

October 17, 2017

An Assessment of the Employment of Practices Associated with Deep Learning in HIP and non- HIP Courses during Spring 2016

Report to the VP for
Academic Affairs

The End of Semester Student Survey of High Impact Practice Experiences, which is part of the Academies Assessment Protocol, was administered in the spring 2016 semester. This report analyzes the survey findings to determine the degree and nature of High Impact Practice implementation at Queensborough Community College.

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Executive Summary

The literature describing effective ways to implement High Impact Practices (HIPs) indicates that students need to be encouraged or required to engage in particular activities (e.g., reflection) in order to promote deep learning. In response to inquiries at the college about how HIPs are implemented at Queensborough, a survey-based assessment was conducted to determine the degree to which courses employ practices and activities that may enhance deep learning and engagement. During the spring 2016 semester, surveys were administered to students enrolled in courses with one or more HIP and to a control group of students who did not experience any HIPs during that semester. The surveys measured the degree to which students agreed or disagreed that their courses encouraged or required them to be involved in activities which may stimulate deep learning. Results indicated that fourteen types of deep learning-stimulating activities/practices were experienced by students in both HIP and non-HIP courses. The use of a control group and the formation of sub-groups allowed for analyses and the establishment of evidence that courses utilizing HIPs employed practices and activities to enhance deep learning, to a greater degree than non-HIP courses. In particular, HIP courses more extensively required/encouraged: 1) applying concepts and facts learned to new situations 2) examining the strengths and weaknesses of their views on a topic 3) considering the perspectives from peoples of other backgrounds and cultures. By comparison, students who experienced only the Writing Intensive HIP showed evidence of experiencing activities for deep learning similar to that of the control group, students who had no HIP experience in Spring 2015. This provides evidence that Writing Intensive (WI) courses are not currently implemented in a manner to enhance deep learning beyond what would be found in a non-HIP course. There was an exception to this pattern in that students experiencing WI courses expressed that their courses provided them with much feedback to improve their writing. Differences in the responses between the Writing Intensive group and the control were large and statistically significant. As a whole, the findings with regard to writing intensive courses provides evidence that these course are not implemented in a way that utilizes most deep learning activities, however they do significantly utilize feedback to help students improve their writing. Students who experienced HIPs, including WI, expressed greater degrees of connectivity to Queensborough Community College. Those who experienced multiple HIPs within the spring semester reported the highest levels of agreement that their courses utilized various deep learning activities.

Purpose

The overarching purpose of this assessment was to better understand how High Impact Practices (HIPs) are employed/implemented at QCC. Well-implemented HIPs include activities and course requirements which can engage students in deep learning. Through the use of a student

survey, this assessment of HIP implementation gathered the students' feedback on course requirements and encouraged activities during the spring 2016 semester in order to determine the extent to which deep learning activities were utilized in HIP and non-HIP courses. In addition, students were asked questions about their levels of involvement with the college to test the hypothesis that students enrolled in engaging HIP courses would be more involved in the college than those without HIP courses. An open-ended question was posed to gather the students' perspectives on how HIPs benefit them. This assessment was also designed to determine if certain types of deep learning-stimulating practices occur more or less frequently with various types of HIPs.

Methodology/Procedures

The assessment of HIP implementation during the spring 2016 semester involved the use of two survey instruments. The End of Semester Student Survey of High Impact Practice Experiences (for now on, referred to as the HIP experience survey) was administered to all students who had experienced one or more HIP during the spring 2016 semester. The End of Semester Student Survey of Academic Experiences was given to students who did not experience any HIP during the spring 2016 semester. This group of students who responded served as a control group. Both surveys asked students about their experiences with activities/class requirements (that can engender deep learning) during the semester. The survey language however varied slightly within the instructions as one survey instrument targeted students in a control group who had not experienced any HIP in spring 2016. The surveys were administered between April 27, 2016 and June 10, 2016.

Starting on April 27, invitations were sent to students' Tigermail addresses, requesting participation in a survey of their learning experiences during the spring semester. To enhance the invitation outreach, students were also invited via their personal email addresses, starting in mid-May. The email included a link to SurveyMonkey which hosted the survey. The survey instruments can be seen in appendices A and B.

