

Incorporating blended learning in content-based instruction classes:

An introduction to social welfare

RITCHIE Zane

リッチー ザイン

Abstract

By introducing a blended learning component into social welfare Content-based Instruction (CBI) classes, it was hoped that students would take the opportunity to take charge of their learning and to reflect upon what they had learned, leading to a solidification of their understanding of the content and concepts that were covered in the classroom. This paper will firstly present a short overview of the concepts of CBI and blended learning, before introducing the course content and examples of student participation in the online portion of the blended learning component. Finally, the author will analyse student participation in the online component of the courses.

Key words: Blended Learning, Content-based Instruction, student reflection, social welfare

要約

Blended learning [ブレンディッド・ラーニング] を Content-based instruction [コンテンツベース指導型の授業] に導入することによって学生は授業外で自分達の学習責任を持ち、その履修したことを内省したことに基づいて、授業で習った概念や理解を向上することができることが期待された。本論文ではまず Content-based instruction と Blended learning のそれぞれの概念を紹介し、その後授業内容、または学生のオンライン履修の参加の実例について述べ、最後にオンライン履修参加率を分析する。

キーワード: ブレンディッド・ラーニング、コンテンツベース指導型の授業、学生反省

Introduction

In recent years, Content-based Instruction (CBI) has become a popular method of teaching at many Japanese tertiary institutions. However, many implementations of CBI appear to be based on trial and error, the teaching method often utilized without careful consideration of either its purpose or effectiveness in a given context (Butler, 2005). The challenge in teaching a CBI class is how to strike the right balance between content and language teaching, while giving students ample opportunity to absorb, reflect upon and then utilize the content in some meaningful way.

By introducing a blended learning component into three CBI classes it was anticipated that students would use the opportunity to take charge of their learning and to reflect upon what they had learned, this leading to a solidification of their understanding of the content and concepts that were covered in the classroom. It was also hoped that this would provide the students with an avenue to overcome *language anxiety*, which is often prevalent among Japanese EFL learners (Ellis, 1991) and a culturally induced reluctance to talk in front of their classmates (Anderson, 1993) since they were free to take part in activities at their own pace, in a more relaxed manner. This paper will firstly present a short overview of the concepts of CBI and blended learning, before introducing the course content and examples of student participation in the online portion of the blended learning component. Finally, the author will analyse student participation in the online component of the courses.

Background

Content-based instruction (CBI) is a language teaching approach that emphasizes learning *about something* rather than learning *about language*. Students study a subject through the medium of English rather than focusing upon form and grammatical structure. In other words, the CBI method of teaching replaces the traditional bottom-up approach in which students are expected to concentrate on grammar and sentence structure. CBI first appeared in the 1980s in language teaching (Brinton, Snow and Wesche, 1989) and has become a very popular L2 teaching approach in many countries, including Japan (Messerklinger, 2008).

There are three main types of CBI: thematic, sheltered and adjunct as originally defined by Brinton et al (1989). According to their model, thematic based learning is to the left end (lower end) of the scale, with the content being nearer to what might be taught in a traditional language class; sheltered is learning somewhere in the middle; and adjunct at the higher end, aimed at more advanced learners who might take regular classes in addition to special classes taught at a non-native level (**figure 1**).

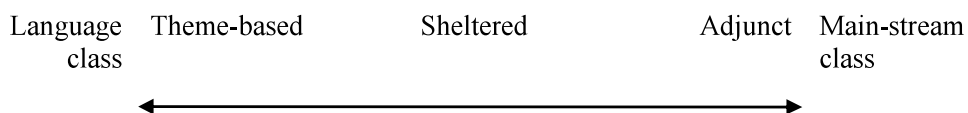


Figure 1: A Content-based Continuum, reproduced from Brinton, Snow and Wesche, 1989

CBI courses encourage students to learn a new language by “actually using that language as a real means of communication” (Stryker and Leaver, 1987). Furthermore, CBI is especially suitable for facilitating the development of all four language skills (listening, speaking, reading, writing) while simultaneously focusing on the functional use of language in authentic settings (Stryker and Leaver, 1987). Although there has been a lot of discussion regarding how to deal with the teaching of grammar context of understanding content, many of the criticisms of grammatical syllabi are satisfied under the CBI approach: students no longer have to deal with decontextualized sentences, or spend time learning isolated rules that inhibit spoken fluency (Masters, 2000). Stryker and Leaver (1987) also note that through CBI, language proficiency is improved by focusing on the language itself through the study of specialized subject matter, promoting total integration of both language and content.

