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April 2, 2026

# Examining the Effectiveness of Kalkomey Boater Education Courses

Prepared for Kalkomey



## Executive Summary

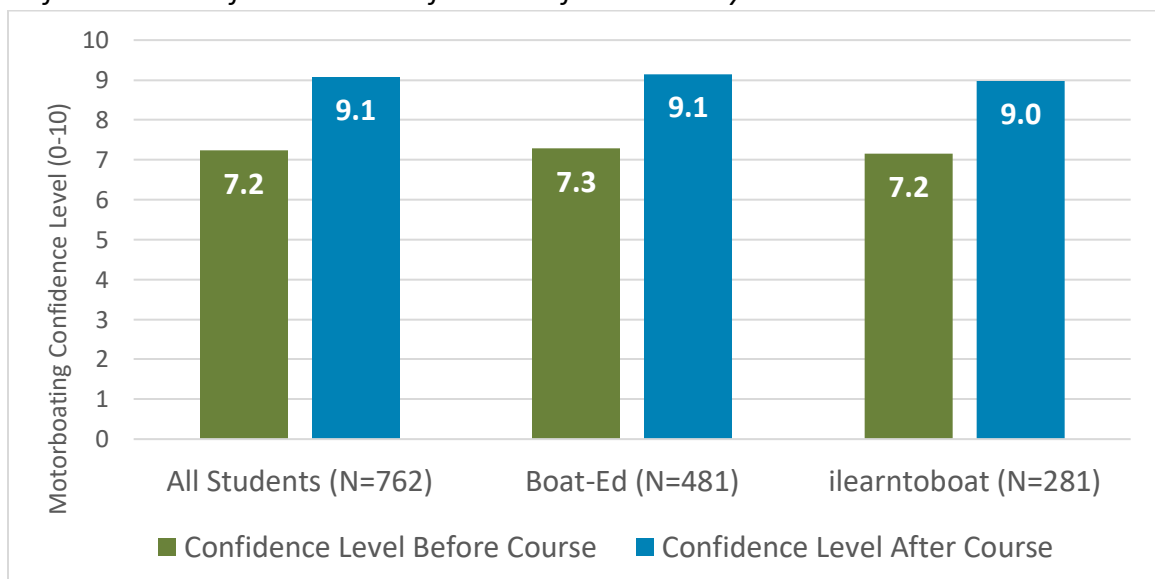
Kalkomey offers two options for online boater education: *Boat-Ed*, which is a standard online course, and *ilearntoboat*, which is an interactive-style online course. The standard program presents boating information interspersed with regular questions to ensure student engagement. The interactive program includes a storyline where the student plays the part of a character who is learning about boating while solving a mystery. This research evaluated the effectiveness of both online courses in educating participants about boater safety. Key areas examined include boating confidence and real-world application, behavioral changes and impact, knowledge retention, and overall satisfaction and advocacy. The study also compared responses across students from different courses to identify any differences related to the style of boater education course taken. The key findings from this research are described below:

- 1. The majority of Kalkomey boater education students indicated the courses made them more confident and prepared them to go motorboating.**

On average, Kalkomey students reported that their confidence in their ability to safely operate a motorboat was 7.2 out of 10 before taking their boater education course. After taking their course, students' confidence had risen to over 9.1 out of 10, which represents more than a 25% increase. There was not a statistically significant difference in the confidence level between *ilearntoboat* and *Boat-Ed* students after taking each course, suggesting that both courses are about equally effective in instilling motorboating confidence in students.

**Figure 1. Confidence Change**

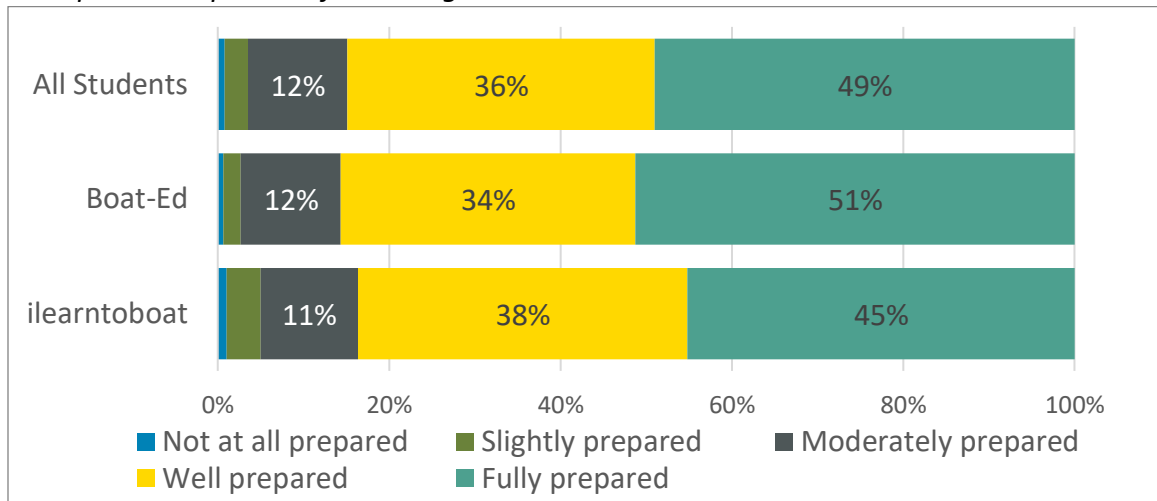
*Self-assessed confidence level before and after Kalkomey boater education courses.*



Most students also reported feeling highly prepared to go motorboating on their own after completing Kalkomey boater education courses. Over 80% of Kalkomey students indicated that they felt either well or fully prepared to operate a motorboat without supervision after taking each respective course. This was true for students of both the *Boat-Ed* standard and the *ilearntoat* interactive courses.

**Figure 2. Boating Preparedness**

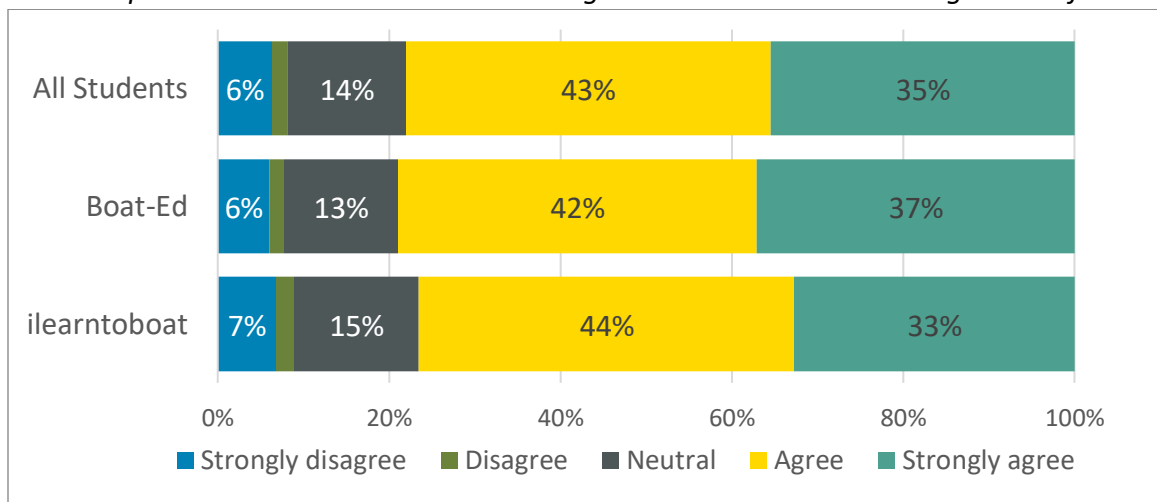
**Question:** *How prepared do you feel to operate a motorboat without supervision from an experienced person after taking this course?*



More than 75% of Kalkomey students either agree or strongly agree that the boater education courses helped them with hazard recognition and avoidance. There were no major differences between *Boat-Ed* and *ilearntoat* students in this regard.

