

# Computer-based Feedback: Developing an Online Presentation Evaluation System

## コンピュータベースのフィードバック：オンラインプレゼンテーション評価システムの開発

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Along with an administration component for scheduling presentations and administering quizzes, the computer-based presentation evaluation system developed by Ritsumeikan and SUAC instructors allows for immediate peer feedback to the presenter and instructor access to each student's evaluation. All audience members submit a form evaluating each presenter against a set of 41 pre-defined criteria covering seven categories: introduction, body, conclusion, content, visual aids, delivery, and Q&A. Additionally, the evaluator assigns a score to each of these seven categories and provides comments. Upon submission, the evaluation system will compare each student's evaluation against the instructor's evaluation for each presenter and indicate the percentage of matches per category along with the evaluator's comments. Via a color-coded read-out, the instructor can then easily determine the extent of each audience member's understanding of the individual presentation content and overall presentation methodology. This system has led to a more attentive audience resulting in a better atmosphere and more valid feedback for the presenter.

立命館大学理工学部ならびに静岡文化芸術大学用に開発したプレゼンテーション授業運営・評価ツールの意義とその詳細、および実証的効果について概説する。ツールはリアルタイム・オンライン・ピア・フィードバックシステムを備え、教員は個々のオーディエンスが行った評価（イントロダクション、ボディ、コンクルーション、内容、ビジュアルエイド、デリバリー、質疑応答の7項目）にリアルタイムでアクセスできる。プレゼンテーションをした当人は、終了後すぐに、教員による評価、ピア・エヴァリュエーションの結果（匿名）に加えて、両者がどの程度一致しているかをパーセンテージで表したのものについても閲覧できる。一方、教員は、色分けされた円グラフで、個々のオーディエンスがどの程度プレゼンテーションの内容を理解できたか、どの程度プレゼンテーションの方法論を理解しているかを容易に把握することができる。このシステムにより学生の授業態度、習熟度、授業満足度が飛躍的に向上したことが、セメスター毎に実施するオンライン授業評価アンケートの数値にも顕著に表われている。

### 1. Introduction

The English curriculum of Ritsumeikan University's Faculty of Engineering is unique in Japan in terms of content, coordination, computer integration, and sheer size. The faculty employs roughly fifty instructors to teach 3000 students in nearly 400 classes covering ten required first and second-year courses streamed into three levels. In terms of size, the English Diploma Course (EDC) at Shizuoka University of Art and Culture (SUAC) is the opposite of the courses at Ritsumeikan University. Two instructors currently teach 24 students in two classes covering eight integrated courses.

Although quite different in terms of size, both systems are structured so that within each system every course shares a common syllabi, common materials, and common assessment tools, as well as extensive computer integration. By the time students reach their English Presentation Course, they have bolstered their English skills in Reading, Listening, Communication, Discussion, and CALL courses. In both systems, the Presentation course was developed with these five goals:

1. The course should incorporate the skills developed in

previous courses with content from their previous and concurrent courses.

2. The course should foster the development of career skills.
3. Students should receive immediate and comprehensive feedback on their performance.
4. Instructors should be able to assess each individual in terms of performance as a student, performance as a presenter, and performance as an audience member.
5. All feedback and assessment should be paperless.

The primary source for research for these presentations comes from the Internet. The quantity and depth of materials available on the Internet has quickly surpassed all but the largest libraries in the world. All students in both systems have taken the English CALL (Computer-Assisted Language Learning) class before their Presentation class. Several meetings of the CALL class are devoted to using the Internet as a tool for research, leaving the students with basic skills in searching and citing sources to add to their skimming and scanning skills developed in previous and concurrent Reading courses—all skills needed by budding scientists and engineers (Haworth & Garrill, 2003). Presentations need to be judged not only on the quality of the language used, but also on the content presented

through this oral medium (Joughin, 1998). In second-language courses, the content is often overlooked, with the language taking precedence. In order to pull focus back on the content, the topic of the presentations course for both the Ritsumeikan and SUAC students comes from topics covered in courses concurrently taken by all students. This has two added benefits: students further research coursework topics, thus promoting their understanding in said course; in addition, since all students share a common coursework background, it is easier for audience members to understand the presentations in their second language.