Blended Learning

The concept of blended learning has been around for at least twenty years. As early as 1995, many universities were already making the move away from faculty-centered and lecture-based systems to learner-centered models in which faculty members were becoming content designers and where students were encouraged to develop critical thinking skills (Barr and Tagg, 2005). And with the rise of the Internet, it was inevitable that virtual learning environments (VLEs) such as WebCT, Blackboard, and Moodle would eventually influence the traditional classroom.

Colis and Moonsen (2001) define blended learning as a hybrid of traditional face-to-face learning and online learning in which instruction occurs both in the classroom and online, and where the online component becomes a natural extension of traditional classroom learning. It is a flexible approach that supports the blending of time and places for learning, and offers students the benefits of online learning and provides students with learning opportunities in-class. It is an integrated combination of traditional learning with web based on-line approaches (Oliver & Trigwell, 2005). The former refers to face-to-face training or language lessons and the latter could be the delivery of parts of the course through a variety of distance tools. The delivery of the distance component may involve the use of synchronous tools, such as chat, and asynchronous tools, such as forums. A typical blend could involve the posting of materials online for study before and/or after the language class. (Motteram and Sharma, 2009). Martyn (2003)

describes a successful blended learning model consisting of a face-to-face meeting, weekly online assessments, e-mail and asynchronous discussions.

Blended learning may be more effective than other forms of learning instruction as it incorporates the benefits of both personal face-to-face interactions and online settings (Pratt 2002). Garrison and Kanuka (2004) also argue that the combination of face-to-face and online learning facilitates a simultaneous independent and collaborative learning experience. In other words the students can be independent of space and time, yet together. And besides fostering the learning community, blended learning extends the total amount of time spent learning with the result being greater reflection and better learning outcomes (Bonk, Kim and Zeng 2005).

One criticism of blended learning is that some students may favor one of the delivery modes (face-to-face or online) to the detriment of the other. There also is a risk in running such a course that the combination of modes actually ends up pleasing no one (Motteram and Sharma, 2009). Additionally, not all students may have access to computers or be confident with using a computer. However this argument is now less relevant as technology has improved to become cheaper and more ubiquitous.

Course Overview

The three introductory CBI classes in welfare were delivered by the traditional classroom setting with one module per week and in addition, students had to complete an online component for homework, to be completed by the following week, via an online forum.

A sheltered model of CBI was employed, which means that rather than a series of unconnected themes, the classes focused on one subject, with the level adjusted accordingly to match the levels of the students. The three classes of first-year students and were taught once a week for a period of 90 minutes per class, for a period of fourteen weeks. The classes were elective and the students non-streamed. As per administration rules, the total number of students was capped at twenty per class. Final enrollment numbers were 9 for Class A, 19 for class B and 7 for class C.

The course modules were designed from the ground up by the instructor, and covered a basic introduction to social welfare principles regarding health, education and geriatric care in Japan, the U.S. and New Zealand. The reasons for choosing these three countries were that in the case of Japan, the students might have some prior knowledge of the situation, due to them having studied many concepts in their L1. The United States was chosen because policies tend to be more market-oriented with less state intervention. Meanwhile, New Zealand was chosen because it was a world pioneer in social welfare and tends to have more state intervention (institutional welfare) than most countries. The aim of the classes was to explore how ideas

about social welfare and human services differ among these three nations and to encourage students to consider and compare (not explicitly, but rather implicitly) some of the differences in the ideas and interpretations of welfare and human services, all through the medium of English. At the end of the 14 weeks the students were required to submit an academic essay. Typically, classroom time was used for studying about education, health and elderly care in the three countries with time spent on developing reading comprehension (scanning and skimming, for example) as well as listening skills. A weekly discussion component was carried out online in the students' own time, at a more relaxed pace.

Blackboard


Blackboard, a popular VLE used at many institutions including this one, is a proprietary system that once set up, is able to provide students with access to the course information and various learning resources such as announcements, timetables, forums, assignments, Internet links, wikis and course documents.

