

## **Students' Engagement in Online Classes: How Are They Different?**

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## **INTRODUCTION**

Student engagement has been measured and tracked through the Community College Survey of Student Engagement (CCSSE) at Kapi'olani Community College (KCC) since 2002. However, CCSSE does not provide a complete picture of student engagement because it only samples students who attend brick-and-mortar classes. The engagement of the students who attend online or hybrid classes is unknown and needs to be investigated as the college rapidly expands its offering of online and hybrid classes. The first author Sunahara led the investigation and adapted the Classroom Level CCSSE, an instrument developed by the second author Hill at the Office for Institutional Effectiveness (OFIE) based on CCSSE. Yamashiro, the third author, administered the survey in October 2011. The administered survey is called: CCSSE Distance Ed Survey at Kapi'olani Community College (CDES).

## **SAMPLING**

A total of 205 students in online classes attempted the survey. As shown in Table 1, 63% of the survey respondents (labeled as Survey Sample) had less than 30 credits, suggesting a slight under-representation of all the students who took distance education classes (71%) and of all the students in the college (72%). Furthermore, students with 30 credits or over were slightly over represented in the survey. There were 37% of students with 30 credits or over among the Survey Sample, 29% among all the students taking distance classes, and 28% of all college students enrolled in fall 2011.

There were proportionally far more full-time students among the survey respondents (60%) than in the college distance education student population (29%) and the college student population in general (33%). The survey responses, therefore, severely over-represent the full-time online students and under-represent the part-time students who took online classes.

**Table 1. Student Credit and Full-Time/Part-Time Status Comparison between the Survey Sample and the College Student Population**

	College All		College DE		Survey Sample	
	Num	%	Num	%	Num	%
<b>0 - 29 credits</b>	6494	72%	2298	71%	128	63%
<b>30 credits or over</b>	2529	28%	939	29%	75	37%
<b>Full-Time</b>	2953	33%	945	29%	122	60%
<b>Part-Time</b>	6070	67%	2292	71%	82	40%

### CCSSE ITEMS COMPARISON

There are 15 items directly adapted from the original CCSSE survey on the CDES. The adapted version and their original version are listed in Appendix 1.

Hill conducted both descriptive and inferential statistics by examining the mean ratings and standard deviations of CDES items as compared those from the college’s 2010 CCSSE administration. The researchers caution the readers that the results should not be over-generalized. Since the CDES respondents were not randomly selected from the college’s total population of online students, their results cannot be generalized in contrast to previous CCSSE survey respondents who were randomly selected and whose results can be generalized to all students taking traditional brick-and-mortar classes. Nevertheless the exploratory comparisons can help the college form hypothesis and identify possible areas for improvement.

Hill conducted two-sample *t*-tests to see whether two cohorts are different from each other above chance level on each item. Following the tradition at CCSSE, we allowed 5% of error, and set the significance level at  $\alpha = .05$ . We also calculated Cohen’s *d* as an index for practical significance. Cohen’s *d* can indicate whether the differences in mean ratings are negligible or meaningful. The following criteria were adapted to determine practical significance using Cohen’s *d* index:

- 0.2 or below – negligible
- 0.2 - .49 – small difference
- 0.5 - 0.79 – medium difference
- 0.8 and above – large difference

These practical difference categories are represented by smiley faces in Table 2. Happy faces means that the respondents taking online classes had higher means than those taking traditional classes. Unhappy faces indicate that the respondents had lower means than the traditional students. One face represents a small difference, two faces a medium difference, and three faces a large difference. "-- " means the difference is negligible or not statistically significant.