Presentation skills are highly valued in both the worlds of business and academia. If students could focus on one skill to increase their chances of advancement as Global Engineers, presentation is it (Polack-Wahl, 2000). Peer assessment and group work, likewise, are skills that are easily transferable to the workplace, thus encouraging students to participate actively in the process (Humphreys, Greenan, & McIlveen, 1997). Students are made thoroughly aware of this during orientation on the first day of class.

## 2. The Presentation Evaluations

The assessment tool developed for this course, the Presentation Evaluation System, needed to address course goals three through five. Specifically, immediacy was of high priority. One of Angelo's (1999) "10 Guidelines for Assessing as if Learning Matters Most" states that "If learning really matters most, then our assessment practices should...provide, receive, and make use of regular, timely, specific feedback." In order to achieve this timely feedback, a new component was added to the Ritsumeikan faculty's e-learning site, English Expeditions. English Expeditions functions as the nerve center for the entire English department, and students are quite familiar with its functions. Many of the functions of English Expeditions have been co-developed with the SUAC teaching staff, among which include: an essay writing submission and feedback system, CALL exercises, extra-credit exercises, and chat, forum, and correspondence systems. English Expeditions is a password-protected secure site available to staff and students at any time on or off campus.

At both universities the Presentation course is conducted in a computer classroom. Students meet once per week for 90 minutes over a 14-week period. The first seven weeks comprise the Workshop Phase where students learn the basics of creating and delivering a computer-aided presentation. By the end of this phase, all students are familiar with the presentation criteria, have created a PowerPoint presentation based on those criteria, and have turned in all presentation materials to their instructors. During the following Presentation Phase of the course, all students have logged on to their computers, have accessed English Ex-

peditions and are presented with a menu of the day's presenters to choose from. Presenters use the instructor's computer at the front of the classroom to present from the PowerPoint file that they created during the Workshop Phase. The Presentation Evaluation Form shown in **Figure 1** is ergonomically designed to allow the evaluator to quickly find criteria without scrolling and thus maintain focus on the presenter. The 41 individual criteria are grouped into seven groups by using HTML field sets and then further grouped into two columns. The left column contains the stages of the presentation: Introduction, Body, and Conclusion. The next column contains criteria judged throughout the presentation: Content, Visual Aids, and Delivery. Finally, after the presentation, the Question and Answer Period is evaluated. In addition to these two columns of criteria, a third column contains fields for evaluators to include at least one positive and one negative comment.

Individual criteria in each section use radio buttons with the same simple scale: N/A (Not Applicable), Yes, and No. When accessing a fresh Evaluation Form, all criteria are pre-populated to N/A. In addition to these criteria, the evaluator must assign a section score using a 4 or 5-point scale. The total of all section scores is the overall total for the presentation. The instructor version of the Evaluation Form contains the same criteria as the students', plus functions for timing the presentation, assigning point deductions, recording questions and answers, and providing detailed comments in each section.

The audience members are allowed to use their mice to click on the Evaluation Form during the presentation. They are not, however, allowed to type until after the Question and Answer period has concluded in order to keep their focus on the presenter and also not disturb the presenter with unneeded noise. Therefore, once the presenter has vacated the podium, the audience members need to spend a few minutes typing in their comments while the next presenter sets up.

Kift (2005) summarizes Ramsden's four requirements for effective feedback as needing to be:

1. Prompt so that it will be perceived as meaningful and relevant
2. Encouraging - strengths and weaknesses identified
3. Constructive - addresses for students how they might improve next time
4. Rational by being based on clear assessment criteria that have been provided to students at time the work was set. The emphasis is on establishing explicitly what the student has done that has met or failed to meet the assessment criteria set.