**Figure 3. Hazard Recognition**

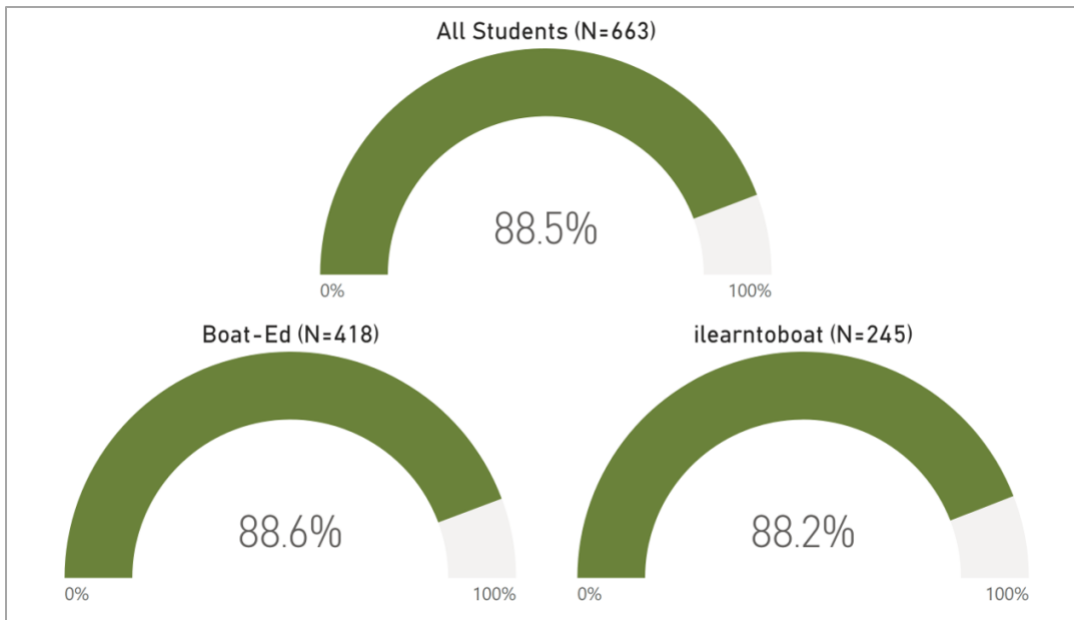
**Question:** *How much do you agree with the following statement: “This course helped me learn to spot and avoid hazards while boating that I would not have recognized before”?*



**2. Kalkomey students showed strong retention of the boating safety information presented in the course.**

Students of Kalkomey boater education courses exhibited a high level of knowledge retention, with the average student scoring 88.5% on the 10-question boating safety evaluation. It is important to recognize that some students completed their course up to six months before taking this survey, indicating that these courses were effective not only at providing boating safety information, but also ensuring that it was remembered. There was not a statistically significant difference in the retention of boating knowledge between *Boat-Ed* and *ilearntoat* students.

Figure 4. Mean Knowledge Retention Scores  
Average student score on 10 standard boater safety questions.



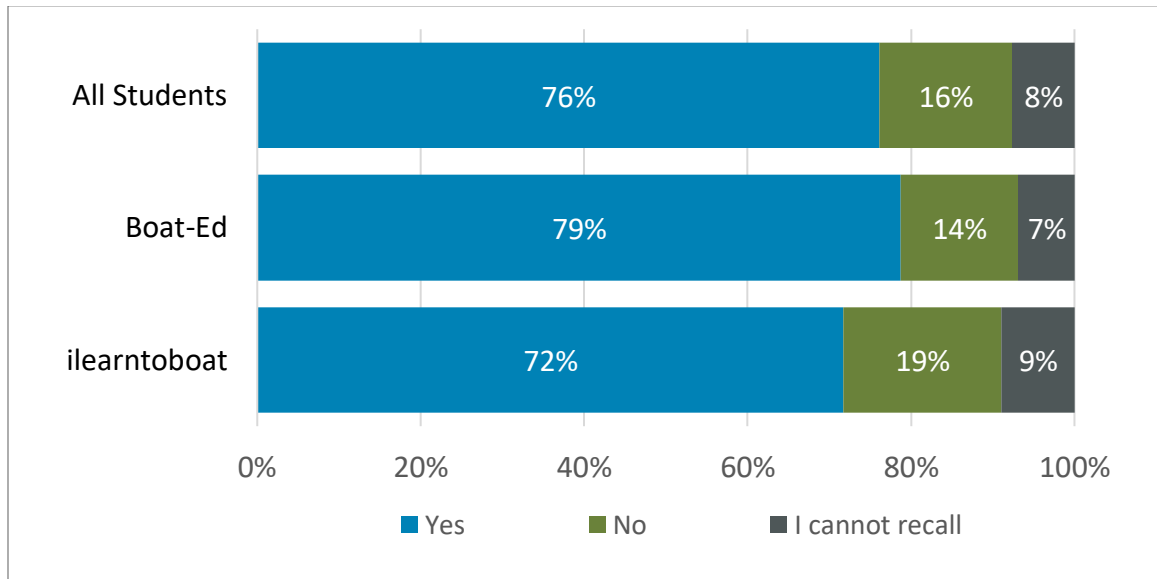
**3. Students were likely to share the information they learned from Kalkomey boater education course with others.**

Over three-quarters of Kalkomey students indicated that they had already shared something they learned in their boater education course with friends or family. This suggests not only that students are learning, but that they are also spreading the knowledge they gained about safe boating with others in their social circle. In this way, the impact of these boater education courses extends beyond the individuals who participate in them.

*Boat-Ed* students were slightly more likely to have shared information learned from their course with friends and family compared to *ilearntoat* students.

**Figure 5. Mean Knowledge Retention Scores**

**Question:** *Have you shared anything that you learned from this boater safety course with friends or family?*

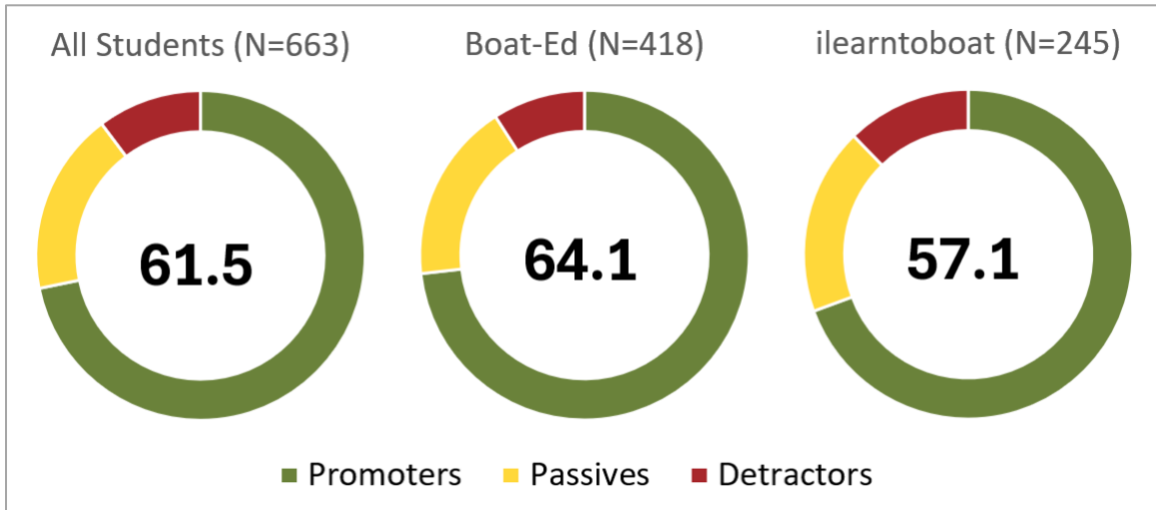


**4. Overall, students hold very positive views about Kalkomey boater education courses.**

Course satisfaction was measured through Net Promoter Scores (NPS). An NPS of over 50 generally signifies strong customer satisfaction. Students gave Kalkomey boater education courses an NPS of 61.5 on average, showing that their views of the courses were mostly very positive. Over 70% of Kalkomey students can be considered promoters of the boater education course they took; these students are likely to share positive feedback about the course and recommend it to others if asked. Just over 10% of students can be considered detractors; they hold relatively negative views of the course and may share negative opinions if asked.

*Boat-Ed* received a slightly higher NPS compared to *ilearntoat*, but the difference was not statistically significant at the 95% confidence level.