Table 1: Blackboard components used in Human Services A, B & C

Syllabus	Link to the syllabus
Announcements	Course related announcements; also option to send via e-mail to all course users
Discussion Board	The main component, consisted of a series of discussion questions for each module
Course uploads/links	Course resumes/papers/links related to each module were put here
Send Mail	Able to send instructor/other users mail at any time.


The instructor decided to keep the Blackboard layout as simple as possible, so as not to confuse the students, many of whom indicated it was their first time using the system (**Figure 2**).

Introduction to Human Services A




Syllabus

Syllabus is here for your reference.



Announcements

Any important announcements will be made here. Please make sure you Check this from time to time.




Discussion Board

Each module will have ONE discussion. Please post replies here. Remember that the discussions are worth 20% of your final grade

To get points for a discussion:


- You MUST write around 80-100 words.
- You MUST complete it before the next class
- You MUST reply to at least one other person.

If you don't do all of the above, you will not get points for that discussion.



Course uploads/links

I will upload course class modules here after each class. Please download them if you miss a class/lose the handout.



Send Email

Figure 2: Blackboard front page, as designed by the instructor

Essentially, Blackboard discussion boards provide a space for students to discuss various topics, with individual discussion threads or messages appearing on a particular topic, in the form of forums. The instructor used the forums in their simplest form, setting up a discussion board for each module based on a series of questions (see Appendix A) related to each weekly module.

To boost motivation and encourage participation rates, it was decided that the online forum component of ten discussions (one for each module) would constitute 20% of the total course grade. Students were explicitly informed (in the syllabus and week to week) that all they needed to do to get an automatic 20% was to complete the appropriate forum discussion for a particular module by the beginning of the next class. They were also instructed to write approximately 80-100 words and to write at least one response to another student – in order to encourage exchange of ideas and not just one-way opinion or reflection.

Finally, a beneficial environmental aspect of using Blackboard was that it replaces traditional paper-based homework assignments. At the same time, this frees up valuable classroom time that might be used for other things. It is also simple to track student participation at any time and it allows the instructor to take part in the learning process with the students in a more relaxed, removed environment, outside of the class.

The Discussion Board

A typical discussion board consisted of three questions, from which the students were asked to choose one to answer. Setting up these questions posed a multitude of challenges, not the least of which was arriving at the right combination of scaffolding and language whilst at the same time designing them in such a way as to give the students a certain amount of flexibility and choice in their discussions. With this in mind, in some discussions the instructor included an open-ended question to give students even more of a say in the outcomes of their learning.

Samples

The following are two examples from the discussion boards; the first one non-moderated and the second moderated. Note that the instructor did not at any time explicitly correct the students, but rather positively encouraged them, hoping this would encourage further participation.

Blackboard Discussion Example 1: Health in America (non-moderated)

Today, we watched five parts from the film, "Sicko" by Michael Moore, which examines problems with the American healthcare system. Please choose and answer ONE of the following questions:

ONE: Which story did you find the most interesting? Why? OR

TWO: What did you learn about the American health system? OR

THREE: What do you think might be some of the good points of having an American style, mainly private insurance based, healthcare system?

Student K

I found the story about a old man is most interesting. I think many people want to spend their golden years being relaxed. But elderly people tend to have sickness and have to pay for medicine. America has Medicare, but it is not enough. The reality that elderly people have to keep working is sad. This old man pays for his wife's medicine on his own. But the price of a painkiller is too expensive. I think government has to support elderly and sick people more.

Replies to Student K:

Student T

I think so too. Unless government support disadvantaged people, difference of people spread.

Student O

I agree with you. American medical treatment is very developed, but health insurance is not enough. Therefore, many American can't undergo the care.

In the above example, student K chose to answer Question One, writing about the case of

an old man who, even though he was in his 80s, was having to work as a cleaner in order to support his sick wife because of inadequate Medicare support. Notice that the student has made use of some of the vocabulary that was covered in class, such as “medicare” and “painkillers” , and appears to have understood the concepts and vocabulary very well.

Blackboard Discussion Example 2: Health in Japan (Moderated)

For this week's discussion, please choose ONE of the following.

ONE: Which version of "Health Care in Japan" did you agree with? Why? OR

TWO: What do you think is the most important issue in Japanese health care (this can be positive or negative). OR

THREE: What else surprised you in today's lesson?