Eleven out of 15 pairs of comparisons were significantly different. This means that the engagement of the CDES respondents is by and large different from the students taking the brick-and-mortar classes. The CDES respondents had higher ratings on 12 items, 8 of them being statistically significantly higher. They had lower ratings on 3 items, and the differences were statistically significant. It can be concluded that the CDES respondents are more engaged than the traditional students in general. Among the items that the CDES respondents had higher ratings, most of them belong to the benchmarks: Student Effort (3 out of 3 items) and Academic Challenge (3 out of 4 items). Out of the three items where the CDES respondents had lower ratings, two of them are related to collaborative learning (I2.3 and I2.4). It can be concluded that the CDES respondents worked harder and were more academically challenged but less engaged in collaborative learning.

**Table 2. CDES and CCSSE Cohort Comparison on Certain CCSSE Items**

CDES Items	CCSSE	2011 CDES			2010 CCSSE			<i>d</i>	
	Benchmark	N	M	SD	N	M	SD		
2.2 Completed readings or assignments by the deadlines	<b>stueff</b>	204	3.59	0.71	783	2.02	0.75	2.12	☺☺☺
2.5 Discussed grades or assignments with the instructor	<b>actcol</b>	204	2.30	1.04	786	1.59	0.83	0.81	☺☺☺
2.7 Discussed ideas from your readings or classes with the instructor	<b>stufac</b>	204	2.32	1.12	785	1.8	0.82	0.58	☺☺
4 About how many hours do you spend in a typical 7-day week preparing for class	<b>stueff</b>	204	2.79	1.13	785	2.19	1.18	0.51	☺
2.11 Seek out tutoring assistance	<b>stueff</b>	204	1.43	0.78	749	1.12	0.87	0.36	☺
3.2 Applying theories or concepts to practical problems or in new situations	<b>acchall</b>	202	3.00	0.98	789	2.67	0.91	0.36	☺
3.1 Making judgments about the value or soundness of information, arguments, or methods	<b>acchall</b>	202	2.90	1.01	786	2.61	0.89	0.32	☺
2.8 Worked harder than you thought you could to meet an instructor's standards or expectations	<b>acchall</b>	204	2.79	0.9	790	2.52	0.85	0.31	☺
2.9 Discussed ideas from your readings or classes with others (students, family members, co-workers, etc.)	<b>actcol</b>	204	2.69	1.02	787	2.44	0.93	0.26	--
2.10 Contact an academic advisor for course planning	<b>support</b>	204	1.75	0.94	761	1.61	0.82	0.17	--
3.3 Using information you have read or heard to perform a new skill	<b>acchall</b>	201	2.93	1.02	791	2.78	0.92	0.16	--
2.1 Asked questions in a discussion board or forum or otherwise contributed to class discussion	<b>actcol</b>	204	2.75	1.09	793	2.68	0.87	0.08	--
2.4 Worked with classmates to prepare class assignments	<b>actcol</b>	203	1.79	1.01	791	2.14	0.87	-0.39	☹
2.6 Talked about career plans with the instructor	<b>stufac</b>	201	1.45	0.78	787	1.99	0.89	-0.62	☹☹
2.3 Worked with other students on projects for this class	<b>actcol</b>	204	1.85	1.02	789	2.65	0.85	-0.90	☹☹☹ ‡

## USE OF STUDENT SUPPORT

The CDES respondents used online communication as their main mode of communication. Ninety-one out of 196, that is 46% of the respondents, used student support resources (I7). Among them, about two-thirds (59%) utilized online communication as their main mode of communication, while 10% used both online and in-person communication. Less than one-third of the students (31%) only used in-person communication mode as their primary communication mode. Among 105, or 54%, students who did not use student support resources, 83% of them utilized online resources such as KCC website to retrieve scheduling information and 10% took advantage of in-person help from services such as the Kekaulike Information and Service Center. See Table 3 for detailed results.

