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COMP 523-001

March 28, 2020

"Group A: APPLES Service Learning Reflection"

Our project aims at developing an interactive question database intended for instructors in the Physics department at UNC. The goal is to implement a user-friendly web application that allows instructors to view questions by custom criteria and upload new questions to the database. Potentially, this application could be applied to a broader range of departments and aid professors in composing exams.

In assisting our clients to create a web application, we believe that we will leave an impact on the educational experience of both instructors and students. From the instructors' perspective, our application will increase their efficiency in creating exams or practice questions. By viewing the statistics from a collection of past questions, instructors can make a more reliable prediction on their students' performance on these questions and regulate the difficulty of exams accordingly. Additionally, in comparing their students' performance with the statistics retrieved from our application, they can better understand how a particular question reflects their students' actual capacity. For example, questions with confusing wording may have a low average as well as low correlation to students' overall performance. From the students' perspective, since the exams and practice questions now become more carefully designed, the questions will not only be more reliable in evaluating their true capacity, but will also be more comfortable to work on. Therefore, students' learning experiences will also be improved. Consequently, we believe that

our application will help to not hinder a students' interest in learning more about a related field in their future.

Moreover, our application aims to improve the collaboration between instructors in making questions for exams. Having this in mind, an instructor using our application, will have access to a database that is populated by questions created through user input. Furthermore, an instructor will be able to use a question from our database and update the database with his or her own results. In addition, instructors will be able to give each other constructive criticism more easily once they have access to each other's questions. In this way, we aim to improve the inter-colleague communication efficiency within universities.

In essence, our application strives to meet instructors needs in determining a question's ability to assess their students' capacity. In turn, this application will ultimately work to the benefit of the students by influencing the exams they take to be more carefully designed. Moreover, by having access to the database provided by our application, we aim to encourage collaboration between instructors. By enhancing the educational experience of both instructors and students, we believe that our project can play an active role in improving the education system in universities.