Student X

I was surprised at many point in the lesson. First is that "shortage of doctors". I thought there are many doctors in japan. Especially, it is severe in rural areas. Doctors work low salaries, so they tend to keep their patients in bed to earn money. Second is that emergency care is sometimes poor. We often hear that ambulances cruise the streets looking for a hospital in news. In smaller cities, there are a lot of small clinics instead of big hospital. Because doctors can earn more money and can work less. It is very serious problem in Japan. And I think Japanese health care is not enough.

Instructor's comment

Hi (Student X). Thanks. I think this was a good summary of the main point of the negative parts of the Japanese health care system. For me, one of the points I really found to be disturbing was the fact that Japanese people, if they have a heart attack, are much more likely to die compared to people from other countries. I guess the reason is that the ambulances are really, really slow in Japan. I have heard lots of stories of patients dying on the way to hospital.

Student F

I think so too. Japanese health care should be improved!

Student K

I known that Japanese emergency is not enough when I got on ambulance. When I got on ambulance few years ago, ambulance did not go-off in 30 minutes. I was so surprised and think Japanese emergency care is not good.

Instructor

[Student K), I know! I replied to [student X] saying the same thing. Ambulances are really, really slow. I am not sure the current system, the way it is run, is really suitable for

emergency transportation of patients. I am glad you are OK after your experience.

Sometimes, as in the above example, the conversations went several threads deep. In this conversation, the participating students appear to have critically evaluated the situation with one student even taking things a step further (following up on the instructors comments) by describing their own personal experience (and disappointment) in the way ambulances are run in Japan. From these examples, we can see that students who took the opportunity to participate in this discussion were quite happy to include their own personal experiences, in addition to making use of the vocabulary and concepts they had covered in the class.

In a sense then, the forums appear to have been a success – for those that took part in them – in achieving the goal of having students collaborate, encourage each other and to have discussions, in their own time and own pace about the contents of the courses. And they certainly encouraged participating students to overcome their language anxiety and culturally induced fear of speaking up in class. Given enough time and freedom, students were willing to take control of their own learning, in a safe and comfortable, non-threatening environment. However, regarding some of the replies (as in Example One) most students remained conservative and mostly in agreement with the original poster and this phenomenon needs further investigation and analysis.

Analysis of Student Participation

The results of the online discussion board participation reveal some interesting, yet slightly disappointing data. The total number of messages per module (**Figure 3**) reveals that participation in the first module (the course introduction) was very high, before tapering off before leveling out between modules 2-8. Participation dipped steeply in the last two classes.

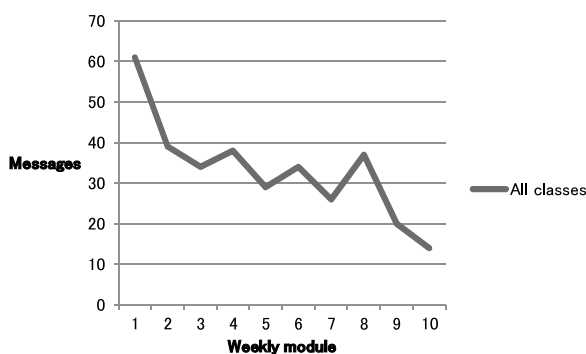


Figure 3: Number of messages - all classes

Comparing percentages of contribution to the online forums per class per module (Figure 4) revealed that Class A contributed far more to the online forums than the other classes, this despite having a lower number of students (9) than class B (19) and only slightly higher than class C which had just 7 students. Interestingly Class B's participation rate was very high for the very first module at 60% of the total messages, but suffered from particularly low participation rates compared to the other two classes, especially in the final two modules. Overall, Class A contributed a much higher percentage of the conversations.