Students who were invited to take the HIP survey had been enrolled in one or more courses with a HIP during the spring 2016 semester. Table 1 shows the counts of students who experienced a particular HIP during the spring 2016 semester (invited) and the count of those who took the HIP survey (responded). A total of 715 students took the HIP survey and experienced at least one HIP during the spring 2016 semester. Of the 715 respondents, 35 took the survey more than once as they were invited more than once because they enrolled in multiple HIPs. A total of 6,306 unique students took one or more courses with a HIP during spring 2016. A larger number of survey invitations (7,781) were sent out since students taking multiple HIP types were given multiple invitations.

Table 1. Counts of Students Invited and Responded to the HIP Survey and Response Rates

High Impact Practice				
Writing Intensive	4,902	500	10.20%	51.44%
Academic Service Learning	501	74	14.77%	7.61%
Common Intellectual Experience ¹	1,660	227	13.67%	23.35%
Student Wiki Interdisciplinary Group	274	64	23.36%	6.58%
Undergraduate Research	256	64	25.00%	6.58%
Global Diversity Learning	165	41	24.85%	4.22%
Learning Communities	23	2	8.70%	.21%
HIP Student Total²	7,781	n.a.	n.a.	100.00%.

Table 1 reveals that the vast majority of students taking a course with a HIP in spring 2016 were taking a WI course. This important finding was considered when structuring the analysis of the survey results. Given the disproportionate number of students who experienced WI courses, separate analyses of responses were made for students who had experienced WI course(s). The survey proportions in Table 1 show the percentage of survey respondents who experienced a particular type of HIP during the spring semester. Among all invited (unique) to take the HIP survey, 10.8% responded. The response rate varied greatly among the different types of HIPs.

A random sample of 8,000 students who were not taking any courses with HIPs during the spring 2016 semester was used to invite students to take the control group survey of learning experiences. 424 students selected for the control group took the survey. Table 2 shows the degree and non-degree status and degrees pursued of the students in the HIP and control groups.

Table 2. Degree Status of Survey Respondents in the HIP and Control Groups

Degree Status	HIP Group		Control Group	
Degree	709	99.2%	396	93.8%
Non-Degree	6	0.8%	26	6.2%
AA	276	38.9%	162	41.0%
AAS	111	15.7%	83	21.0%
AS	322	45.4%	147	37.2%
Certificate	0	0.0%	3	0.8%

¹ The Common Read was the Common Intellectual Experience offered in spring 2016

² "HIP Student Total" responded is not a unique student total because some students took more than one HIP. The unit of analysis is a course with a HIP type, not a student.

The counts and percentages found in table 2 show that both groups were similar in the degree types they pursued.

Data Sources

All students within the HIP group and the control group who completed the survey provided data in the form of responses on a Likert-type scale of agreement. Respondents provided agreement ratings to fourteen statements of what their course required or encouraged them to do, ranging from strongly disagree to strongly agree. Survey question 15 asked students to rate their level of involvement with QCC on a five point scale ranging from very low to very high. All respondents were given an open-ended question asking them to explain how they had benefitted from their experiences with HIPs (or in the control group, with their courses during the semester). A qualitative analysis was conducted on the respondents' explanations to create categories of response types (e.g., "obtained new perspectives") and to count responses within each category.

Survey Findings

Agreement levels were calculated for every survey statement by adding the counts and percentages of students who "agreed" or "strongly agreed" to a statement. QCC involvement ratings of "high" and "very high" were also added the same way. These measures were then compared between various groups. Table 3 shows the comparisons of agreement levels between the HIP group (students who experienced one or more HIP) and the control group (those who did not experience any HIP during spring 2016). In addition, the agreement levels for students who experienced any HIP except for the writing intensive HIP exclusively, are also shown. This was done because WI students were a disproportionately large group and by separating out those who took WI, the analyses of the agreement levels of all other HIP types was possible.

