# Teacher/ Student perception gap in online learning

## Terumi Miyazoe
Tokyo Denki University

## Masayo Saeki
Chihlee Institute of Technology

## Rab Paterson
International Christian University

## Reference data:

This study presents the results and implications of an experiment on the perceptions of a learning community. Four universities (three in Tokyo, Japan, and one in Taipei, Taiwan), four language instructors, and nine classes (200 Japanese and 36 Taiwanese students) participated. All followed the same blended course design of regular face-to-face instruction and online instruction developed on a learning management system (LMS). Topic-based online forum discussions in the target language (English for Japanese students; Japanese for Taiwanese students) were the common feature. Similar questionnaires were given to both instructors and students. The results revealed that in general the students evaluated the blended course design positively, but the instructors and students held differing perceptions of the strength of class community. The study therefore suggests a possible *perception gap* between instructors and students on the criteria of what a good virtual classroom is.

　本稿は、ブレンド型授業デザインにおけるクラスコミュニティ形成について考察する。東京（日本）と台北（台湾）にある4つの大学、4人の語学インストラクター、および彼らが教える9クラス・236名の学生（日本人200名、台湾人36名）が参加した。対面授業に加え、学習管理システム（LMS）を用いたブレンド型授業デザインを共通項とし、対象言語（日本の学生は英語、台湾の学生は日本語）を用いたトピックベースのフォーラム・ディスカションが学期を通じて定期に導入されていることを条件とした。学期末に質問紙をインストラクターと学生に配布し、結果を比較した。全体として、学生たちのブレンド型授業に対する評価は、極めて肯定的だった。他方、インストラクター/学生のペアにおいて、クラスコミュニティの強度認識がすべてのペアで逆転しており、オンライン学習空間におけるクラスコミュニティの評価について、教員と学習者のあいだに「認識のギャップ」がある可能性が示唆された。

**T**HIS PAPER provides a research summary regarding perception gaps between instructors and students in a blended learning course. Blended learning is a learning design that combines both face-to-face and online learning (Graham, 2006). This paper consists of three sections: 1) research background, 2) research scheme, and 3) reflections on course experiences by the two collaborators, who participated in the research to provide a balanced interpretation of the results.

## Research background

In this section, background information supporting the present research is provided. Such information is in the form of 1) a literature review to address the research question of the study

and 2) an account of the core measurement instrument used in the following research.

## Research question

This research sought to answer the question "How do instructors and students perceive the same blended learning experience?" The Interaction Theory Typology posited by Garrison and Anderson (2003) is helpful in analyzing the following research question because it can successfully define the three essential components—teacher, student, and content—all necessary for consideration in online learning.
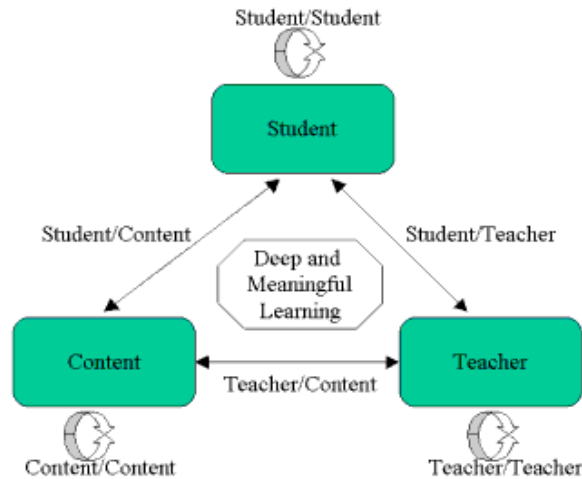


**Figure 1. Garrison and Anderson's Interaction Theory Typology (2003)**

In Figure 1, the two arrows represent a situation where the teacher and students experience the same learning experience. However, even if we tend to think that teachers and students perceive the level of success within a course in the same way, this may not be entirely true for all cases. This study aimed to measure how individual teachers and students perceive a course experience, and consequently, to conduct a comparison of these experiences.