The Presentation Evaluation System specifically addresses each of these four requirements. Once the instructor and students have completed their evaluations, presenters can

immediately access their Presentation Evaluation Results as shown in **Figure 2**. The layout of the Results closely resembles that of the Evaluation Form, allowing presenters to quickly comprehend both instructor and peer evaluations. Each criterion lists the results of the instructor's evaluation and the students'. For criteria that use radio buttons in the Evaluation Form, presenters see a bar graph of the student audience's evaluations; section scores are simply averaged. Following each section, the presenter can read the instructor's comments for that section, color-coded for positive or negative. The right column contains the presentation length, any point deductions and the overall positive and negative comments, with the student audience's comments remaining anonymous. Finally, presenters can see what questions were asked and their responses to those questions. Students benefit not only from reviewing their Presentation Results, but also through reflection on their own performance while observing and evaluating subsequent presenters, a process valuable to improving future performance (Cooper, 2005).

### 3. Evaluating the Evaluator

While the effective evaluation of the presenter is critical to the success of a presentation class, equally important but often over-looked is the effective evaluation of the audience members. In a class of 35 students, while students only present once, they must evaluate 34 other students.

Most of their time spent in class during the Presentation Phase, therefore, is spent evaluating their peers. This, in itself, is a significant improvement over traditional Presentation courses where students typically pay very little attention to other students' presentations, let alone evaluate them. For presenters to feel they are receiving a fair and accurate evaluation from their peers, it is important to monitor students' evaluations. This "evaluating the evaluator" (Shawback & Pals, 2004) function takes advantage of having the Presentation Evaluations conducted online with the results entered into a database.

To evaluate audience performance, the instructor accesses the Evaluate the Evaluator form shown in **Figure 3**. This form runs a script that tallies the percentage of criterion matches per section, the total percentage of matches per presenter, the overall percentage for that meeting, and all comments and questions contributed by that evaluator. The percentages are represented in number form as well as color-coded pie charts: more than 75% = green, 50% to 75% = yellow, and less than 50% = red. For the section scores, if a student's score is within one point of the instructor's score, it is counted as a match.

It is important to note that an audience member's goal should not be to guess how the instructor will evaluate each criterion, but to fully understand the criteria and assess each presenter's performance based on those criteria. There will