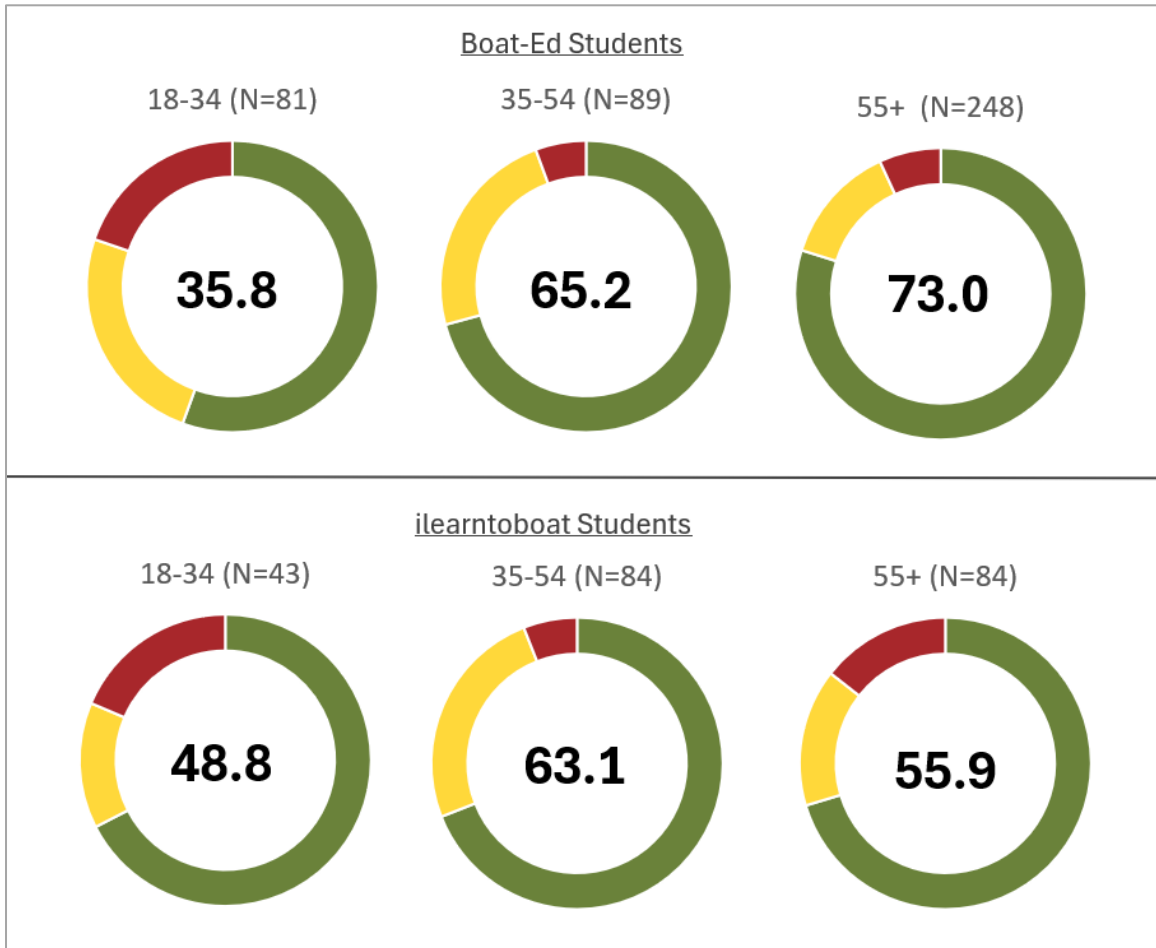
**Figure 6. Net Promoter Scores**  
*Calculated as (% Promoters – % Detractors) x 100*



**5. The *Boat-Ed* standard and *ilearntoat* interactive course formats are both effective, but students of different ages have different preferences for course style.**

Age-related differences in student preferences for the standard versus interactive course styles were seen throughout this study. One of the most obvious differences was in student satisfaction with each course. Satisfaction ratings among students aged 55 and older were significantly higher for the standard-style *Boat-Ed* course than for the interactive *ilearntoat* course, though this group rated both courses favorably. Conversely, students 34 and younger showed relatively higher satisfaction with the interactive-style *ilearntoat* course compared to the standard *Boat-Ed* course.

**Figure 7. Net Promoter Scores by Age Group**  
*Calculated as (% Promoters – % Detractors) x 100*



Differences in course preference by age were also seen across measures of engagement, helpfulness, ease of use, and motivation. In most cases, students under 34 rated the interactive course more highly, while students 55 and older tended to give higher ratings to the standard course.

While there is evidence that younger students tend to hold a relatively more favorable view of the *ilearntoboat* interactive course and that older students tend to prefer the *Boat-Ed* standard course, it's important to recognize that every student has a unique set of needs and preferences. Both courses offered by Kalkomey are effective methods of boater education, and giving students the opportunity to choose the course style that works best for them may help ensure that everyone's need are met.

## Table of Contents

INTRODUCTION .....	10
METHODOLOGY.....	10
RESULTS .....	11
SURVEY AUDIENCES .....	11
BOATING CONFIDENCE & APPLICATION .....	14
BEHAVIOR CHANGE & REAL-WORLD IMPACT .....	17
KNOWLEDGE RETENTION .....	19
SATISFACTION & ADVOCACY.....	19
APPENDIX A: BOATER EDUCATION QUESTIONNAIRE .....	26
APPENDIX B: CENSUS REGION MAP .....	32
APPENDIX C: FULL KNOWLEDGE RETENTION RESULTS.....	33

## List of Tables

Table 1. Respondent Age Groups .....	11
Table 2. Respondent Gender .....	11
Table 3. State Courses Taken by Region .....	11
Table 4. State Courses Taken .....	12
Table 5. Boating Experience Before Course.....	13
Table 6. Confidence Level Before Course .....	14
Table 7. Confidence Level After Course.....	14
Table 8. Boating After Course .....	14
Table 9. Boat Used After Course.....	15
Table 10. Boating Frequency After Course .....	15
Table 11. Boating Activities After Course .....	16
Table 12. Preparedness After Course .....	16
Table 13. Hazard Recognition After Course.....	17
Table 14. Activity Change After Course .....	17
Table 15. Activity Change by Age Group.....	18
Table 16. Likelihood of Following Safety Protocols .....	18
Table 17. Shared Learnings .....	18
Table 18. Mean Knowledge Retention Scores .....	19
Table 19. Mean Knowledge Retention Scores by Age Group .....	19
Table 20. Net Promoter Scores.....	20

Table 21. Net Promoter Scores by Age Group ..... 20

Table 22. Engagement ..... 21

Table 23. Engagement by Age Group ..... 21

Table 24. Clarity ..... 22

Table 25. Clarity by Age Group ..... 22

Table 26. Course Helpfulness..... 23

Table 27. Course Helpfulness by Age Group..... 23

Table 28. Ease of Use ..... 24

Table 29. Ease of Use by Age Group ..... 24

Table 30. Motivation ..... 25

Table 31. Motivation by Age Group..... 25

Table 32. Full Distribution of Knowledge Retention Scores ..... 33

Table 33. Knowledge Retention Quiz Q1 ..... 33

Table 34. Knowledge Retention Quiz Q2 ..... 33

Table 35. Knowledge Retention Quiz Q3 ..... 34

Table 36. Knowledge Retention Quiz Q4 ..... 34

Table 37. Knowledge Retention Quiz Q5 ..... 34

Table 38. Knowledge Retention Quiz Q6 ..... 34

Table 39. Knowledge Retention Quiz Q7 ..... 35

Table 40. Knowledge Retention Quiz Q8 ..... 35

Table 41. Knowledge Retention Quiz Q9 ..... 35

Table 42. Knowledge Retention Quiz Q10 ..... 36

## List of Figures

Figure 1. Confidence Change ..... 2

Figure 2. Boating Preparedness ..... 3

Figure 3. Hazard Recognition ..... 3

Figure 4. Mean Knowledge Retention Scores ..... 4

Figure 4. Mean Knowledge Retention Scores ..... 5

Figure 5. Net Promoter Scores..... 6

Figure 6. Net Promoter Scores by Age Group..... 7

## Introduction

This study surveyed adult participants of two Kalkomey Boater Education courses: the *Boat-Ed* standard course and the *ilearntoat* interactive course. The standard program delivers boating information alongside periodic questions to keep students engaged. The interactive program features a narrative in which the student takes on the role of a character learning about boating while working to solve a mystery. The goal of this research was to determine the effectiveness of each course in educating participants about boater safety. Topics explored included boating confidence and safety application, behavioral changes and real-world impact, knowledge retention, and course satisfaction and advocacy. In addition, comparisons were made between the responses of students who took each course to determine any differences based on the format of boater education course taken.

In order to explore outcomes among both groups of Kalkomey students, an online survey was developed and sent to each group of boater education students, with the only difference being the name of the specific course taken. The full questionnaire can be found in [Appendix A](#).

## Methodology

Surveys were sent via email to students 18 and older who had completed either the *Boat-Ed* or *ilearntoat* course within the past six months. Efforts were made to ensure that each audience receiving a survey invite was demographically representative of the full group of students who took each course during the specified time period. These surveys were fielded from January 13 to February 12, 2026. A chance to win a \$150 gift card to Bass Pro Shops was offered to those who completed the survey to incentivize participation. To ensure survey response quality, average time per response, straightlining, and patterned responses were monitored, and responses that failed any quality control measures were removed. In total, 764 quality responses were collected from students of Kalkomey boater education courses: 483 from *Boat-Ed* students and 281 from *ilearntoat* students. Partial responses were retained, so sample sizes decrease slightly for questions asked later in the survey.

For each question, responses from *Boat-Ed* students were compared to *ilearntoat* students, with statistical testing performed to identify significant differences at the 95% confidence level. These comparisons helped determine whether there were significant differences in experience and outcomes for students taking standard versus interactive boater education courses.

It is important to recognize the potential impact of non-response bias on the results of this study. It is possible that students who had a bad experience with a course would be less likely to respond to a survey invitation asking for feedback. It should be kept in mind that all survey responses were voluntary, and that these results may not represent a complete view of all students' experiences with the boater education courses provided by Kalkomey.

## Results

### Survey Audiences

As mentioned above, efforts were made to ensure that each audience receiving a survey invite was demographically representative of the full group of students who took each course. In general, age and gender were similar across the *Boat-Ed* and *ilearntoat* courses, with the exception that *Boat-Ed* students were more likely than *ilearntoat* students to be 65 or older.