The field of online learning is rich in studies focused on evaluation issues, particularly from the students' viewpoint. However, few studies have focused on how a shared online learning experience is perceived and evaluated by both parties—the teachers and the students. The study of Osborne, Kriese, Tobey, and Johnson (2009) is unique because it addresses perception gap issues between teachers and students. They examined "the potential differences between student expectations for taking and faculty perceptions about teaching online courses" (p. 176). Specifically, a total of 152 students and 24 teachers at a public university in Texas participated in the survey. Included were 12 statements about face-to-face and online learning. The survey questions dealt with how the online course was perceived in terms of difficulty, learning outcomes, openness, communication, time, interaction, learning effectiveness, problems, withdrawal, and procrastination. The study revealed that students and teachers tended to form different perceptions of the online courses. However, there was no difference between the students and teachers in terms of their experience of both online learning and teaching. The study suggests that the perception gap can be bridged by offering more blended courses that correspond to students' needs and teaching styles.

A pilot study conducted by Miyazoe in 2007-2008 among her students from two classes (n = 44) revealed as a by-product that she, the instructor, and her students had differing perceptions of the strength of class community; that is, when she felt one class

was more strongly united than the other class in terms of class community, students felt the opposite.

## Classroom Community Scale (CCS)

The Classroom Community Scale (CCS) posited by Rovai (2002) is a psychological scale to measure the success level of a learning community to realize learning. The scale came about as a result of Rovai's teaching experiences at Regent University in the US, coupled with his solid background in statistics. It draws on the assumption developed from prior literature that perceived interaction, learning, and sense of community are positively correlated (Rovai, 2002). The final version of Rovai's CCS, after factor analysis and revisions, consisted of 20 statements in two groups with 10 statements each: 10 statements related to feelings of connectedness among the class members and 10 related to the sense that a learning environment was fostered in the classroom community (see Appendix 1 for a copy of Rovai's CCS). For example, "I feel that students in this course care about each other" is a statement pertaining to connectedness; and "I feel that I am encouraged to ask questions" is a statement pertaining to the learning environment. The statements are scored according to a 5-point scale ranging from strongly disagree, disagree, neutral, agree, to strongly agree. Half of the statements were negatively keyed to avoid response biases. The answers were then codified into a quantitative score from 0 to 4, with a higher total score indicating a higher sense of class community and higher total scores indicating higher levels of connectedness and fostered learning environment. Therefore, the total scores potentially ranged from 0 to 80. Thus far, other CCS studies by Rovai and Jordan (2004), Dawson (2006), and Miyazoe (2009) have found that 1) female students tend to score higher than male students and 2) blended course design may produce higher CCS than face-to-face learning or stand-alone online learning.

In this research, the CCS was translated into Japanese and Chinese to avoid any misunderstanding on the part of the respondents, the details of which will be reported in the research methods section below.

## Research scheme

### Participants

The research was conducted at four universities, three in Tokyo (University A, B, and C) and one in Taipei (University D). It involved a total of nine classes taught by four language instructors, with 200 Japanese and 36 Taiwanese students participating. Table 1 shows the breakdown of the participants who satisfactorily answered the questionnaire and gave consent for analysis and publication: 196 responses out of 236 were analyzed. For University D, there were two instructors, D1 and D2, who participated. Only D1 could attend the JALT presentation and thus contributed to this paper.

### Table 1. Participants

| Institution | Instructor | No. of classes | No. of students |
|---|---|---|---|
| A | A | 2 | 69 |
| B | A | 3 | 54 |
| C | C | 2 | 37 |
| D | D1 and D2 | 2 | 36 |
| Total | 4 | 9 | 196 |

All the classes chosen for the research fulfilled four criteria: 1) the same blended course design of regular face-to-face and online instruction; 2) the online portion of the course was

developed using a learning management system (LMS); 3) topic-based online forum discussions in the target language were regularly assigned throughout the course period; and 4) language learning was the core course target.