Table 3. Comparison of Survey Respondent Agreement Levels among Non-HIP (control group), those who experienced any HIP and those who experienced any non-Writing Intensive HIP

Survey Item	N	Non-HIP	N	Any HIP	N	Non-WI HIP
1. This course required me to make judgments about the quality or value of information.	337	81.8%	615	86.0%	339	87.8%
2. This course encouraged me to reflect on my learning process.	363	88.1%	632	88.4%	348	90.1%
3. This course required me to use skills and/or information I learned in another course to complete assignments or have class discussions in this course.	319	80.4%	613	85.7%	336	87.1%
4. This course encouraged me to reflect on what I learned in the past when I think about new information and concepts.	334	84.1%	617	86.3%	339	87.8%
5. This course challenged me to examine the strengths and weaknesses of my own views on a topic or issue.	331	83.4%	602	85.7%	340	89.0%
6. This course included at least one assignment requiring me to put together concepts and facts from different sources to create new ideas.	318	81.1%	619	88.2%	342	89.5%
7. This course encouraged me to apply to new situations the concepts and facts that I learned.	316	80.6%	617	87.9%	345	90.3%
8. This course encouraged me to use my personal experiences to understand concepts and facts.	295	75.5%	580	83.0%	319	84.1%
9. The assignments and/or activities in this course have helped me to form study groups and/or friendships.	263	67.2%	467	66.9%	274	72.3%
10. A class activity or assignment in this course required me to work with classmates to complete a project.	275	70.4%	503	71.9%	299	78.9%
11. This course required me to break down a concept or theory into its smaller elements so I could understand it.	283	73.1%	565	81.4%	313	83.0%
12. This class encouraged me to interact with people from different backgrounds and cultures.	287	74.2%	548	79.0%	309	81.9%
13. This class included perspectives of peoples from different backgrounds and cultures.	285	73.7%	560	80.7%	320	84.9%
14. This course provided me with much feedback to improve my writing.	241	65.7%	535	81.3%	296	81.8%
15. My level of involvement with Queensborough Community College can best be described as: (5 Point scale from very low to very high) High +Very High	166	45.2%	342	52.0%	203	56.1%

Agreement = responses of agree and strongly agree. Outcomes for question 15 are for responses of high and very high.

Table 3 revealed that agreement levels to statements about course requirements/activities (which can enhance deep learning) were generally higher for the Any HIP group than the Non-HIP control group. Most meaningful differences were only modestly higher (around 7 percentage point) with the exception of the statement “This course provided me with much feedback to improve my writing” which had much higher responses in the Any HIP group (15.6 percentage points higher). Modestly higher differences between students who had experienced any HIP and the control group were found for five statements: 6) *This course included at least one assignment requiring me to put together concepts and facts from different sources to create new ideas.*, 7) *The course encouraged me to apply to new situations the concepts and facts that I learned.*, 8) *This course encouraged me to use my personal experiences to understand concepts and facts.*, 11) *The course required me to break down a concept or theory into its smaller elements so that I could understand it.*, and 13) *This class included perspectives of peoples from different backgrounds and cultures.*

Statement 15 was posed to obtain measures of students’ feelings of connectivity to QCC and to make comparisons of ratings between control and HIP groups. The results in table 3 show that higher involvement with QCC was 6.8 and 10.9 percentage points higher than the control group in the WI only and non-WI HIP groups respectively.

Table 3 revealed that agreement levels were generally highest in the non-WI HIP group. Additional analyses were conducted to determine whether or not the differences in agreement ratings between the non-WI HIP group and the control group were caused by selection bias and a disproportional representation of demographic and academic factors in these groups. A statistical procedure called Propensity Score Matching (PSM) was utilized to match HIP students to students in the control group on the following five student characteristics, covariates likely to affect outcomes: cumulative GPA at the start of spring 2016, cumulative credits earned at the start of spring 2016, credits attempted in spring 2016, ethnicity and gender. The match tolerance was set to 0.01 which created two groups that were very closely matched on the covariates and which reduced the total number of respondents included in the analysis. Additional statistical tests were run which confirmed that the two groups were equivalent on the five factors. The percentages of students agreeing to the survey statements were recalculated for the matched groups and chi square tests of goodness of fit were performed to determine whether there were any statistically significant differences in agreement between the Non-WI HIP group and the control group. Table 4 shows the percentages in agreement for the two groups and the chi-square test results.