Table 1. Respondent Age Groups

Age Group	All Students	<i>Boat-Ed</i>	<i>ilearntoat</i>
18 to 24	5.9%	6.6%	4.6%
25 to 34	11.8%	11.2%	12.8%
35 to 44	13.6%	11.2%	17.8%
45 to 54	11.9%	9.9%	15.3%
55 to 64	23.7%	22.8%	25.3%
65 or older	33.1%	38.3%	24.2%
<b>Sample Size</b>	<b>N=764</b>	<b>N=483</b>	<b>N=281</b>

Table 2. Respondent Gender

Gender	All Students	<i>Boat-Ed</i>	<i>ilearntoat</i>
Male	78.8%	77.6%	80.8%
Female	20.0%	21.3%	17.8%
Non-binary	0.1%	0.2%	0.0%
Prefer not to say	1.0%	0.8%	1.4%
<b>Sample Size</b>	<b>N=764</b>	<b>N=483</b>	<b>N=281</b>

There were some differences in geography between the two survey audiences. Overall, Kalkomey students were most likely to take a course to obtain their boater education certification for a state located in the Northeast, followed by the South and West regions. Students of the *Boat-Ed* course were slightly more likely to be seeking their boater certification for a state located in the South, and less likely to take courses for states in the Midwest or West regions compared to students of the *ilearntoat* course. These regions are defined by the U.S. Census Bureau; a map showing the states included in each region can be found in [Appendix B](#).

Table 3. State Courses Taken by Region

Region	All Students	<i>Boat-Ed</i>	<i>ilearntoat</i>
Northeast	30.0%	29.6%	30.6%
South	28.3%	33.1%	19.9%
Midwest	17.9%	15.5%	22.1%
West	23.8%	21.7%	27.4%
<b>Sample Size</b>	<b>N=764</b>	<b>N=483</b>	<b>N=281</b>

Table 4. State Courses Taken

State	All Students	<i>Boat-Ed</i>	<i>ilearntoboat</i>
Alabama	8.2%	13.0%	0.0%
Alaska	0.3%	0.2%	0.4%
Arizona	0.7%	0.2%	1.4%
Arkansas	1.6%	2.3%	0.4%
California	13.4%	11.8%	16.0%
Colorado	0.4%	0.6%	0.0%
Connecticut	0.1%	0.2%	0.0%
Delaware	0.3%	0.2%	0.4%
District of Columbia	0.1%	0.2%	0.0%
Florida	3.5%	2.5%	5.3%
Georgia	2.6%	4.1%	0.0%
Hawaii	0.7%	1.0%	0.0%
Idaho	0.5%	0.8%	0.0%
Illinois	1.4%	1.2%	1.8%
Indiana	0.9%	1.2%	0.4%
Iowa	0.4%	0.2%	0.7%
Kansas	0.3%	0.0%	0.7%
Kentucky	0.4%	0.4%	0.4%
Louisiana	0.4%	0.6%	0.0%
Maine	1.0%	1.7%	0.0%
Maryland	1.7%	0.8%	3.2%
Massachusetts	7.2%	7.2%	7.1%
Michigan	4.6%	4.8%	4.3%
Minnesota	2.6%	0.0%	7.1%
Mississippi	0.5%	0.4%	0.7%
Missouri	3.3%	2.3%	5.0%
Nevada	0.9%	0.4%	1.8%
New Hampshire	1.6%	1.7%	1.4%
New Jersey	0.1%	0.2%	0.0%
New York	13.9%	13.0%	15.3%
North Carolina	2.0%	1.4%	2.8%
North Dakota	0.3%	0.4%	0.0%
Ohio	2.1%	2.1%	2.1%
Oklahoma	0.3%	0.4%	0.0%
Oregon	2.1%	1.9%	2.5%
Pennsylvania	4.2%	3.7%	5.0%
Rhode Island	0.3%	0.0%	0.7%
South Carolina	2.1%	3.3%	0.0%
<b>Sample Size</b>	<b>N=764</b>	<b>N=483</b>	<b>N=281</b>

Table 4. State Courses Taken (continued)

State	All Students	Boat-Ed	ilearntoboat
South Dakota	0.3%	0.4%	0.0%
Tennessee	1.4%	2.3%	0.0%
Texas	0.9%	1.0%	0.7%
Vermont	1.6%	1.9%	1.1%
Virginia	2.2%	0.0%	6.0%
Washington	5.0%	4.8%	5.3%
Wisconsin	1.8%	2.9%	0.0%
<b>Sample Size</b>	<b>N=764</b>	<b>N=483</b>	<b>N=281</b>

Over 60% of the Kalkomey boater education students surveyed had at least some experience operating a motorboat on their own before taking the course. There was not a statistically significant difference in the motorized boating experience level of *ilearntoboat* and *Boat-Ed* students prior to taking each course.

Table 5. Boating Experience Before Course

**Question:** On a scale of 0 to 10, how confident were you in your ability to safely operate a motorboat before taking this course?

Response	All Students	Boat-Ed	ilearntoboat
I had never been on a motorboat before	1.6%	0.8%	2.8%
I had been on a motorboat before, but had never operated one myself	14.5%	14.7%	14.2%
I had some experience operating a motorboat with supervision from an experienced person	20.8%	21.1%	20.3%
I had some experience operating a motorboat on my own	20.8%	19.3%	23.5%
I had a lot of experience operating a motorboat on my own	42.3%	44.1%	39.1%
<b>Sample Size</b>	<b>N=764</b>	<b>N=483</b>	<b>N=281</b>

On average, Kalkomey boater education students rated their confidence in their ability to safely operate a motorboat at just over 7 out of 10 prior to taking their course. There was not a statistically significant difference in the confidence level of *ilearntoboat* and *Boat-Ed* students prior to taking each course. Since both sets of students reported about the same confidence level prior to starting each course, comparisons between these two groups become more meaningful.

**Table 6. Confidence Level Before Course**

**Question:** *On a scale of 0 to 10, how confident were you in your ability to safely operate a motorboat before taking this course?*

	All Students	Boat-Ed	ilearntoat
Mean Confidence Level Before Course	7.24	7.28	7.15
<b>Sample Size</b>	<b>N=762</b>	<b>N=481</b>	<b>N=281</b>

### Boating Confidence & Application

On average, Kalkomey boater education students reported that their confidence in their ability to safely operate a motorboat had increased from just over 7 to more than 9 out of 10 after taking their course. There was not a statistically significant difference in the confidence level of *ilearntoat* and *Boat-Ed* students after taking each course. This suggests that both courses were equally effective in instilling confidence in students.

**Table 7. Confidence Level After Course**

**Question:** *On a scale of 0 to 10, how confident were you in your ability to safely operate a motorboat before after this course?*

	All Students	Boat-Ed	ilearntoat
Mean Confidence Level After Course	9.08	9.14	8.98
<b>Sample Size</b>	<b>N=762</b>	<b>N=481</b>	<b>N=281</b>

More than three-quarters of Kalkomey students reported going boating since taking their boater education course. Over 15% of students reported that they have operated a motorboat with supervision from an experienced boater since taking the course, and nearly 65% reported operating a motorboat by themselves. *Boat-Ed* and *ilearntoat* students reported similar levels of boating activity after taking each course.

**Table 8. Boating After Course**

**Question:** *Have you operated a motorboat since taking this course? (Select all that apply:)*

Response	All Students	Boat-Ed	ilearntoat
No, I have not operated a motorboat since taking this course	24.0%	24.5%	23.1%
Yes, I've operated a motorboat with supervision from an experienced person since taking this course	16.4%	17.0%	15.3%
Yes, I've operated a motorboat by myself since taking this course	64.4%	63.2%	66.5%
<b>Sample Size</b>	<b>N=762</b>	<b>N=481</b>	<b>N=281</b>

Just under two-thirds of Kalkomey students reported that they operated their own boat after taking a boater education course. An additional 17% operated a rented boat, and another 15% operated a boat owned by their family. There were no significant differences in the types of motorboats used by students of each course.

**Table 9. Boat Used After Course**

**Question:** *Whose motorboat(s) have you operated since taking this course? (Select all that apply:)\**

Response	All Students	Boat-Ed	ilearntoat
My own boat	64.8%	66.9%	61.1%
A rented boat	16.8%	15.4%	19.0%
A boat owned by my family	15.0%	14.6%	15.7%
A boat owned by a friend	11.4%	11.8%	10.6%
Other (please specify):	4.1%	4.1%	4.2%
<b>Sample Size</b>	<b>N=579</b>	<b>N=363</b>	<b>N=216</b>

*\*Only answered by those who had operated a motorboat since taking their course.*

Over half of Kalkomey students reported operating a motorboat between two and five times since taking their boater education course. There was not a significant difference between *Boat-Ed* and *ilearntoat* students in the number of times they had gone motorboating since taking each respective course.