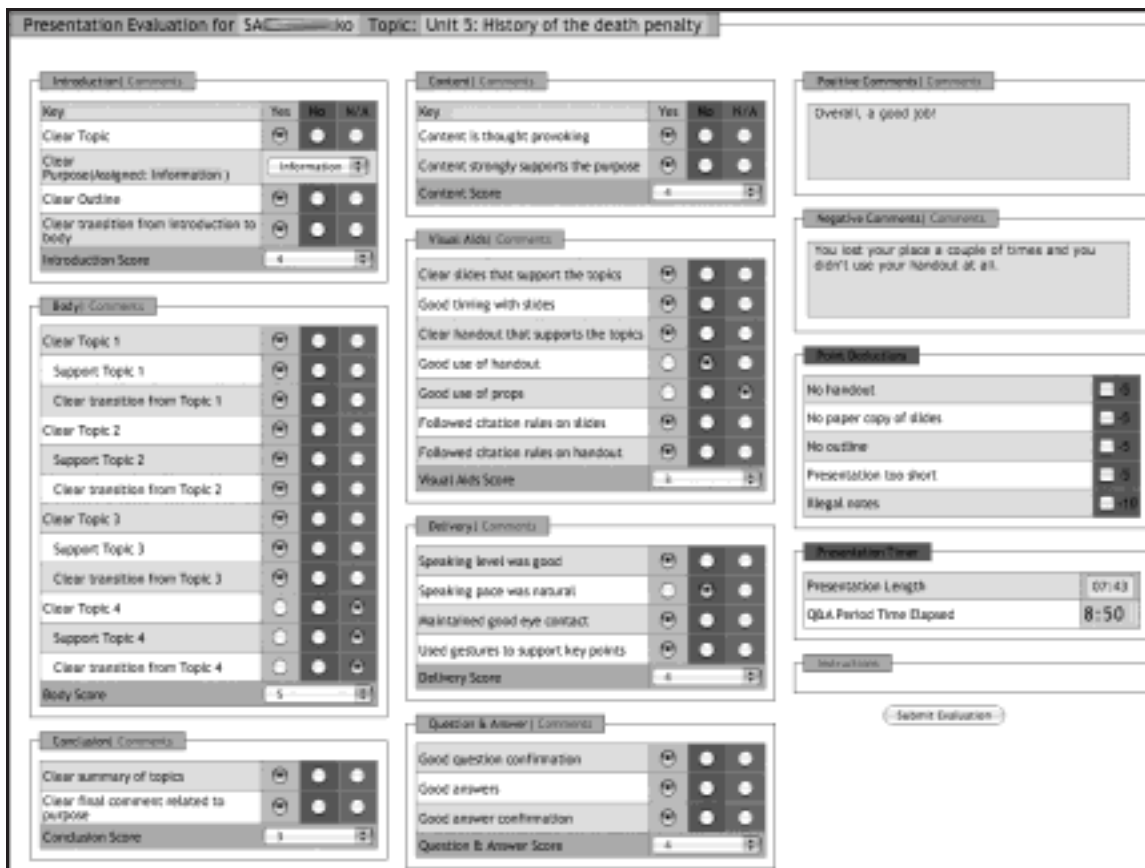


Figure 1. Presentation Evaluation Results

be differing opinions on criteria that call for judgments (Speaking pace was natural), while those that require recognition (Followed citation rules on slides) should match. The instructor takes this into account, as well as the comments and questions from the evaluator when assigning the in-class grade for that meeting. While the presentation itself is the most significant grading criterion for the course at 30% of the overall course grade, the Evaluating the Evaluator scores total a significant 21% of the overall course grade.

Because the criteria are well defined and thoroughly introduced during the Workshop Phase, as Patri (2002) confirms, the accuracy of peer evaluations is quite high. **Figure 4** shows that in a survey of 2004 data across all levels of students (n=901), Student-Teacher matches ranged from a high of 81.42% for the Introduction criteria to a low of 66.90% for the Conclusion criteria and averaged 70.92% for all criteria.

#### 4. Student Reaction

Following the completion of the 2004 Fall semester, an extensive five-point Likert scale survey was conducted online to ascertain student opinions of the Presentation course. Of the 28 questions asked to a total of 901 students, the following questions are particularly relevant to the Presentation Evaluation System:

- Q23. I can use what I learned in this class to help me give a presentation in my native language.
- Q24. The presentation skills that I learned in this class will be useful for me in the future.
- Q25. The online presentation evaluation system was useful in evaluating the presenter.
- Q26. The online presentation evaluation system made me pay attention to the presenter in class.
- Q27. The feedback from the online presentation evaluation system made it easy for me to see the strong points and weak points of my own presentation.
- Q28. I tried to evaluate each presenter accurately because I knew that my in-class grade depended on an accurate evaluation.

The results of the survey found in **Figure 5** show that the vast majority of students agree or strongly agree that the Presentation Evaluation System was useful in evaluating the presenter, made the evaluator pay attention to the presenter, was useful in pointing out strong points and weak points of presentations, and made the evaluator focus on accuracy in an effort to get a good grade in class. Importantly, students also realize that the skills they have learned are important to their future regardless of which language they present in. These results closely mirror the impressions that the instructors received in class.