Table 4. Comparisons of agreement levels (agree & strongly agree) between non-HIP (control group) and those who experienced any non-WI HIP within a subset of survey respondents matched with propensity score matching.

Survey Item	N	Non HIP	χ^2	Signif.	N	Non-WI HIP
1. This course required me to make judgments about the quality or value of information.	202	78.3%	12.07	.001 **	231	89.5%
2. This course encouraged me to reflect on my learning process.	222	86.0%	3.23	.072	235	91.1%
3. This course required me to use skills and/or information I learned in another course to complete assignments or have class discussions in this course.	197	79.4%	6.80	.009 **	227	88.0%
4. This course encouraged me to reflect on what I learned in the past when I think about new information and concepts.	206	83.0%	2.91	.088	228	88.3%
5. This course challenged me to examine the strengths and weaknesses of my own views on a topic or issue.	201	81.0%	13.56	.000 ***	236	92.2%
6. This course included at least one assignment requiring me to put together concepts and facts from different sources to create new ideas.	202	83.1%	6.93	.008 **	233	91.0%
7. This course encouraged me to apply to new situations the concepts and facts that I learned.	191	78.6%	13.96	.000 ***	232	90.6%
8. This course encouraged me to use my personal experiences to understand concepts and facts.	181	74.5%	7.26	.007 **	214	84.3%
9. The assignments and/or activities in this course have helped me to form study groups and/or friendships.	160	65.8%	2.53	.111	184	72.5%
10. A class activity or assignment in this course required me to work with classmates to complete a project.	165	67.9%	5.85	.016 *	197	77.5%
11. This course required me to break down a concept or theory into its smaller elements so I could understand it.	169	70.7%	13.55	.000 ***	213	84.6%
12. This class encouraged me to interact with people from different backgrounds and cultures.	176	73.7%	5.70	.017 *	208	82.5%
13. This class included perspectives of peoples from different backgrounds and cultures.	170	71.1%	18.54	.000 ***	219	86.9%
14. This course provided me with much feedback to improve my writing.	148	64.7%	20.82	.000 ***	201	83.0%
15. My level of involvement with Queensborough Community College can best be described as: (5 Point scale from very low to very high) High +Very High	102	44.5%	6.39	.011 *	136	56.2%

Levels of Significance = * $p < .05$, ** $p < .01$, *** $p < .001$

χ^2 = The Pearson Chi-Square test value. Ns are the # who agreed.

Table 4 shows that for all but three of the statements, agreement levels were significantly (statistically) higher in the non-WI HIP group than in the non-HIP control group. The differences in agreement levels were notably large between the following items: *“This course challenged me to examine the strengths and weaknesses of my own views on a topic or issue.”*, *“This course encouraged me to apply to new situations the concepts and facts that I learned.”*, *“This course provided me with much feedback to improve my writing.”*, *“This course required me to break down a concept or theory into its smaller elements so I could understand it.”*, *“A class activity or assignment in this course required me to work with classmates to complete a project,”* and *“This class included perspectives of peoples from different backgrounds and cultures.”*

Finally, levels of *involvement with Queensborough Community College* (item 15 in Table 4) were also higher for the HIP group.

These results confirm that students in HIP courses were significantly more likely to have reported such experiences than similar students (who matched on cumulative GPA, credits completed, credits attempted, ethnicity and gender) who were not enrolled in HIP courses. Therefore the findings, as shown in table 4 lend evidence that most HIPs are employing the particular techniques (e.g., analysis, application, group work) to a greater degree than non-HIP courses and that one of the goals of HIP implementation is being met.