**Table 10. Boating Frequency After Course**

**Question:** *How many times have you operated a motorboat since taking this course?\**

Response	All Students	Boat-Ed	ilearntoat
Just once	12.1%	12.1%	12.0%
2-3 times	27.6%	26.4%	29.6%
4-5 times	24.4%	27.5%	19.0%
6-10 times	14.7%	12.1%	19.0%
11-20 times	10.2%	10.2%	10.2%
21 times or more	11.1%	11.6%	10.2%
<b>Sample Size</b>	<b>N=579</b>	<b>N=363</b>	<b>N=216</b>

*\*Only answered by those who had operated a motorboat since taking their course.*

Cruising / pleasure riding and fishing were the top two boating activities that Kalkomey students participated in after completing their boater education course. Swimming/anchoring out and waterskiing, wakeboarding, knee boarding, and tubing were also popular activities. *ilearntoat* students were slightly more likely to have gone cruising / pleasure riding and waterskiing, wakeboarding, knee boarding, or tubing after completing their course compared to *Boat-Ed* students.

**Table 11. Boating Activities After Course**

**Question:** Which of the following activities have you operated a motorboat for since taking the course? (Select all that apply:)\*

Response	All Students	Boat-Ed	ilearntoat
Cruising / pleasure riding	66.0%	63.4%	70.4%
Fishing	59.6%	59.2%	60.2%
Swimming / anchoring out	33.7%	31.4%	37.5%
Waterskiing, wakeboarding, knee boarding or tubing	20.9%	18.7%	24.5%
Wildlife watching	14.3%	16.0%	11.6%
Camping	7.1%	6.9%	7.4%
Other (please specify):	4.7%	4.4%	5.1%
None of these	0.7%	0.8%	0.5%
<b>Sample Size</b>	<b>N=579</b>	<b>N=363</b>	<b>N=216</b>

Students of Kalkomey boater education courses reported high levels of preparedness, with over 80% stating they felt either well or fully prepared to operate a motorboat without supervision after taking either course.

**Table 12. Preparedness After Course**

**Question:** How prepared do you feel to operate a motorboat without supervision from an experienced person after taking this course?

Response	All Students	Boat-Ed	ilearntoat
Not at all prepared	0.8%	0.6%	1.1%
Slightly prepared	2.8%	2.1%	3.9%
Moderately prepared	11.6%	11.7%	11.4%
Well prepared	35.9%	34.4%	38.4%
Fully prepared	49.0%	51.3%	45.2%
<b>Sample Size</b>	<b>N=761</b>	<b>N=480</b>	<b>N=281</b>

The majority of students agreed that Kalkomey boater education courses helped them with hazard recognition and avoidance, with over three-quarters of respondents from both courses either agreeing or strongly agreeing with the statement listed below.

Table 13. Hazard Recognition After Course

**Question:** How much do you agree with the following statement: “This course helped me learn to spot and avoid hazards while boating that I would not have recognized before”

Response	All Students	Boat-Ed	ilearntoat
Strongly disagree	6.3%	6.0%	6.8%
Disagree	1.8%	1.7%	2.1%
Neutral	13.8%	13.3%	14.6%
Agree	42.6%	41.9%	43.8%
Strongly agree	35.5%	37.1%	32.7%
<b>Sample Size</b>	<b>N=761</b>	<b>N=480</b>	<b>N=281</b>

### Behavior Change & Real-World Impact

Over 60% of Kalkomey boater education students reported that their boating activity had not changed since taking the course, while over 30% reported that their activity had increased. Very few students reported that their boating activity had decreased since taking the course.

*ilearntoat* students were slightly more likely to report that their boating activity had increased since taking the course compared to *Boat-Ed* students. Over 67% of *Boat-Ed* students said their boating activity had not changed since taking the course, compared to 57% of *ilearntoat* students. Conversely, nearly 40% of *ilearntoat* students reported that their boating activity had increased since taking the course, compared to just under 32% of *Boat-Ed* students.

Table 14. Activity Change After Course

**Question:** How much has your level of boating activity changed since taking this course?

Response	All Students	Boat-Ed	ilearntoat
I’m boating much less often since taking this course	1.1%	1.0%	1.1%
I’m boating slightly less often since taking this course	0.9%	0.2%	2.1%
No change	63.6%	67.3%	57.1%
I’m boating slightly more often since taking this course	19.6%	17.1%	23.9%
I’m boating much more often since taking this course	14.9%	14.4%	15.7%
<b>Sample Size</b>	<b>N=760</b>	<b>N=480</b>	<b>N=280</b>

It's important to recognize that changes in boating activity are not necessarily the result of the style of course taken. Younger boaters are more likely to report going boating more often after taking their course, simply because they are likely to be newer to boating, while older boaters are more likely to report no change in their activity level. *ilearntoat* students tended to be slightly younger, which helps explain why their boating activity increased more than *Boat-Ed* students. The table below helps show that changes in boating activity tended to be correlated with respondent age.

Table 15. Activity Change by Age Group

**Question:** How much has your level of boating activity changed since taking this course?

Response by Age Group	All Students		
	18 to 34	35 to 54	55+
I'm boating much less often since taking this course	0.7%	0.0%	1.6%
I'm boating slightly less often since taking this course	0.0%	1.0%	1.1%
No change	50.4%	56.2%	71.0%
I'm boating slightly more often since taking this course	28.9%	24.8%	14.4%
I'm boating much more often since taking this course	20.0%	18.0%	11.8%
<b>Sample Size</b>	<b>N=135</b>	<b>N=194</b>	<b>N=431</b>

Over 80% of Kalkomey students agreed that the boater education course made them more likely to follow safety protocols while boating. There was not a significant difference between *Boat-Ed* and *ilearnto boat* students in their reported likelihood of following boating safety protocols after taking each course.

Table 16. Likelihood of Following Safety Protocols

**Question:** How much do you agree with the following statement: "This course made me more likely to follow safety protocols while boating"

Response	All Students	<i>Boat-Ed</i>	<i>ilearnto boat</i>
Strongly disagree	4.5%	5.0%	3.6%
Disagree	0.8%	0.4%	1.4%
Neutral	11.6%	10.6%	13.3%
Agree	38.0%	39.5%	35.5%
Strongly agree	45.1%	44.5%	46.2%
<b>Sample Size</b>	<b>N=758</b>	<b>N=479</b>	<b>N=279</b>

More than 75% of Kalkomey students reported that they had shared something they learned in their boater education course with others. *Boat-Ed* students were slightly more likely to have shared information learned from their course with friends or family compared to *ilearnto boat* students. No significant differences in likelihood of sharing information were found between students of different age groups.

Table 17. Shared Learnings

**Question:** Have you shared anything that you learned from this boater safety course with friends or family?

Response	All Students	<i>Boat-Ed</i>	<i>ilearnto boat</i>
Yes	76.1%	78.7%	71.7%
No	16.2%	14.4%	19.4%
I cannot recall	7.7%	6.9%	9.0%
<b>Sample Size</b>	<b>N=758</b>	<b>N=479</b>	<b>N=279</b>

## Knowledge Retention

Kalkomey students were also asked to answer 10 standard boater safety questions ([Appendix A](#)) to evaluate their course knowledge retention. The same set of questions were asked of each group of students. Scores represent the percent of questions answered correctly by each respondent, e.g. if a respondent answered 9 out of 10 questions correctly, then their score was 90%. Only respondents that answered all 10 knowledge retention questions before exiting the survey were included in the analysis for consistency.

Students of Kalkomey boater education courses exhibited a high level of knowledge retention, with average scores above 88% on the 10-question evaluation. There was not a statistically significant difference in the retention of boating knowledge between *Boat-Ed* and *ilearntoat* students. The full results of the knowledge retention analysis can be found in [Appendix C](#).

Table 18. Mean Knowledge Retention Scores

Metric	All Students	<i>Boat-Ed</i>	<i>ilearntoat</i>
Mean Knowledge Retention Score	88.5%	88.6%	88.2%
Sample Size	<b>N=663</b>	<b>N=418</b>	<b>N=245</b>

Students in the 18–34 age group showed slightly lower levels of knowledge retention after taking the *ilearntoat* course compared to students of the same age who took the *Boat-Ed* course. There were no statistically significant differences in knowledge retention between students of each course within the 35-54 or 55+ age groups. However, students in the 18–34 age group that took either Kalkomey course still exhibited relatively high retention of boating knowledge on average, with *ilearntoat* students scoring 82.1% and *Boat-Ed* students scoring 89.5%.

Table 19. Mean Knowledge Retention Scores by Age Group

Metric by Age Group	<i>Boat-Ed</i>			<i>ilearntoat</i>		
	18 -34	35 - 54	55+	18 - 34	35 - 54	55+
Knowledge Retention Score	89.5%	88.2%	88.5%	82.1%	88.9%	89.8%
Confidence Interval (95%)	86.6% - 92.4%	85.4% - 91.0%	87.0% - 90.1%	75.7% - 88.5%	86.6% - 91.3%	87.7% - 91.9%
Sample Size	<b>N=81</b>	<b>N=89</b>	<b>N=248</b>	<b>N=43</b>	<b>N=84</b>	<b>N=118</b>

## Satisfaction & Advocacy

Kalkomey boater education students were asked to report their likelihood of recommending the course they took to a friend or colleague. This type of question is used to generate a “Net Promoter Score” (NPS). Respondents who give a score of 6 or lower are considered “Detractors;” these people have a relatively negative view and may share these negative opinions if asked. Those who give a score of 7 or 8 are considered “Passives;” they are

somewhat ambivalent about their experience and are unlikely to share either negative or positive opinions. Those who give a score of 9 or 10 are considered “Promoters;” these people have positive views and are likely to share positive feedback if asked.