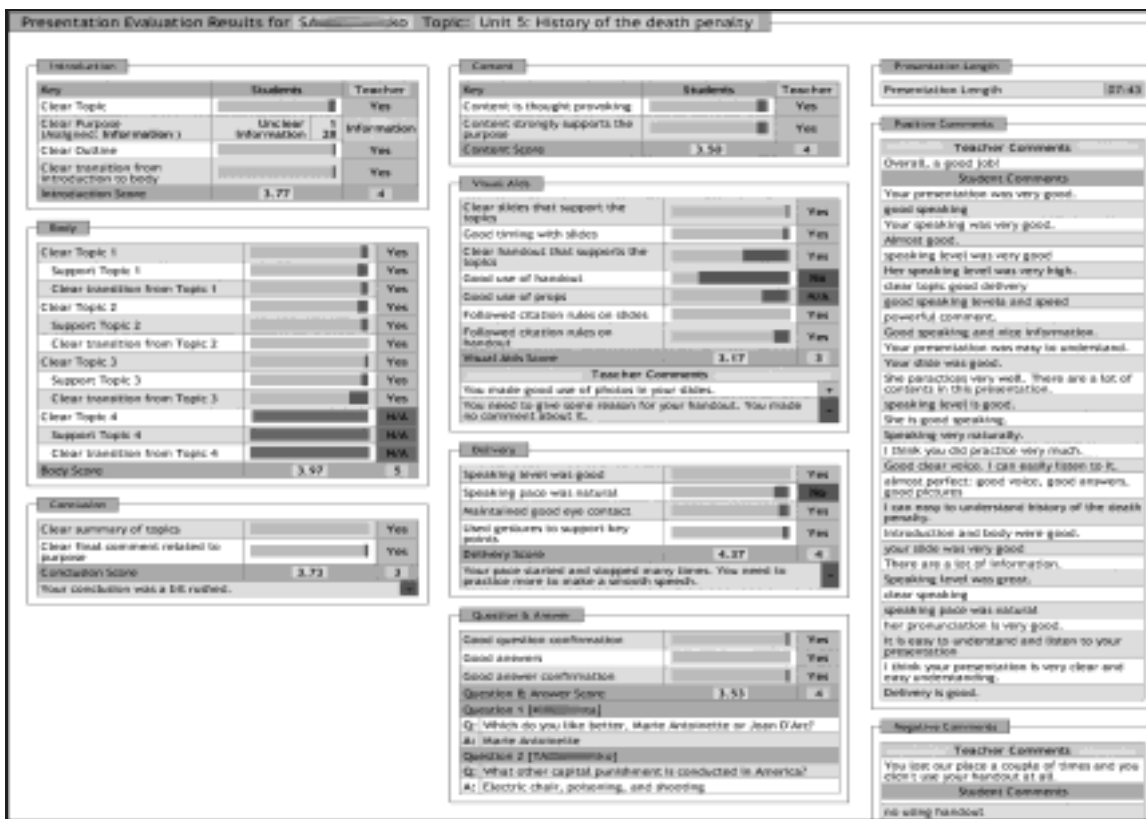


Figure 2. Presentation Evaluation Form

## 5. Conclusion

Presentation skills are directly transferable to the workplace and highly valued in many fields—a fact not lost on

the students. By integrating an online Presentation Evaluation System into this computer-based Presentation course, students are more attentive in class and contribute positively to their cognitive understanding of presentation skills.