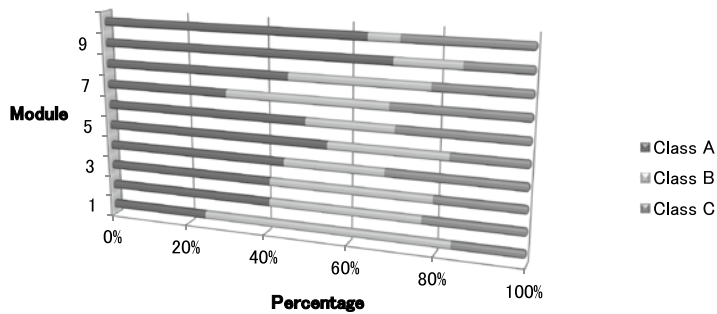


Figure 4: Comparison of messages (%) per class, per module

Table 2 shows that the mean number of messages per student was highest for class A (15.8); 10.86 for class C and just 5.9 for class B. Overall, the mean number of messages per student for the three classes was 9.49 per student for the whole ten modules, which works out at just .949 messages per student, per module, a lot less than the required twenty that they needed in order to get the full 20% credit for the discussion portion of their grade.

Table 2: Total messages and mean number sent by student per module

Class/Module	1	2	3	4	5	6	7	8	9	10	Total	
A	Total messages	15	16	14	17	16	17	8	17	14	9	143
	Mean	1.67	1.78	1.56	1.89	1.78	1.89	0.89	1.89	1.56	1.00	15.8
B	Total messages	36	14	13	9	8	7	10	12	3	1	133
	Mean	1.8	0.7	0.65	0.45	0.4	0.35	0.5	0.6	0.15	0.05	5.9
C	Total messages	10	9	7	12	5	10	8	8	3	4	76
	Mean	1.69	1.08	0.94	1.06	0.81	0.94	0.72	1.03	0.56	0.39	10.86
Total ABC	Total messages	61	39	34	38	29	34	26	37	20	14	332
	Mean	1.69	1.08	0.94	1.06	0.81	0.94	0.72	1.03	0.56	0.39	9.49

Discussion

The participation rate in the online message board component by all three classes was a little disappointing, especially for Class B. It could be inferred that the main reason for the high

number of messages in the very first class was the fact that students were getting used to the course, and that after that, participation remained somewhat constant for the rest of the course, and severely tapered off (especially for the B class) in the final two classes. A reason for presenting the students with a path to an automatic 20% of their grade was to encourage the highest possible participation rate; however the data fails to indicate that it was as motivating as was anticipated. Even Class A students averaged just 15.8 messages for the 10 modules, which, as impressive as it sounds (comparatively), was still a relatively disappointing 16 out of the maximum 20 conversations required for the full 20%.

One of the reasons for a lower than anticipated participation rate in the blended learning component might have been strategically motivated on the part of the students. They may have taken full advantage of the syllabus stipulation that stated that participation per module was only worth 2% of their final grade and they only had to take part in as many as they wanted to. For example, on average, for the three classes, as noted above, students completed just under half the discussions. In fact, out of 25 students, just two (refer to appendix B for raw data per student per module) completed all twenty discussions (remember that they needed to initiate at least one conversation and reply to at least one other student).

Apart from student strategies, additional reasons for the overall low participation rate may have been motivational, lack of access to a computer during certain parts of the semester, or simply not being able to understand certain forum questions. The lower than anticipated participation rate could even have been due lack of student maturity (they are all first year students after all). A contributing factor could have been language anxiety – students who did not participate were not confident they were able to do so, and so chose to passively avoid the forums all together. Considering these outcomes, in a future study it will be necessary to examine students' attitudes toward the blended learning component of the course and measure whether there is a correlation with their participation on the online forums.

Conclusions

Encouraging discussion among Japanese students in class is a challenge at the best of times, and even more difficult in a CBI class with its complex content, specialized concepts and vocabulary. By introducing a blended learning approach into three CBI classes on social welfare it was hoped students would take responsibility for their own learning in an autonomous manner and reflect upon and share what they have covered in the class with other students and the instructor. While the overall participation rate in the online discussions was unexpectedly low, among students who did take part, the boards appear to have served their purpose to some extent: they were willing to share personal stories and experiences, make use of the vocabulary

they learned in class and take charge of their own learning in an autonomous manner. Finally, the author argues participation in online discussion tends to enhance the 'deep learning' process and thus enhances student-learning outcomes, although in the future, when preparing such classes, it will be desirable to require a higher rate of student participation.