To calculate the NPS, the percentage of detractors is subtracted from the percentage of promoters, and the result is multiplied by 100. An NPS of 50 or higher generally signifies strong brand satisfaction. Kalkomey students gave an NPS of 61.5 on average, showing that their views of the courses were mostly very positive.

**Table 20. Net Promoter Scores**

**Question:** *On a scale of 0 to 10, how likely are you to recommend the boater safety course from [Boat-Ed / ilearntoat]\* to a friend or colleague?*

Metric	All Students	Boat-Ed	ilearntoat
Net Promoter Score	61.5	64.1	57.1
Detractors (0-6)	10.3%	9.1%	12.2%
Passives (7-8)	17.9%	17.7%	18.4%
Promoters (9-10)	71.8%	73.2%	69.4%
<b>Sample Size</b>	<b>N=663</b>	<b>N=418</b>	<b>N=245</b>

*\*Course title reflected the course taken by each student*

*Boat-Ed* received a slightly higher NPS compared to *ilearntoat*, though the difference was not statistically significant at the 95% confidence level. Significant differences did appear, however, when examining satisfaction ratings for each course by student age group.

Students ages 55 and older were significantly more likely to be promoters of the *Boat-Ed* course than the *ilearntoat* course, though this group rated both courses favorably. Students ages 18-34 were relatively more likely to be promoters of the *ilearntoat* course compared to the *Boat-Ed* course. Though this difference was not statistically significant at the 95% confidence level, it was significant at the 90% confidence level. Overall, there is evidence to suggest that younger students hold a relatively more favorable view of the *ilearntoat* interactive course than the *Boat-Ed* standard course. Conversely, older students tend to prefer the standard to the interactive format.

**Table 21. Net Promoter Scores by Age Group**

**Question:** *On a scale of 0 to 10, how likely are you to recommend the boater safety course from [Boat-Ed / ilearntoat]\* to a friend or colleague?\**

Metric by Age Group	Boat-Ed			ilearntoat		
	18 - 34	35 - 54	55+	18 - 34	35 - 54	55+
Net Promoter Score	35.8	65.2	73.0	48.8	63.1	55.9
<b>Sample Size</b>	<b>N=81</b>	<b>N=89</b>	<b>N=248</b>	<b>N=43</b>	<b>N=84</b>	<b>N=118</b>

The majority of students found Kalkomey boater education courses engaging, with 65% reporting that the course they took was either somewhat or very engaging. Just 11% of respondents indicated they found the course to be very, somewhat, or slightly boring.

**Table 22. Engagement**

**Question: Did you find the course boring or engaging?**

Response	All Students	<i>Boat-Ed</i>	<i>ilearntoat</i>
Very boring	2.7%	1.4%	4.9%
Somewhat boring	3.9%	3.8%	4.1%
Slightly boring	4.4%	4.3%	4.5%
Neutral	12.4%	13.4%	10.6%
Slightly engaging	11.6%	12.0%	11.0%
Somewhat engaging	35.7%	35.9%	35.5%
Very engaging	29.3%	29.2%	29.4%
<b>Sample Size</b>	<b>N=663</b>	<b>N=418</b>	<b>N=245</b>

Students ages 18-34 and ages 35-54 found the *ilearntoat* course relatively more engaging compared with students of the same age that took the *Boat-Ed* course. Students 55 and older found the *Boat-Ed* course relatively more engaging than students of the same age who took the *ilearntoat* course. In general, younger students were more likely to report that they found each course boring when compared to older students who took the same course.

**Table 23. Engagement by Age Group**

**Question: Did you find the course boring or engaging?**

Response by Age Group	<i>Boat-Ed</i>			<i>ilearntoat</i>		
	18 - 34	35 - 54	55+	18 - 34	35 - 54	55+
Very boring	0.0%	2.2%	1.6%	11.6%	4.8%	2.5%
Somewhat boring	9.9%	2.2%	2.4%	2.3%	2.4%	5.9%
Slightly boring	9.9%	4.5%	2.4%	7.0%	3.6%	4.2%
Neutral	21.0%	16.9%	9.7%	18.6%	9.5%	8.5%
Slightly engaging	19.8%	13.5%	8.9%	9.3%	8.3%	13.6%
Somewhat engaging	25.9%	38.2%	38.3%	32.6%	35.7%	36.4%
Very engaging	13.6%	22.5%	36.7%	18.6%	35.7%	28.8%
<b>Sample Size</b>	<b>N=81</b>	<b>N=89</b>	<b>N=248</b>	<b>N=43</b>	<b>N=84</b>	<b>N=118</b>

Students of Kalkomey boater education courses also found each course to be clear, with nearly 80% indicating that the course was either somewhat or very clear. *ilearntoat* students were slightly more likely to find the course somewhat or very confusing (6.1%) compared to *Boat-Ed* students (1.2%). Conversely, *Boat-Ed* students were more likely to report that the course was very clear (58.5%) compared to *ilearntoat* students (51%).

Table 24. Clarity

**Question:** Did you find the course confusing or clear?

Response	All Students	Boat-Ed	ilearntoat
Very confusing	0.8%	0.5%	1.2%
Somewhat confusing	2.3%	0.7%	4.9%
Slightly confusing	4.1%	4.3%	3.7%
Neutral	8.9%	8.6%	9.4%
Slightly clear	4.8%	3.8%	6.5%
Somewhat clear	23.4%	23.4%	23.3%
Very clear	55.8%	58.6%	51.0%
<b>Sample Size</b>	<b>N=663</b>	<b>N=418</b>	<b>N=245</b>

Students aged 18-34 were more likely to find the *ilearntoat* course very clear (60.5%) compared with students of the same age that took the *Boat-Ed* course (43.2%). However, students aged 35-54 and 55 or older were more likely to report that the *Boat-Ed* course was very clear compared to students of the same age who took the *ilearntoat* course. In general, younger students were more likely to find the interactive *ilearntoat* course very clear, while middle-aged and older students were more likely to find the standard *Boat-Ed* course very clear.

Table 25. Clarity by Age Group

**Question:** Did you find the course confusing or clear?

Response by Age Group	<i>Boat-Ed</i>			<i>ilearntoat</i>		
	18 - 34	35 - 54	55+	18 - 34	35 - 54	55+
Very confusing	0.0%	0.0%	0.8%	2.3%	0.0%	1.7%
Somewhat confusing	0.0%	0.0%	1.2%	7.0%	2.4%	5.9%
Slightly confusing	7.4%	1.1%	4.4%	2.3%	3.6%	4.2%
Neutral	17.3%	11.2%	4.8%	11.6%	9.5%	8.5%
Slightly clear	3.7%	4.5%	3.6%	2.3%	8.3%	6.8%
Somewhat clear	28.4%	18.0%	23.8%	14.0%	28.6%	22.9%
Very clear	43.2%	65.2%	61.3%	60.5%	47.6%	50.0%
<b>Sample Size</b>	<b>N=81</b>	<b>N=89</b>	<b>N=248</b>	<b>N=43</b>	<b>N=84</b>	<b>N=118</b>

Kalkomey students reported that they thought each course was informative, with over 83% indicating that the course was either somewhat or very informative. *Boat-Ed* students were slightly more likely to find the course very informative (64.6%) compared to *ilearntoat* students (59.2%).

Table 26. Course Helpfulness

**Question:** Did you find the course unhelpful or informative?

Response	All Students	Boat-Ed	ilearntoat
Very unhelpful	2.1%	1.7%	2.9%
Somewhat unhelpful	1.8%	1.7%	2.0%
Slightly unhelpful	1.1%	0.5%	2.0%
Neutral	5.7%	5.3%	6.5%
Slightly informative	5.7%	4.3%	8.2%
Somewhat informative	21.0%	22.0%	19.2%
Very informative	62.6%	64.6%	59.2%
<b>Sample Size</b>	<b>N=663</b>	<b>N=418</b>	<b>N=245</b>

Students aged 18-34 were more likely to find the *ilearntoat* course very informative (55.8%) compared with students of the same age that took the *Boat-Ed* course (42.0%). However, 14% of those aged 18–34 who took the *ilearntoat* course reported that it was either very or somewhat unhelpful, compared to 0% of those in the 18–34 age group who took the *Boat-Ed* course, revealing some mixed feelings among younger students taking the interactive course. Students 55 and older were more likely to report that the *Boat-Ed* course was very informative (69.8%) compared to students of the same age who took the *ilearntoat* course (55.1%).

