 1/3rd of the assessments taken indicate no changes for any of the default values for any of the items on a given quiz, however, a very few students never made any changes on any of the assessments they took over the course of the semester. This would indicate that the students are aware that the QIICC process is occurring and are taking advantage of it when it is appropriate, however, they do not deem it necessary at all times.   I addition, interesting results were found about the most often changed variable of QIICC. Further research will indicate whether the tool should be altered to foster further student participation or if further training on the importance and use of the instrument is needed.