Students experiencing WI made up a very large proportion of the Any HIP group (see Table 3). Separate analyses were conducted with a sub-group that only included respondents who took a WI course and no other HIP during the spring 2016 semester, a total of 296 survey respondents. Agreement ratings were compared between the subgroup of those students who only took one or more WI courses and the Non-HIP control group. In addition, a sub-group of students who took more than one HIP course during the spring 2016 semester was selected for analyses of agreement outcomes. High agreement levels would be expected in this subgroup if HIP courses are requiring or encouraging students to be involved in the deep learning activities presented in the survey (i.e., items 1-14). Table 5 shows the agreement levels for the control group, for students who took WI only, and for the sub-group of respondents who took two or more non-WI HIPs. The “Ns” represent the number who agreed or strongly agreed.

Table 5. Comparison of Survey Respondent Agreement Levels among Non-HIP (control group), those experiencing only the Writing Intensive HIP and those experiencing two or more HIPs (WI excluded).

Survey Item	N	Non-HIP	N	WI Only	N	Multi non-WI HIPs
1. This course required me to make judgments about the quality or value of information.	337	81.8%	276	83.9%	103	89.6%
2. This course encouraged me to reflect on my learning process.	363	88.1%	284	86.3%	108	94.0%
3. This course required me to use skills and/or information I learned in another course to complete assignments or have class discussions in this course.	319	80.4%	277	84.2%	101	87.8%
4. This course encouraged me to reflect on what I learned in the past when I think about new information and concepts.	334	84.1%	278	84.5%	107	93.0%
5. This course challenged me to examine the strengths and weaknesses of my own views on a topic or issue.	331	83.4%	262	81.9%	108	94.8%
6. This course included at least one assignment requiring me to put together concepts and facts from different sources to create new ideas.	318	81.1%	277	86.6%	109	95.6%
7. This course encouraged me to apply to new situations the concepts and facts that I learned.	316	80.6%	272	85.0%	107	93.9%
8. This course encouraged me to use my personal experiences to understand concepts and facts.	295	75.5%	261	81.6%	104	92.1%
9. The assignments and/or activities in this course have helped me to form study groups and/or friendships.	263	67.2%	193	60.3%	91	80.6%
10. A class activity or assignment in this course required me to work with classmates to complete a project.	275	70.4%	204	79.5%	100	88.4%
11. This course required me to break down a concept or theory into its smaller elements so I could understand it.	283	73.1%	252	63.8%	99	87.6%
12. This class encouraged me to interact with people from different backgrounds and cultures.	287	74.2%	239	75.4%	102	90.3%
13. This class included perspectives of peoples from different backgrounds and cultures.	285	73.7%	240	75.7%	105	93.0%
14. This course provided me with much feedback to improve my writing.	241	65.7%	239	80.7%	93	84.5%
15. My level of involvement with Queensborough Community College can best be described as: (5 Point scale from very low to very high) High +Very High	166	45.2%	139	47.0%	61	55.5%

Agreement = responses of agree and strongly agree. Outcomes for question 15 are for responses of high and very high.

The agreement levels of WI only students were the same or lower than the agreement levels of the control group for all but two of the statements. Chi square tests were run to determine if the differences in agreement levels were significantly different between the WI only and the control group for four items which had agreement levels that were at least 5 percentage points higher in the WI-only group (i.e., items 6, 8, 10 and 14). For the statement “This course encouraged me to use my personal experiences to understand concepts and facts.” The Chi Square results were only marginally significant, $\chi^2 (1, N = 320) = 3.86, p < .05$. The p value was .049 and a Chi Square test using the continuity correction yielded a p value above .05. So significance is considered marginal at best. For the statement “This course provided me with much feedback to improve my writing” the agreement levels were much larger in the WI only group (WI only = 80.7%, Non HI = 65.7%) and the Chi Square test showed that the differences were clearly significant, $\chi^2 (1, 296) = 18.6, P < .001$. These findings provide some evidence that the implementation of most practices/activities to foster deep learning did not occur sufficiently within the writing intensive courses. The essential practice of providing feedback to students about their writing was clearly shown to be more present in the writing intensive courses by comparison to non-HIP courses.