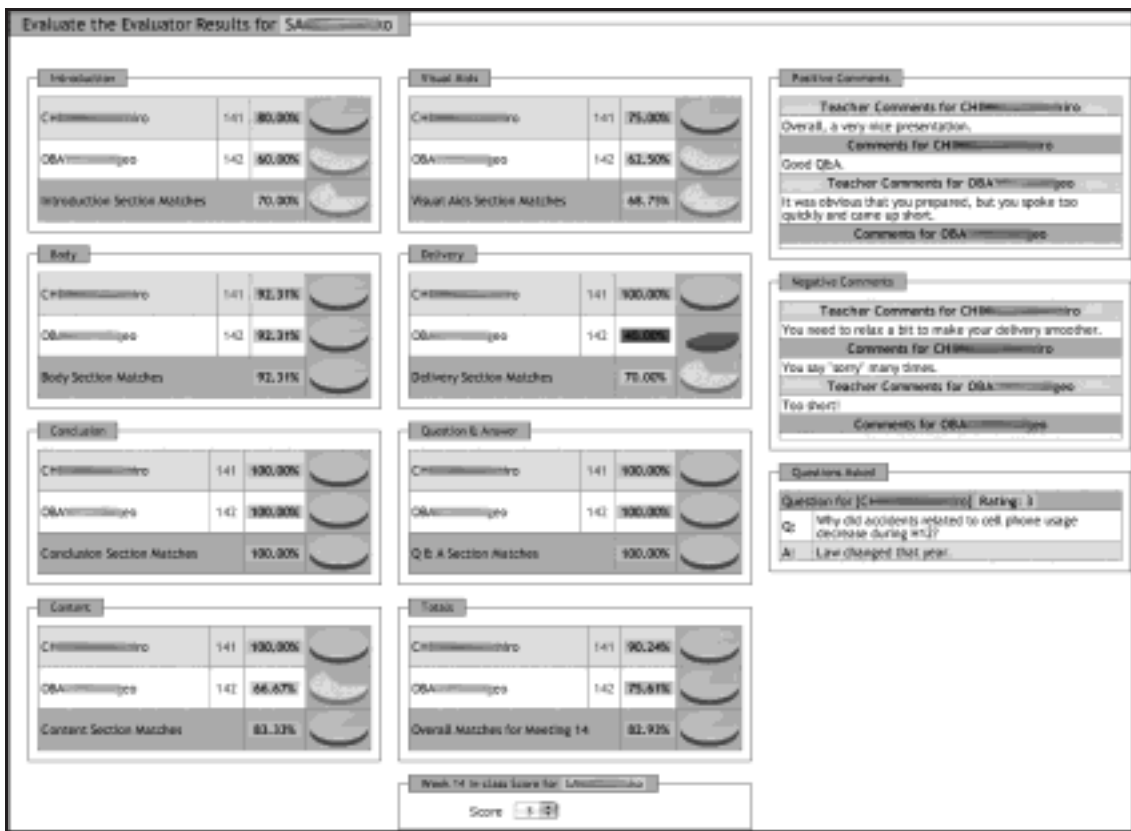


Figure 3. Evaluate the Evaluator Results

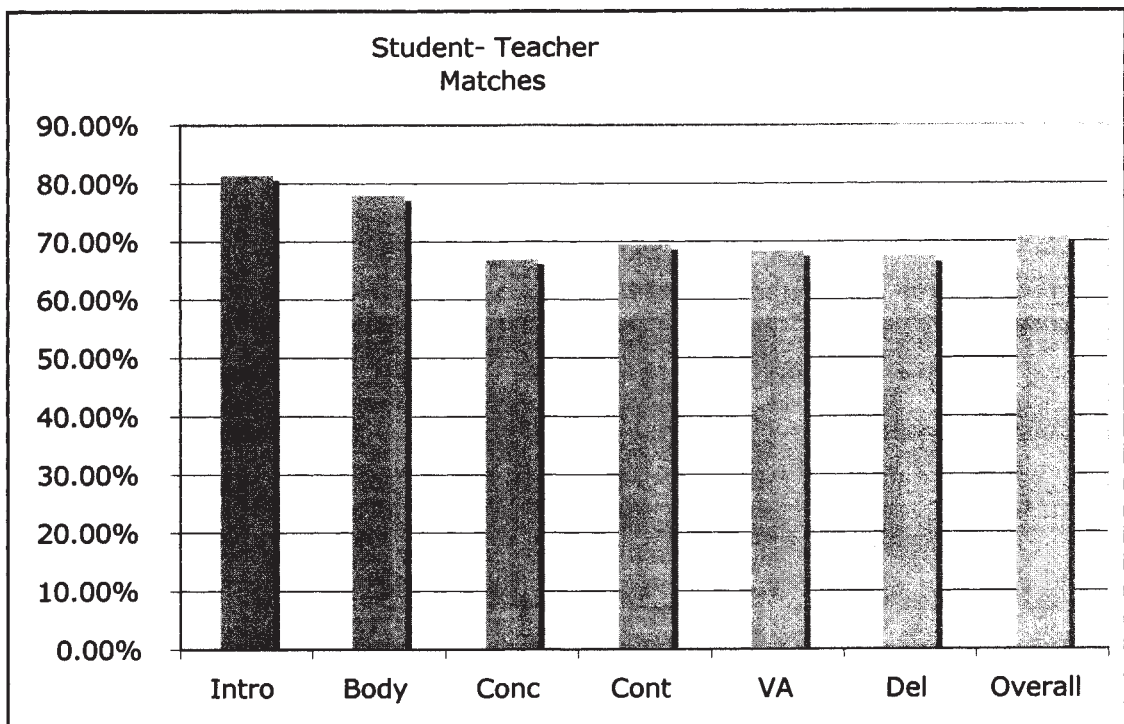


Figure 4. Student-Teacher Matches

The Presentation Evaluation System also allows