At Universities A, B and C, the student were studying English while at University D, the students were studying Japanese. In terms of language proficiency, the results provided by TOEFL scores and other proficiency tests indicated that English proficiency was high, with the institutions roughly ranked highest to lowest: C, B, A. Japanese proficiency in one class was mixed from elementary to advanced, largely due to the fact that no placement tests were required for application to the program at University D.

The information communications and technology (ICT) readiness was high in all cases in this study. This means that nearly all of the students had Internet access at school and at home.

### Methods and procedures

Questionnaires were given to both instructors and students. They included questions on the perceived strength of class community, demographic information, and sets of questions to investigate different research questions. In regards to strength of class community, for students, the CCS questions were presented in a 5-point Likert scale with 1 being "strongly disagree" and 5 being "strongly agree" and the total mean CCS scores were computed (see Appendix 1). For the instructors, a statement with 9-point scale answer to ask the perceived strength level of class community was used (see Appendix 2, Question 1).

The reliability of the Japanese and Chinese versions of the CCS was tested using Cronbach's reliability test. For the Japanese version, an alpha coefficient of .839 was obtained for the total CCS items (n = 151), with .786 (n = 154) for the CCS connectedness items and .755 (n = 158) for the CSS learning items. For the Chinese version, an alpha coefficient of .820 (n = 36) was

obtained for the CCS connectedness items, with .556 (n = 35) for the CCS learning items and .825 for the total CCS items (n = 35). Though the CCS learning subscale for the Chinese version showed room for improvement, the CCS of both languages was considered highly reliable in this study.

### Results

Table 2 summarizes the results of the CCS and the strength level of class community, while Figure 2 presents a graphical representation of the main features. In the table, for each of the connectedness and learning items, average scores per class are found on the left; on the right are comparisons of average student and instructor scores of the total sense of class community. In Figure 2, the blue bars represent the mean CCS student scores of each class while the red lines represent the converted 5-point scale instructor scores of the strength of class community.

In all cases related to the sense of class community item, the scores of the instructors' perceptions were opposite to those of the students. For example, in the cases of A3 and A4, the CCS of A4 was slightly stronger, but Instructor A rated them differently. The same pattern was observed in the B3-B5 case by Instructor A, C1, and C2 by Instructor C, class D1 by Instructor D1, and class D2 by Instructor D2. Based on the results of this study, this phenomenon is tentatively referred to as a possible "perception gap" in blended learning.

In the case of Instructor A, she rated the class that was easier to manage higher for CCS than for her other classes. These classes completed assignments regularly, followed the instructor's directions and were attentive during class. Hence, classes like this were perceived to be somewhat better than others. However, as far as the results show, classes that are considered to be more manageable by the instructor are not necessarily the ones that the students feel most united in and effectively

## Table 2. Instructors' vs. students' perceptions on the same course

| | CCS connectedness items | CCS learning items | CCS total | Strength of class community |
|---|---|---|---|---|
| Class | Students | Students | Students | Instructor |
| A3 | 29.55 | 33.39 | 62.94 | 4.0 |
| A4 | 30.06 | 32.92 | 63.03 | 2.5 |
| B3 | 29.45 | 36.15 | 65.60 | 4.0 |
| B4 | 32.12 | 36.88 | 69.00 | 3.0 |
| B5 | 31.28 | 36.44 | 68.44 | 3.5 |
| C1 | 31.33 | 38.29 | 69.62 | 2.5 |
| C2 | 31.59 | 37.18 | 68.88 | 4.0 |
| D1 | 29.75 | 32.75 | 62.50 | 2.5 |
| D2 | 28.35 | 30.80 | 59.15 | 4.0 |
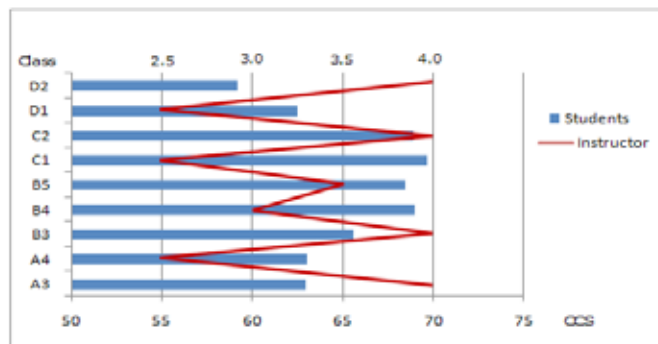