**Table 3. Communication Mode Usage Distribution**

Use Student Support Services to register or plan out courses for graduation.		On-line		In person		Both Online and In Person	
		Num	%	Num	%	Num	%
<b>Yes</b>	91	54	59%	28	31%	9	10%
<b>No</b>	105	87	83%	11	10%	3	3%
<b>Total</b>	196	141	72%	39	20%	12	6%

## OTHER ITEMS

The statistics for the other items are listed in the Appendix. These additional survey items indicate that most respondents (82%) were prepared for taking online classes (Item 10). During the class, they felt very or quite comfortable (85%) contacting their online instructors (Item 19), and most of them (85%) received feedback on their progress in the course (Item 18). About two-thirds (65%) of the respondents were provided a tutorial for the online class (Item 14). Almost all of them knew how to check grades (98%), but only 47% of the respondents felt the technology used for the class was easy to master (Item 12.e.). About three-quarters (78%) of the respondents



were required to perform research (Item 15), and 90% of the respondents believed that the online services provided met their research requirements (Item 16).

Online classes still seem to create a sense of isolation among the respondents. Only 23% of the students felt as though they were in a class and were not working by themselves (Item 12.a). Only about a third of the students (32%) enjoyed expressing themselves on the class discussion board (Item 12.c), and only 31% of the respondents enjoyed their classmates' post on the discussion board (Item 12.d). About a third (29%) of the students never communicated with their fellow students on message boards, blogs, emails and/or chat, and about half of them (47%) communicated only once a week. Item 3.4 showed that a third of the respondents (33%) believed the classes never emphasized on collaboration with classmates.

Being able to work at one's own pace was the most attractive characteristic of an online class to these respondents, as 73% the respondents considered it a positive experience feeling like they could work at their own pace regardless of what other students were doing in the class (Item 12.b). The respondents in general seemed to be satisfied with the online class taking experience and 92% of them were likely to take another online class in their areas of study.

## **CONCLUSION**

The researchers want to draw attention to the following factors in data interpretation. The 205 respondents only accounted for 6% of the 3237 students enrolled in distance education courses. There was a severe over-representation of full-time students and slight over-representation of senior students (those with 30 credits or higher) in the respondents. One can also expect that students most likely to respond to such surveys also complete online assignments and are generally more engaged than non-responders. This may make it difficult to draw clear generalizations between online and brick-and-mortar responders. Even so, the results create a baseline that allow room for improvement strategies and can provide guidance for academic advisors and online instructors.

Judging by the responses on CCSSE adapted items, the CDES respondents seemed to be more engaged in online courses than the brick-and-mortar students. Respondents appeared to put in more effort, and they felt more academically challenged. They interacted with faculty more on academic matters but not on their career plans. Furthermore, they engaged less in collaborative learning with fellow students. Additional survey items supported some of the findings from

CCSSE items. In terms of faculty-and-student interaction, 85% of the students were comfortable contacting their instructors and also received feedback from their instructors on their progress. There was more evidence showing that respondents were less engaged in collaborative learning. Only about a third of the students enjoyed posting and their fellow students' posting in online forums, and about a third of the students never communicated with their fellow students through online media. A third of the students said that their classes never emphasized on collaboration with classmates.

Students may also struggle with the technical aspects of online classes. Although two-thirds of the students received tutorials, only about half indicated that the technology used for the class was easy to master. Improving collaborative learning environment and increase technical support for online classes emerge as two areas to focus for online instructors and student support services.

Overall, the respondents were satisfied with their online class experiences, mostly because they can work at their own pace. Almost all (92%) students said that they were likely to take another online class in their area of study.

Campus stakeholders on distance learning can use this data and develop interventions to target the two areas identified as the challenging areas for online students and set goals for achievement. The interventions can be evaluated when the survey is administered in Fall 2013.