Table 27. Course Helpfulness by Age Group

**Question:** Did you find the course unhelpful or informative?

Response by Age Group	Boat-Ed			ilearntoat		
	18 - 34	35 - 54	55+	18 - 34	35 - 54	55+
Very unhelpful	0.0%	1.1%	2.4%	9.3%	0.0%	2.5%
Somewhat unhelpful	0.0%	1.1%	2.4%	4.7%	0.0%	2.5%
Slightly unhelpful	1.2%	0.0%	0.4%	0.0%	0.0%	4.2%
Neutral	11.1%	7.9%	2.4%	9.3%	4.8%	6.8%
Slightly informative	4.9%	4.5%	4.0%	14.0%	9.5%	5.1%
Somewhat informative	40.7%	14.6%	18.5%	7.0%	19.0%	23.7%
Very informative	42.0%	70.8%	69.8%	55.8%	66.7%	55.1%
<b>Sample Size</b>	<b>N=81</b>	<b>N=89</b>	<b>N=248</b>	<b>N=43</b>	<b>N=84</b>	<b>N=118</b>

Kalkomey students reported that they thought each course was user-friendly, with 82% reporting that the course was either somewhat or very user-friendly. *ilearntoat* students were slightly more likely to find the course very hard to use (3.3%) compared to *Boat-Ed* students (0.5%). Conversely, *Boat-Ed* students were more likely to report that the course was very user-friendly (63.6%) compared to *ilearntoat* students (56.3%).

Table 28. Ease of Use

**Question:** Did you find the course hard to use or user-friendly?

Response	All Students	Boat-Ed	ilearntoat
Very hard to use	1.5%	0.5%	3.3%
Somewhat hard to use	1.2%	1.0%	1.6%
Slightly hard to use	3.0%	2.9%	3.3%
Neutral	8.0%	7.7%	8.6%
Slightly user-friendly	4.2%	4.1%	4.5%
Somewhat user-friendly	21.1%	20.3%	22.4%
Very user-friendly	60.9%	63.6%	56.3%
<b>Sample Size</b>	<b>N=663</b>	<b>N=418</b>	<b>N=245</b>

Again, there were some differences when considering students of different age groups. Students 55 and older were relatively more likely to find the *ilearntoat* course hard to use and less likely to find it user-friendly compared with students of the same age who took the *Boat-Ed* course. However, significant differences were not found between the user-friendliness ratings given to either course by students younger than 55, suggesting that older students struggled more with the interactive format of the *ilearntoat* course than younger students.

Table 29. Ease of Use by Age Group

**Question:** Did you find the course hard to use or user-friendly?

Response by Age Group	<i>Boat-Ed</i>			<i>ilearntoat</i>		
	18 - 34	35 - 54	55+	18 - 34	35 - 54	55+
Very hard to use	0.0%	1.1%	0.4%	4.7%	1.2%	4.2%
Somewhat hard to use	0.0%	0.0%	1.6%	0.0%	2.4%	1.7%
Slightly hard to use	3.7%	1.1%	3.2%	4.7%	2.4%	3.4%
Neutral	12.3%	12.4%	4.4%	14.0%	4.8%	9.3%
Slightly user-friendly	7.4%	3.4%	3.2%	2.3%	4.8%	5.1%
Somewhat user-friendly	16.0%	16.9%	23.0%	16.3%	23.8%	23.7%
Very user-friendly	60.5%	65.2%	64.1%	58.1%	60.7%	52.5%
<b>Sample Size</b>	<b>N=81</b>	<b>N=89</b>	<b>N=248</b>	<b>N=43</b>	<b>N=84</b>	<b>N=118</b>

The majority of Kalkomey students found the boater education course they took to be motivating, with nearly 79% indicating that they found the course to be slightly, somewhat, or very motivating. Less than 6% found their boater education course to be discouraging. *ilearntoat* students were slightly more likely to find the course somewhat or very discouraging compared to *Boat-Ed* students.

Table 30. Motivation

**Question:** *Did you find the course discouraging or motivating?*

Response	All Students	Boat-Ed	ilearntoat
Very discouraging	1.4%	0.7%	2.4%
Somewhat discouraging	1.7%	1.0%	2.9%
Slightly discouraging	2.7%	2.4%	3.3%
Neutral	15.4%	14.1%	17.6%
Slightly motivating	9.2%	7.9%	11.4%
Somewhat motivating	33.3%	37.6%	26.1%
Very motivating	36.3%	36.4%	36.3%
<b>Sample Size</b>	<b>N=663</b>	<b>N=418</b>	<b>N=245</b>

Students ages 18-34 and 35-54 were relatively more likely to find the *ilearntoat* course very motivating compared with students of the same age that took the *Boat-Ed* course. Students ages 55 and older were more likely to report that the *Boat-Ed* course was very motivating compared to students of the same age who took the *ilearntoat* course.

Motivation shows a similar trend seen earlier with engagement, where those under age 55 tended to be more motivated by the interactive course, while those 55 and older tended to find the standard course more motivating.

Table 31. Motivation by Age Group

**Question:** *Did you find the course discouraging or motivating?*

Response by Age Group	Boat-Ed			ilearntoat		
	18 - 34	35 - 54	55+	18 - 34	35 - 54	55+
Very discouraging	0.0%	1.1%	0.8%	2.3%	1.2%	3.4%
Somewhat discouraging	0.0%	1.1%	1.2%	7.0%	2.4%	1.7%
Slightly discouraging	2.5%	2.2%	2.4%	2.3%	1.2%	5.1%
Neutral	23.5%	16.9%	10.1%	20.9%	13.1%	19.5%
Slightly motivating	11.1%	6.7%	7.3%	7.0%	13.1%	11.9%
Somewhat motivating	35.8%	40.4%	37.1%	20.9%	31.0%	24.6%
Very motivating	27.2%	31.5%	41.1%	39.5%	38.1%	33.9%
<b>Sample Size</b>	<b>N=81</b>	<b>N=89</b>	<b>N=248</b>	<b>N=43</b>	<b>N=84</b>	<b>N=118</b>

## Appendix A: Boater Education Questionnaire

*Note: All survey logic appears in brackets and was not shown to respondents. Round choice options indicate single-select questions, while square choice options indicate a multiple-selection type question.*

1. How old are you?

- 17 or younger [Disqualified]
- 18 to 24
- 25 to 34
- 35 to 44
- 45 to 54
- 55 to 64
- 65 or older

2. What is your gender?

- Male
- Female
- Non-binary/third gender
- Prefer not to answer

3. Did you recently take a boater safety course through [*Boat-Ed / ilearntoboat*]?

- Yes
- No
- I don't recall

[Those who do not answer yes]

4. Our records show this email account was used to register for a boater safety course. Did someone you know sign up for a boater safety course using your email account?

- Yes, one of my children took the course
- Yes, my spouse took the course
- Yes, someone else I know took the course (please specify): \_\_\_\_\_
- No, I don't know of anyone who took a boater education course using my email
- I did take a boater safety course
- I'm not sure

[Those who did not answer "Yes" in Q3 are disqualified]

5. Which state did you complete this boater safety course for? [Dropdown menu]

6. Which of the following vessels did you complete this boater safety to use?

*Select all that apply:*

- Motorboat [disqualified if not selected]
- Personal Watercraft (e.g. Jet Ski)
- Sailboat
- Other, please specify: \_\_\_\_\_

#### Confidence & Application

5. Which of the following best describes your level of motorized boating experience **before** taking this course?

- I had never been on a motorboat before
- I had been on a motorboat before, but had never operated one myself
- I had some experience operating a motorboat with supervision from an experienced person
- I had some experience operating a motorboat on my own
- I had a lot of experience operating a motorboat on my own

7. On a scale of 0 to 10, how confident were you in your ability to safely operate a motorboat **before** taking this course?

[0= not at all confident, 10= extremely confident]

8. On a scale of 0 to 10, how confident are you in your ability to safely operate a motorboat **after** taking this course? [0= not at all confident, 10= extremely confident]

9. Have you operated a motorboat **since taking this course**?

- Yes, I've operated a motorboat with supervision from an experienced person since taking this course
- Yes, I've operated a motorboat by myself since taking this course
- No, I have not operated a motorized since taking this course

[Those who have operated a motorboat since taking the course]

10. Whose motorboat(s) have you operated since taking this course?

Select all that apply:

- My own boat
- A boat owned by my family
- A boat owned by a friend
- A rented boat
- Other (please specify): \_\_\_\_\_

[Those who have operated a motorboat since taking the course]

11. How many times have you operated a motorboat since taking this course?

- Just once
- 2-3 times
- 4-5 times
- 6-10 times
- 11-20 times
- 21 times or more

[Those who have operated a motorboat since taking the course]

12. Which of the following activities have you operated a motorboat for since taking the course? *Select all that apply:*

- Fishing
- Cruising / pleasure riding
- Swimming / anchoring out
- Waterskiing, wakeboarding, knee boarding or tubing
- Wildlife watching
- Camping
- Other (please specify): \_\_\_\_\_
- None of these

13. How prepared do you feel to operate a motorboat **without supervision from an experienced person** after taking this course?