**Figure 2. Perception gap between instructors and students in blended learning**

connected to, to foster their learning. This suggests that instructors and students may give a different evaluation on the same learning environment.

### Reflections from the teachers

*Masayo Saeki—Online forum discussion experiences in the Chihlee Institute of Technology's Japanese language classes*

The two participating classes were from the Applied Japanese Department, where students study both Japanese language and business courses. This is a four-year college offering business and technology degrees.

Table 2 and Figure 2 show that the D2 class has relatively lower evaluation than D1. This can be explained from the perspective of class size. Classes D1 and D2, which took the required courses for a junior curriculum, started out as one class with 44 students and one instructor (D1) in the first semester. In the second semester, due to a budget increase, the class was divided into two, D1 and D2, based on the students' ID numbers. Although we provided students with a full explanation for the change prior to the implementation of the partition, some of the students could not accept this sudden change. This may have been one of the reasons why the D2 class received a comparatively lower evaluation score.

Table 3 below shows the discussion topics covered during the research semester. Online forum discussions were held six times, and 20 sub-topics in total were set up alongside the writing essays. It should be noted that all student writing was required to be in Japanese only.

### Table 3. Course plan and forum discussions

| Date | Topics (Total number of sub-topics) | Posts | Type |
|---|---|---|---|
| 3/22~ | Free topics ("Studying Japanese by blog," "Diet," etc.)(8) | 80 | Free discussion |
| 3/29~ | "Dramas and movies" (5) | 40 | Free discussion |
| 4/2~ | "The declining number of children"(2) | 48 | Preparation for writing essays |
| 4/30~ | Free topics ("The midterm exam," etc.)(3) | 15 | Free discussion |
| 5/7~ | "The youth of Japan versus those of Taiwan"(1) | 14 | Preparation for writing essays |
| 6/4~ | "Exchanges between Taiwan and Japan"(1) | 18 | Preparation for writing essays |
| Total | 6 (20) | 215 | |

An issue worth looking into is technology readiness. Although the students began using the message board for discussions for the first time during the semester when this research took place, we were confident that the learners were fully capable of communicating via the LMS message board since they have many opportunities to familiarize themselves with online communication tools in their daily lives in Taiwan. This assertion is confirmed by the survey results. To be specific, both D1 and D2 students gave comments such as "we enjoyed it" in the open-ended questions regarding the discussions on the message board.

The Japanese proficiency of the students in this study was determined to be roughly at the intermediate level. By reading students' messages, it can be inferred that in general most of the students were only able to express their own thoughts but it was more difficult for them to comment on others' ideas. In other words, the students may not be quite ready to conduct meaningful discussions through writing in Japanese. Thus, uncertainty arose about whether specific writing techniques for developing discussions should be taught. An alternative would be to simply allow them to learn on their own, to prevent any interference by instructors in their writing.

Some behavioral changes were observed after the message board was launched. For example, the number of students late

for class seemed to increase slightly. This phenomenon gave me the sensation that the online forum discussions had some effect on class management. Another case was that of a student who was absent, but who made comments from home to other students using the message board during class hours. This particular student might have thought that participating in the internet discussion could make up for being absent. These incidents made us realize how great the feeling was for students to be able to participate in class by communicating online.