**Appendix 1: The Comparison Between the Original CCSSE items and CDES Adaptations**

<b>CDES Items</b>	<b>Original CCSSE Items</b>
2.1 Asked questions in a discussion board or forum or otherwise contributed to class discussion	4.a Asked questions in class or contributed to class discussion
2.2 Completed readings or assignments by the deadlines	4.e. Come to class without completing readings or assignments (reverse)
2.3 Worked with other students on projects for this class	4.f. Worked with other students on projects during class
2.4 Worked with classmates to prepare class assignments	4.g. Worked with classmates outside of class to prepare class assignments
2.5 Discussed grades or assignments with the instructor	4.i. Discussed grades or assignments with an instructor
2.6 Talked about career plans with the instructor	4.m. Talked about career plans with an instructor or advisor
2.7 Discussed ideas from your readings or classes with the instructor	4.n. Discussed ideas from your readings or classes with instructors outside of class
2.8 Worked harder than you thought you could to meet an instructor's standards or expectations	4.p. Worked harder than you thought you could to meet an instructor's standards or expectations.
2.9 Discussed ideas from your readings or classes with others (students, family members, co-workers, etc.)	4.r. Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)
2.10 Contact an academic advisor for course planning	13.1.a. Academic advising/planning
2.11 Seek out tutoring assistance	13.1.d. Peer or other tutoring
3.1 Making judgments about the value or soundness of information, arguments, or methods	5.d. Making judgments about the value or soundness of information, arguments, or methods
3.2 Applying theories or concepts to practical problems or in new situations	5.e. Applying theories or concepts to practical problems or in new situations.
3.3 Using information you have read or heard to perform a new skill	5.f. Using information you have read or heard to perform a new skill.
4 About how many hours do you spend in a typical 7-day week preparing for class (studying, reading, writing, rehearsing, doing homework, or other activities related to your program)	10.a. About how many hours do you spend in a typical 7-day week doing each of the following: Preparing for class (studying, reading, writing, rehearsing, doing homework, or other activities related to your program)

**Appendix 2: Statistics for Additional Items**

**Item 3.4 During this current semester, how much has THIS course emphasized the following: Collaboration with classmates**

<b>Very Often</b>	39	19%
<b>Often</b>	43	21%
<b>Sometimes</b>	53	26%
<b>Never</b>	67	33%

**Item 10. To what extent were you prepared for taking this course online:**

<b>Very or Quite</b>	117	60%
<b>Somewhat</b>	62	32%
<b>Not very or Not at all</b>	16	8%

**Item 11. Assuming that this is not your last semester, and that one were available in your area, would you take another online course?**

<b>Likely</b>	138	73%
<b>Somewhat likely</b>	21	11%
<b>Uncertain or unlikely</b>	31	16%

**Item 12. Aside from the ability to do classwork on a flexible schedule, which of these were positive experiences in your online course?**

<b>a. I felt as though I was in a class and was not working by myself</b>	47	23%
<b>b. I felt like I could work at my own pace regardless of what other students were doing</b>	158	77%
<b>c. I enjoyed expressing myself on the class discussion board</b>	65	32%
<b>d. I enjoyed my classmates' post on the discussion board</b>	63	31%
<b>e. I found that the technology used for the class was easy to master</b>	96	47%

**Item 13. How often do you communicate with fellow students such as message boards, blogs, emails and/or chat?**

<b>None</b>	57	29%
<b>Once a week</b>	93	47%
<b>Twice a week</b>	32	16%
<b>Three times or more a week</b>	15	8%

**Item 14. Were you provided a tutorial for this online course?**

<b>Yes</b>	128	65%
<b>No</b>	70	35%

**Item 15. Did this course require that you perform research?**

<b>Yes</b>	152	78%
<b>No</b>	42	22%

**Item 16. Were online services provided to meet your research requirements?**

<b>Yes</b>	172	90%
<b>No</b>	20	10%

**Item 17. Do you know how to check your grades for this course?**

<b>Yes</b>	195	98%
<b>No</b>	4	2%

**Item 18. Did you receive feedback on your progress in this course?**

<b>Yes</b>	167	85%
<b>No</b>	30	15%

**Item 19. Did you feel comfortable contacting your online instructor (s)?**

<b>Very or Quite</b>	165	84%
<b>Somewhat</b>	22	11%
<b>Not really</b>	9	5%