Many of the survey respondents experienced more than one HIP during the semester. A subgroup was formed of all HIP survey respondents who experienced two or more HIPs during the spring 2016 semester, except for writing intensive. Table 5 shows that this sub-group’s agreement levels were particularly higher than those of the other groups, especially for the following statements: 8) *This course encouraged me to use my personal experiences to understand concepts and facts.* 10) *A class activity or assignment in this course required me to work with classmates to complete a project,* 13) *This class included perspectives of peoples from different backgrounds and cultures,* and 14) *This course provided me with much feedback to improve my writing.* The multiple-HIP group had the largest ratings for their level of involvement with QCC (55.5 percent reported “high” or “very high” involvement) as opposed to 45.2 and 47.0 percent “highly involved” in the other groups.

An open-ended question obtained 773 intelligible/interpretable responses to the prompt “*Please explain how you have benefitted from your experiences with High Impact Practices this semester.*” A qualitative analysis was conducted to form categories of responses. Table 6 shows the counts of response types.

Table 6. Categorized Open-Ended Prompt Response Counts to “Please explain how you have benefitted from your experiences with High Impact Practices this semester.”

How Students Benefitted	Response Count
Learned, gained knowledge, understood more	150
Communication skills/writing improved	149
Unintelligible/did not explain how they benefitted	92
More social, work with others/as a team	62
Obtained new perspectives	55
Motivated to study/worked harder, challenged	51
Skill improved	37
Critical thinking, better thinking	36
Unspecified positive/ enjoyed the class	33
No benefit/negative comment	29
Interacted/exposed/learned from different cultures	19
Performed better, good grades, achievement	19
Applied knowledge	19
Self-examination/reflection, self-knowledge	14
Time management/study techniques	13
Used integration/synthesis, made connections	4
Blank or I don't know	2
Other	84

Some respondents gave explanations that fell into more than one response category. A very large proportion of respondents expressed that they benefitted from their HIP courses by learning more and/or by improving their communication skills, especially in writing. A very large number of respondents (149) stated that they benefitted in terms of improved communication skills, especially in writing (105 responses).

Fourteen respondents remarked that their experiences with the Common Read benefitted them.

Summary of Main Findings

From the comparisons of the agreement levels between the control group and the various HIP experiencing groups, there are several key findings:

1. A large majority of students experiencing either HIP or non-HIP courses agreed that their courses required or encouraged them to partake in deep learning activities during the semester. This held true for almost every type of deep learning activity assessed.
2. Agreement ratings to most statements of deep learning activity experiences were lowest in the control group and the Writing Intensive (WI) only group. Agreement levels in the WI only group were similar to agreement levels in the control group with the exception of the statement “*This course provided me with much feedback to improve my writing*” which had significantly higher agreement ratings in the WI only group.
...
3. Agreement levels were uniformly higher in the Non-WI HIP group than in the control group, providing evidence that the HIPs, with the exception of WI, were employing many deep learning activities to a greater extent.
4. Students who experienced any high impact practice in spring 2016 felt more involved with Queensborough Community College. This was particularly true for students who experienced multiple high impact practices.

5. At an absolute level, agreement ratings on reflection were high among all groups. It appears that pedagogical techniques involving reflection are being implemented in many HIP and non-HIP courses.

6. There were no differences in agreement between the control group and any HIP groups to the statement that the course included assignments that helped students to form study groups and/or friendships, except for students who took multiple HIP courses who had higher agreement levels.

7. Agreement levels were much higher in both the non-WI HIP and the WI only group than the control group to the statement that a course provided students with much feedback to improve their writing.

Conclusions

Analyses of the absolute values of agreement levels and comparisons of the agreement levels between the control group and the various HIP experiencing groups provided evidence for several conclusions:

During the spring 2016 semester a solid majority of responding students in courses with and without HIPs were encouraged or required to participate in activities designed to engender deep learning. Measures of both “agree” and “strongly agree” responses to statements that courses encouraged participation in deep learning activities provided evidence for this conclusion. The results of the Spring 2015 Survey revealed that agreement levels were essentially the same between students experiencing the writing intensive HIP and the control group. The Spring 2016 survey included statement 14 about a course providing feedback to improve writing skills in order to detect if there was a deep learning activity/course characteristic that was particularly relevant and previously unconsidered factor to be assessed. The findings from the current survey revealed that again, WI courses did not utilize most deep learning activities however, they did indeed use feedback to help students to improve their writing. It is important to note that there were higher agreement levels for non-WI HIP courses than the control group.