References

- Anderson, F.E. (1993) The Enigma of the College Classroom: Nails that Don't Stick Up. In P. Wadden (Ed.), *A Handbook for Teaching English at Japanese Colleges and Universities* (pp. 101-110). New York: Oxford University Press
- Barr, R. B., and Tagg, J. (1995). From teaching to learning: A new paradigm for undergraduate education. *Change*, 27(6), 13-25.
- Bonk, C., Kim, K. J., & Zeng, T. (2006). Future directions of blended learning in higher education and workplace learning settings. In C. Bonk & C. Graham (Eds.), *The handbook of blended learning: Global perspectives local designs* (pp. 550-567). San Francisco: Pfeiffer.
- Brinton, D. M., Snow, M. A., & Wesche, M. B. 1989). *Content-based second language instruction* (p. vii). New York: Newbury House.
- Butler, Y. G. (2005). Content-based instruction in EFL contexts: Considerations for effective implementation. *JALT JOURNAL*, 27(2), 227-245.
- Colis, B., and Moonen, J. (2001). *Flexible learning in a digital world: Experiences and expectations*. London: Kogan-Page.
- Ellis, R. (1991). Communicative competence and the Japanese learner. *JALT Journal* 13, 103-127.
- Garrison, D.R & Kanuta, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The Internet and Higher Education*. 7 (2), 95-105 .
- Martyn, M. (2003). The Hybrid Online Model: Good practice. *Educause Quarterly*, 1, 18-23.
- Motteram, G., & Sharma, P. (2009). Blending learning in a web 2.0 world. *International Journal of Emerging Technologies & Society*, 7(2), 83-96.
- Pratt, JR. (2002). The manager's role in creating a blended learning environment. *Home Health Care Management and Practice*, 15, 76-79.
- Stryker, S. B., & Leaver, B. L. (1997). Content-based instruction: Some lessons and implications. *Content-based instruction in foreign language education: Models and methods*, 285-312.
- Oliver M & Trigwell K. (2005). Can "Blended Learning" be redeemed? *E-learning*, (2)1, 17-18
- Messerklinger, J.(2008). Language immersion and content-based language learning, what's the difference? A survey of different language programs. In *CELE*, 16, 34-41.
- Yam, L.H.S., & Rossini, P. (2011). Online learning and blended learning: which is more effective? *17th Pacific Rim Real Estate Society Conference, 2011*.

Appendix A. Blackboard, Discussion board (forum) page for Introduction to Human Services

<input type="checkbox"/>	Forum	Description	Total Posts	Unread Posts	Total Participants
<input checked="" type="checkbox"/>	Lesson 1: Middle Earth, Japan and Me	<p>Welcome to our first discussion. For this week, please choose ONE of the following:</p> <p>1) Write a paragraph about my PowerPoint presentation. You can write whatever you like.</p> <p>OR</p> <p>2) Write something interesting about yourself.</p> <p>Remember: Try and keep it about 100 words, and reply to another person. Also this must be completed by the next class if you want credit for it. Thanks, and have a nice week. -Zane</p>	15	0	8
<input checked="" type="checkbox"/>	Lesson 2: What is Social Welfare?	<p>I hope you could learn something interesting from my PowerPoint about some of the the concepts and history of welfare. For this week, there are THREE questions. Please choose ONE.</p> <p>1. On the worksheet (we used in class), Answer question 3 (2) Unemployment Benefit example and tell us WHY you chose [residual] or [institutional]</p> <p>OR</p> <p>2. Write a summary of my PowerPoint presentation.</p> <p>OR</p> <p>3. What did you find most interesting in the lesson?</p> <p>As usual, please write around 80 words, and reply to another person(some deep thinking, please). Also you must do it by the next class.</p>	23	0	9
<input type="checkbox"/>	Lesson 3: American Healthcare	<p>Today, we watched five parts from the film, "Sicko" by Michael Moore, which examines problems with the American healthcare system. Please choose and answer ONE of the following questions:</p> <p>ONE: Which story did you find the most interesting? Why?</p> <p>OR</p> <p>TWO: What did you learn about the American health system?</p> <p>OR</p> <p>THREE: What do you think might be some of the good points of having an American style, mainly private insurance based, healthcare system?</p> <p>Please remember:</p> <p>-you should answer the question within 80-100 words.</p> <p>-reply to at least ONE other person (please make your reply meaningful).</p> <p>-This discussion must be completed by the next class at the latest if you want credit for it.</p>	20	0	8
<input type="checkbox"/>	Lesson 4: Health in New Zealand	<p>This week I have THREE recommended questions. Please choose ONE. The video link is here, again for your reference. http://youtu.be/wdUERh7PzYY</p> <p>Remember, you can watch it with subtitles. 自由に字幕を利用してください。</p> <p>ONE: Which point did you find most interesting in the video about New Zealand health? OR</p> <p>TWO: Do you agree with universal health? Why? Why not? OR</p> <p>THREE: Do you think that a co-pay system whereby people pay a free for primary care (family doctor visits) is a good system? Why? Why not? OR</p>	17	0	8