the instructor to monitor the accuracy—found to be quite high—of the peer evaluations.

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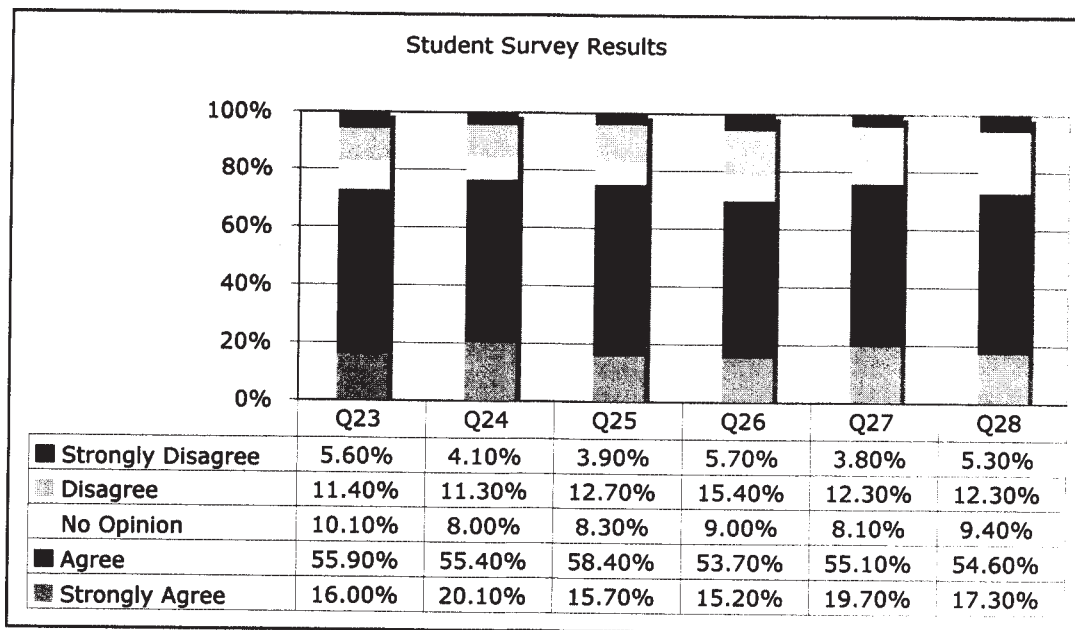


Figure 5. Survey Results