Findings that students who participated in courses with one or more HIPs (with the exception of writing intensive courses) reported higher levels of agreement to statements of deep learning-stimulating experiences, provides evidence that HIP courses afforded students more frequent and/or more intense deep learning opportunities.

Among all course requirements/activities and among both HIP and non-HIP courses, the use of reflection seemed to be the most utilized deep learning pedagogy. Several deep learning activity experiences were strongly associated with having taken a HIP course including: *challenging students to examine the strengths and weakness of their views, encouraging students to apply the concepts and facts that they learned to new situations, breaking down a concept or theory into its smaller elements, encountering the perspectives of peoples from different backgrounds and cultures and receiving feedback to improve writing skills.* Among all groups analyzed, students experiencing multiple HIPs worked together the most to complete projects.

Agreement levels were not statistically significantly different between any of the HIP groups and the control group for statement 2 about reflection on the learning process. It is likely that no difference was found because agreement levels were already high (88.1%) in the control group and because as with most survey responses, there is a ceiling effect limiting agreement ratings from approaching the upper 90's. These results provided evidence that in both HIP and non-HIP courses, most students are encouraged to reflect on their learning process.

It was hypothesized that the employment of HIPs would lead students to be more engaged academically as well as with the college as a whole. This engagement would lead to greater feelings of connectivity to the college. The results of the survey showed that students who were enrolled in courses with HIPs were more involved with Queensborough Community College.

Appendix A. Survey Instrument for the HIP group

Introduction:

Please take a few minutes to answer this survey regarding how your courses with High Impact Practices may have required or encouraged you to think and learn in various ways during this semester at Queensborough Community College (QCC).

This semester, you took one or more courses which included a High Impact Practice (HIP). The High Impact Practices at QCC are: Academic Service Learning, Collaborative Assignments and Projects (e.g., SWIG), Common Intellectual Experiences (e.g., The Common Read, Academy Specific Courses), Global and Diversity Learning, Learning Communities, Undergraduate Research and Writing Intensive Courses. Please respond to the following statements based upon your experiences with any HIPs during this current semester. If you have any questions, please contact Dr. Victor Fichera, Principal Investigator for the Academy Assessment Protocol at [Vfichera AT qcc.cuny.edu](mailto:Vfichera@qcc.cuny.edu).

Your responses to the following statements should be based upon your experiences in your course which included High Impact Practices this semester:

1) This course required me to make judgments about the quality or value of information.

Strongly Agree Agree Neutral Disagree Strongly Disagree

2) This course encouraged me to reflect on my learning process.

Strongly Agree Agree Neutral Disagree Strongly Disagree

3) This course required me to use skills and/or information I learned in another course to complete assignments or have class discussions in this course.

Strongly Agree Agree Neutral Disagree Strongly Disagree

4) This course encouraged me to reflect on what I learned in the past when I think about new information and concepts.

Strongly Agree Agree Neutral Disagree Strongly Disagree

5) This course challenged me to examine the strengths and weaknesses of my own views on a topic or issue.

Strongly Agree Agree Neutral Disagree Strongly Disagree

6) This course included at least one assignment requiring me to put together concepts and facts from different sources to create new ideas.

Strongly Agree Agree Neutral Disagree Strongly Disagree

7) This course encouraged me to apply to new situations the concepts and facts that I learned.

Strongly Agree Agree Neutral Disagree Strongly Disagree

8) This course encouraged me to use my personal experiences to understand concepts and facts.

Strongly Agree Agree Neutral Disagree Strongly Disagree

9) The assignments and/or activities in this course have helped me to form study groups and/or friendships.