Finally, I will offer the instructor's perspective on why some students were less willing to participate in the online discussions and why eventually their average course evaluation scores went down. First, the instructor's unfamiliarity with the technology could have affected students' participation. Second, it is more difficult for a new instructor to detect students' likes and dislikes and to take measures for compensation in a short time. Third, some students become more open and candid in online settings than they are in face-to-face discussions. This may intimidate other students, causing them to distance themselves. Fourth, students seem to be more attentive to their fellow students online than they usually are to their teacher face-to-face. This may be one of the causes of a perception gap between teachers and students.

The blended learning experience and reflections suffice to conclude that having a message board discussion is one way to stimulate learners' interest. However, as we still do not fully understand the reactions of students and the influences on class management, message board discussions should be conducted in a cautious manner.

### Rab Paterson—Blended learning experience at International Christian University's English Language Program

Two of the classes surveyed in this study were from International Christian University's English Language Program (ELP), which is compulsory for all freshmen and sophomore students. The survey's classes were freshman classes in their final semester from Program A, the lowest English level with a TOEFL range of 350-450. These classes were Academic Reading and Writing classes taught by native speakers and are designed to give students a thorough grounding in Critical Thinking, Argumentation, Academic Writing, Research Methodology and other academic skills rather than "English." Also every Academic Reading and Writing class has the same syllabus, structure, content readings, tests and activities. However the volume of material to cover is such that new teachers, unfamiliar with the content and materials sometimes struggle to finish it during the normal class schedule. That was my experience with the classes I taught in the autumn semester when I started teaching at ICU. The problems with the syllabus in the autumn convinced me to make changes for the winter semester by using blended learning.

The blended learning system used was Moodle as it was available at ICU and I had previously used Moodle at Sophia Universitywith senior year students with some success. The two Academic Reading and Writing classes were set up with a Moodle class page and a class discussion forum. Students were encouraged to post and reply to questions, opinions and anything else posted on their forum that was relevant to the topics covered in class. Overall I had less student participation in the forums than expected when compared with my previous experiences. This was possibly due to the ICU classes being compulsory freshman classes with students having no direct interest or connection to the material, unlike my previous discussion

## Table 4. Number of forum responses

|  | Topic 1 | Topic 2 | Topic 3 | Topic 4 | Topic 5 | Topic 6 | Topic 7 |
|---|---|---|---|---|---|---|---|
| Class C1 posts | 10 | 13 | 4 | 0 | 0 | 1 | 3 |
| Class C2 posts | 3 | 5 | 21 | 4 | 3 | 0 | 2 |

## Table 5. Number of forum participants

|  | Participants | Total posts | Student average | Non-participants | Teacher's posts |
|---|---|---|---|---|---|
| Class C1 | 13 | 25 | 1.9 | 9 | 7 |
| Class C2 | 15 | 31 | 2.1 | 5 | 8 |

forums in elective classes for senior students. The details of the posts are in the tables below with Class C2 performing better than C1 as the tables above show.

From the above table it can also be seen that class C1 had a higher number of non-participants than C2.

At the end of the semester the students were given questionnaires on CCS (see above section). From the results it seems there is a perception gap between students and teachers. However this is possibly not as clear-cut an issue as it first appears. Class C1 had two students who did not interact well with the others and another two students who were frequently absent. These "problem" students were absent when the survey was conducted, so the results for C1's perception were probably higher as a result. Conversely the student perception from C2 was slightly lower than mine as the non-participating students from this class who did not contribute to the forum were present for the survey unlike their counterparts in C1.

As a tentative conclusion based on my experience it seems that using blended learning discussion forums in content based compulsory classes is less successful than for elective content classes as the students in elective classes have more involvement with the content. However the blended learning set up did enable the classes to get through the material in a timelier manner compared with the previous semester. Also the student feedback I received on the classes in winter, when I used blended learning techniques, was better than the feedback from autumn when blended learning techniques were not used. So although there may be differences in perception the overall improvement in managing the syllabus and student satisfaction seem to support using blended learning for content classes.