Appendix B. Participation in online discussions per student per class (raw) for Humans Services A, B, C

Class/Module	1	2	3	4	5	6	7	8	9	10	Messages/ student	
A (9students)	3	3	3	3	3	3	0	4	3	0	25	
	2	1	1	2	0	1	0	1	0	0	8	
	1	2	0	0	2	2	0	2	0	0	9	
	2	2	2	2	2	2	2	2	3	2	21	
	2	2	2	2	2	2	2	2	2	2	20	
	0	0	0	2	1	2	0	2	2	2	11	
	1	1	2	2	2	1	0	0	2	0	11	
	2	2	2	2	2	2	2	2	2	0	1	17
	2	3	2	2	2	2	2	2	2	2	2	21
Semi total	15	16	14	17	16	17	8	17	14	9	143	
(%)	10	11	10	12	11	12	6	12	10	6	100	
%/Course total	5	5	4	5	5	5	2	5	4	3	43	
Mean	1.67	1.78	1.56	1.89	1.78	1.89	0.89	1.89	1.56	1.00	15.89	
B (19 students)	2	0	0	0	0	0	1	0	0	0	3	
	4	2	0	0	0	0	0	2	1	0	9	
	1	0	0	0	0	0	0	0	0	0	1	
	2	0	0	0	0	0	0	0	0	0	2	
	2	2	2	2	2	2	2	2	0	0	16	
	2	0	1	0	0	1	0	0	0	0	4	
	2	0	0	0	0	0	0	0	0	0	2	
	2	2	2	2	2	2	2	2	2	0	1	17
	3	2	2	0	0	0	2	2	0	0	11	
	0	0	0	0	0	0	0	0	0	0	0	
	2	0	0	0	0	0	0	0	0	0	2	
	3	2	3	0	2	0	0	2	0	0	12	
	0	0	0	1	1	0	0	1	0	0	3	
	1	1	1	1	1	1	1	1	1	0	9	
	0	0	0	0	0	0	0	0	0	0	0	
	2	2	2	3	0	1	2	0	1	0	13	
	3	0	0	0	0	0	0	0	0	0	3	
2	0	0	0	0	0	0	0	0	0	2		
1	0	0	0	0	0	0	0	0	0	1		
2	1	0	0	0	0	0	0	0	0	3		
Semi Total	36	14	13	9	8	7	10	12	3	1	113	
%	32	12	12	8	7	6	9	11	3	1	100	
%/Course Total	11	4	4	3	2	2	3	4	1	0	34	
Mean	1.8	0.7	0.65	0.45	0.4	0.35	0.5	0.6	0.15	0.05	5.95	
C (7 students)	5	4	2	2	2	3	2	2	2	0	24	
	0	0	0	0	0	1	1	1	0	2	5	
	2	2	3	0	2	2	1	1	0	1	14	
	1	1	0	2	0	1	1	1	0	0	7	
	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	1	1	1	0	0	3	
	2	2	2	8	1	2	2	2	1	1	23	
Semi total	10	9	7	12	5	10	8	8	3	4	76	
%	13	12	9	16	7	13	11	11	4	5	100	
%/Course total	3	3	2	4	2	3	2	2	1	1	23	
Mean	1.69	1.08	0.94	1.06	0.81	0.94	0.72	1.03	0.56	0.39	10.86	
%/Course total ABC	3	3	2	4	2	3	2	2	1	1	23	
Mean ABC	1.69	1.08	0.94	1.06	0.81	0.94	0.72	1.03	0.56	0.39	9.49	
Messages/module ABC	61	39	34	38	29	34	26	37	20	14	332	