Strongly Agree Agree Neutral Disagree Strongly Disagree

10) A class activity or assignment in this course required me to work with classmates to complete a project.

Strongly Agree Agree Neutral Disagree Strongly Disagree

11) This course required me to break down a concept or theory into its smaller elements so I could understand it.

Strongly Agree Agree Neutral Disagree Strongly Disagree

12) This class encouraged me to interact with people from different backgrounds and cultures.

Strongly Agree Agree Neutral Disagree Strongly Disagree

13) This class included perspectives of peoples from different backgrounds and cultures.

Strongly Agree Agree Neutral Disagree Strongly Disagree

14) This course provided me with much feedback to improve my writing.

Strongly Agree Agree Neutral Disagree Strongly Disagree

15) My level of involvement with Queensborough Community College can best be described as:

Very High High Moderate Low Very Low

Open Ended Question

16) Please explain how you have benefitted from your experiences with High Impact Practices this semester:

17) Please provide your EMPLID (Your QCC EMPLID is the eight-digit number located on your QCC ID card.)

18) First Name

19) Last Name

Thank you for your time!

Please click the "Submit" button to complete this survey.

Appendix B. Survey Instrument for the Control Group

Introduction:

Please take a few minutes to answer this survey regarding how your experiences with your courses and course-work may have required or encouraged you to think and learn in various ways during this semester at Queensborough Community College.

This survey will pose statements for you to respond to. Please respond to these statements based upon your experiences in the classes that you took at QCC during this current semester. If you have any questions, please contact Dr. Victor Fichera, Principal Investigator for the Academy Assessment Protocol at Vfichera@qcc.cuny.edu.

Your responses to the following statements should be based upon your experiences in the courses that you took at QCC this semester:

1) My courses required me to make judgments about the quality or value of information.

Strongly Agree Agree Neutral Disagree Strongly Disagree

2) My courses encouraged me to reflect on my learning process.

Strongly Agree Agree Neutral Disagree Strongly Disagree

3) My courses required me to use skills and/or information I learned in another course to complete assignments or have class discussions in this course.

Strongly Agree Agree Neutral Disagree Strongly Disagree

4) My courses encouraged me to reflect on what I learned in the past when I think about new information and concepts.

Strongly Agree Agree Neutral Disagree Strongly Disagree

5) My courses challenged me to examine the strengths and weaknesses of my own views on a topic or issue.

Strongly Agree Agree Neutral Disagree Strongly Disagree

6) My courses included at least one assignment requiring me to put together concepts and facts from different sources to create new ideas.

Strongly Agree Agree Neutral Disagree Strongly Disagree

7) My courses encouraged me to apply to new situations the concepts and facts that I learned.

Strongly Agree Agree Neutral Disagree Strongly Disagree

8) My courses encouraged me to use my personal experiences to understand concepts and facts.

Strongly Agree Agree Neutral Disagree Strongly Disagree

9) The assignments and/or activities in my courses have helped me to form study groups and/or friendships.

Strongly Agree Agree Neutral Disagree Strongly Disagree

10) A class activity or assignment required me to work with classmates to complete a project.

Strongly Agree Agree Neutral Disagree Strongly Disagree

11) My courses required me to break down a concept or theory into its smaller elements so I could understand it.

Strongly Agree Agree Neutral Disagree Strongly Disagree

12) My courses encouraged me to interact with people from different backgrounds and cultures.

Strongly Agree Agree Neutral Disagree Strongly Disagree

13) My courses included perspectives of peoples from different backgrounds and cultures.

Strongly Agree Agree Neutral Disagree Strongly Disagree

14) This course provided me with much feedback to improve my writing.

Strongly Agree Agree Neutral Disagree Strongly Disagree

15) My level of involvement with Queensborough Community College can best be described as:

Very High High Moderate Low Very Low

Open Ended Question

16) Please explain how you have benefitted from your experiences with your courses this semester:

17) Please provide your EMPLID (Your QCC EMPLID is the eight-digit number located on your QCC ID card.)

18) First Name

19) Last Name

Thank you for your time!

Please click the "Submit" button to complete this survey.