## Implications and conclusion

This study is an attempt to explore how instructors and students look at and experience the same blended course, including the online written discussion components. The study suggests the possibility that instructors and students may experience the same blended course in different ways. It is not certain whether the results are limited to this study or if they can be generalized

to wider teaching and learning settings. Moreover, we are not certain whether the results are more specific to the introduction of the online components, where both the instructor and the students experience events while physically apart, or if it is a sign of a general trend in all teaching and learning settings.

A possible weakness of this study was the use of a different measurement scale for teachers and students: the phenomenon reported in this paper was obtained as a by-product among other results in a series of research projects. Even so, the goal was to capture blended learning characteristics that had not been investigated before and therefore, to call to attention an important research question for further studies.

Reflective essays provided by the collaborating teachers in this research are useful in providing a balanced interpretation of the data collection and analysis process. As suggested above, it is possible that the results excluded the students who were less adaptive to the blended course design and who eventually could not complete the course. It would be unfortunate if the observed "gap" were a simple reflection of those who were "pushed out" from the class learning community and those who potentially "pushed them out." If this is the case, then it is predictable that the same phenomenon will be observed repeatedly if the same research design and process are taken, and a re-interpretation of the apparent mask of "perception gap" may become necessary. It should be noted that all the instructors in this study observed students who had difficulty in adapting to interactive online discussions. Further examination is thus recommended: for example, the research design comparing face-to-face, online, and blended learning courses. Applying the same research design using CCS can be a possible avenue to further clarify the perception gap issue. Moreover, comparison between the courses with and without the interactive online discussions within a similar blended course design would clarify if the online discussions were the main factor for the observed

phenomenon. Blended course designs with forum discussions versus other interactive online components, such as voice/text chat, may also foster different levels of class community. Although this may be controversial, a research design with the same students, the same course design, and different instructors may eventually be the best way to clarify the mechanism of learning community formation.

More in-depth research on this issue is therefore necessary. This study is the first step to fill the gap, if any, between the instructor and students for a better teaching and learning experience.

## Bio data

**Terumi Miyazoe** is an Associate Professor of English and e-Learning at Tokyo Denki University (Japan). She obtained an MA degree in TESOL (UK) and an MA degree in Distance Education (Canada) through online distance education programs taken from Japan. Her interests include CALL, online learning, and distance learning. She has a Ph.D. in Educational Technology. <t.miyazoe@mail.dendai.ac.jp>

**Masayo Saeki** is a Lecturer in Japanese language at the Chihlee Institute of Technology (Taipei, Taiwan). She has been teaching Japanese in Taipei since 1994. She is currently interested in exploring the internet and Learning Management Systems (LMS) for enhancing the teaching of Japanese writing courses. She is completing her Ph.D. on Japanese subordinate clauses at the Graduate School of Japanese Language and Culture of Soochow University. <saekimas@ms65.hinet.net>

**Rab Paterson** is an Instructor on the English Language Program at International Christian University and coordinates the Communication Via Multimedia course. He teaches Critical Thinking, Academic Writing and Presentation Skills. He has a BA in Pacific Asian History, an MA in Pacific Asian Studies and

is currently a Doctoral Candidate in International Relations at Waseda University. <rab.paterson@gmail.com>

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## Appendix 1

### *Classroom Community Scale (CCS) by Rovai (2002, pp. 208–210)*

Directions: Below, you will see a series of statements concerning a specific course or program you are presently taking or have recently completed. Read each statement carefully and place an X in the parentheses to the right of the statement that comes closest to indicate how you feel about the course or program. You may use a pencil or pen. There are no correct or incorrect responses. If you neither agree nor disagree with a statement or are uncertain, place an X in the neutral (N) area. Do not spend too much time on any one statement, but give the response that seems to describe how you feel. Please respond to all items.

| Strongly agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly disagree (SD) | |
| --- | --- |
| 1. I feel that students in this course care about each other | (SA) (A) (N) (D) (SD) |
| 2. I feel that I am encouraged to ask questions | (SA) (A) (N) (D) (SD) |
| 3. I feel connected to others in this course | (SA) (A) (N) (D) (SD) |
| 4. I feel that it is hard to get help when I have a question | (SA) (A) (N) (D) (SD) |
| 5. I do not feel a spirit of community | (SA) (A) (N) (D) (SD) |
| 6. I feel that I receive timely feedback | (SA) (A) (N) (D) (SD) |
| 7. I feel that this course is like a family | (SA) (A) (N) (D) (SD) |

| | |
|---|---|
| 8. I feel uneasy exposing gaps in my understanding | (SA) (A) (N) (D) (SD) |
| 9. I feel isolated in this course | (SA) (A) (N) (D) (SD) |
| 10. I feel reluctant to speak openly | (SA) (A) (N) (D) (SD) |
| 11. I trust others in this course | (SA) (A) (N) (D) (SD) |
| 12. I feel that this course results in only modest learning | (SA) (A) (N) (D) (SD) |
| 13. I feel that I can rely on others in this course | (SA) (A) (N) (D) (SD) |
| 14. I feel that other students do not help me learn | (SA) (A) (N) (D) (SD) |
| 15. I feel that members of this course depend on me | (SA) (A) (N) (D) (SD) |

| | |
|---|---|
| 16. I feel that I am given ample opportunities to learn | (SA) (A) (N) (D) (SD) |
| 17. I feel uncertain about others in this course | (SA) (A) (N) (D) (SD) |
| 18. I feel that my educational needs are not being met | (SA) (A) (N) (D) (SD) |
| 19. I feel confident that others will support me | (SA) (A) (N) (D) (SD) |
| 20. I feel that this course does not promote a desire to learn | (SA) (A) (N) (D) (SD) |

Japanese and Chinese versions are available upon request to Terumi Miyazoe.

## Appendix 2

### Questions regarding strength of class community

### and course management (extract)

Q.1 Rate your impression of the strength of class community in your course on the 9-point scale below, where 1 represents very weak and 9 very strong.

Class 1     very weak    1 -- 2 -- 3 -- 4 -- 5-- 6 -- 7 -- 8 -- 9      very strong
Class 2     very weak    1 -- 2 -- 3 -- 4 -- 5-- 6 -- 7 -- 8 -- 9      very strong

Q.2 Rate the effectiveness of the online written discussion portions of the course on the 9-point scale below, where 1 represents not very effective and 9 very effective.

Class 1     not very effective    1 -- 2 -- 3 -- 4 -- 5-- 6 -- 7 -- 8 -- 9      very effective
Class 2     not very effective    1 -- 2 -- 3 -- 4 -- 5-- 6 -- 7 -- 8 -- 9      very effective

Q.3 Estimate the overall evaluation of your course that you imagine would be awarded <u>by the students</u> on the 9-point scale below, where 1 represents 1 very unsatisfied and 9 very satisfied.

Class 1     very unsatisfied    1 -- 2 -- 3 -- 4 -- 5-- 6 -- 7 -- 8 -- 9     very satisfied

Class 2     very unsatisfied    1 -- 2 -- 3 -- 4 -- 5-- 6 -- 7 -- 8 -- 9     very satisfied

Q.4 Rate the overall effectiveness of your <u>blended course design</u> on the 9-point scale below, where 1 represents 1 not very effective and 9 very effective.

Class 1     not very effective    1 -- 2 -- 3 -- 4 -- 5-- 6 -- 7 -- 8 -- 9     very effective

Class 2     not very effective    1 -- 2 -- 3 -- 4 -- 5-- 6 -- 7 -- 8 -- 9     very effective

Q.5 Rate the overall <u>success of your course</u> on the 9-point scale below, where 1 represents 1 poorly managed and 9 successfully managed.

Class 1     not very successful    1 -- 2 -- 3 -- 4 -- 5-- 6 -- 7 -- 8 -- 9     very successful

Class 2     not very successful    1 -- 2 -- 3 -- 4 -- 5-- 6 -- 7 -- 8 -- 9     very successful