- Not at all prepared
- Slightly prepared
- Moderately prepared
- Well prepared
- Fully prepared

14. How much do you agree with the following statement:

*“This course helped me learn to spot and avoid hazards while boating that I would not have recognized before”*

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

### Behavior Change & Real-World Impact

15. How much has your level of boating activity changed since taking this course?
- I'm boating much less often since taking this course
  - I'm boating slightly less often since taking this course
  - No change
  - I'm boating slightly more often since taking this course
  - I'm boating much more often since taking this course
16. How much do you agree with the following statement:  
*"This course made me more likely to follow safety protocols while boating."*
- Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
17. Have you shared anything that you learned from this boater safety course with friends or family?
- Yes
  - No
  - I cannot recall

### Knowledge Retention Quiz

18. What color buoy marks the right side of a channel when you are returning from open waters or heading upstream?
- Red [answer]
  - Green
  - White
  - Orange
19. How do you avoid overloading your vessel?
- Limit everyone on board to 10 pounds of gear
  - Don't permit large ice chests on board.
  - Don't allow the load weight or number of passengers to exceed the maximum stated on the capacity plate [answer]
  - Make sure that there are at least 10 inches of freeboard when everyone and their gear are on board.

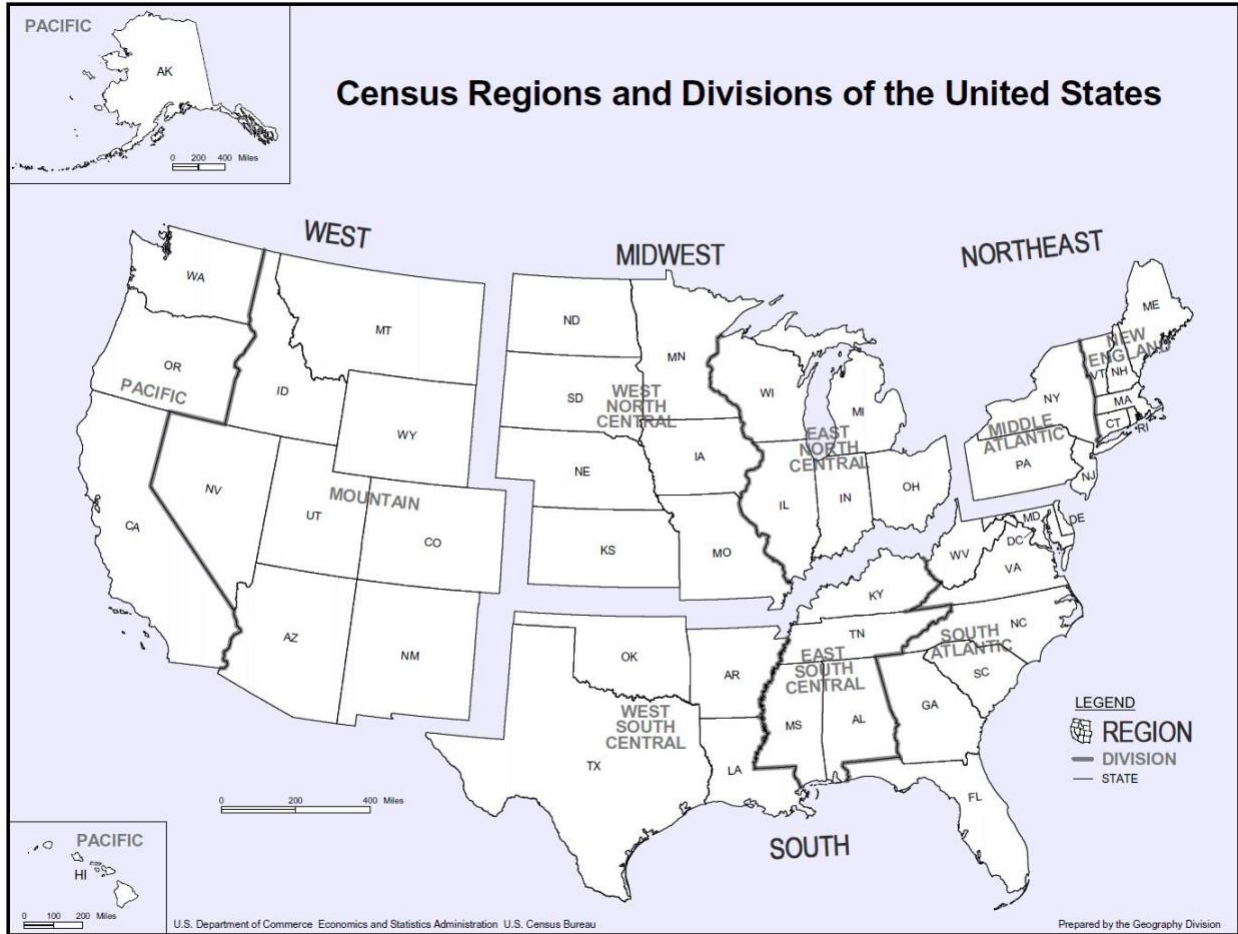
20. Which side of the vessel has a green light at night?
- Stern
  - Bow
  - Starboard side [answer]
  - Port side
21. Under which condition is a person at the greatest risk of developing hypothermia?
- After being in the wind for a long time
  - When deprived of liquid
  - When exposed to cold air
  - When immersed in cold water [answer]
22. Which of the following is a reason that a boat operator may be directed by an officer to return to shore?
- Displaying navigation lights in the fog
  - Not having enough fuel in the bilges
  - Having PFDs that are the wrong color
  - Not having enough PFDs on board [answer]
23. From which direction does most bad weather arrive?
- South
  - North
  - West [answer]
  - East
24. A recreational vessel is approaching a U.S. Naval vessel. How far must it stay away from the U.S. Naval vessel?
- 25 feet
  - 50 feet
  - 75 yards
  - 100 yards [answer]
25. Visibility is restricted due to fog. What should the vessel operator do to avoid the risk of a collision?
- Speed up as much as possible to go around other vessels
  - Reduce speed to the minimum needed to stay on course [answer]
  - Maintain the same speed until the other vessel is visible
  - Stop the engine, and drop a sea anchor

26. What should you do if someone on your boat falls overboard?
- Jump into the water to save the victim.
  - Pull the victim to shore with a rope.
  - Wait for the victim to swim back to you.
  - Toss the victim a throwable device. [answer]
27. When boating on federally controlled waters in an 18 foot boat, what equipment are you legally required to have on board?
- Mushroom anchor and bucket
  - U.S. Coast Guard-approved visual distress signals (VDSs) [answer]
  - Emergency Position Indicating Radio Beacon (EPIRB)
  - Compass and map

Satisfaction & Advocacy

28. On a scale of 0 to 10, how likely are you to recommend this course to a friend or colleague? [0-10 with labels]
29. How would you describe the boater education course?  
[7-point Likert scale question with the following labels]  
Boring – Engaging  
Clear – Confusing  
Informative - Unhelpful  
User-friendly – Hard to Use  
Motivating - Discouraging
30. Please tell us what you liked and disliked about the course, and offer any suggestions that you have for improving the course: \_\_\_\_\_  
\_\_\_\_\_

## Appendix B: Census Region Map



## Appendix C: Full Knowledge Retention Results

Table 32. Full Distribution of Knowledge Retention Scores

Score	All Students	Boat-Ed	ilearntoat
0%	0.0%	0.0%	0.0%
10%	0.3%	0.2%	0.4%
20%	0.2%	0.0%	0.4%
30%	0.5%	0.5%	0.4%
40%	0.5%	0.5%	0.4%
50%	0.5%	0.7%	0.0%
60%	2.7%	1.9%	4.1%
70%	8.9%	9.8%	7.3%
80%	17.2%	15.6%	20.0%
90%	31.4%	33.5%	27.8%
100%	38.0%	37.3%	39.2%
<b>Sample Size</b>	<b>N=663</b>	<b>N=418</b>	<b>N=245</b>

Table 33. Knowledge Retention Quiz Q1

**Question:** What color buoy marks the right side of a channel when you are returning from open waters or heading upstream? [Correct answer indicated by \*]

Response	All Students	Boat-Ed	ilearntoat
Red*	80.8%	81.8%	79.2%
Green	14.8%	14.6%	15.1%
White	1.5%	1.4%	1.6%
Orange	2.9%	2.2%	4.1%
<b>Sample Size</b>	<b>N=663</b>	<b>N=418</b>	<b>N=245</b>

Table 34. Knowledge Retention Quiz Q2

**Question:** How do you avoid overloading your vessel? [Correct answer indicated by \*]

Response	All Students	Boat-Ed	ilearntoat
Limit everyone on board to 10 pounds of gear	0.3%	0.5%	0.0%
Don't permit large ice chests on board	0.5%	0.5%	0.4%
Don't allow the load weight or number of passengers to exceed the maximum stated on the capacity plate*	97.3%	97.4%	97.1%
Make sure that there are at least 10 inches of freeboard when everyone and their gear are on board	2.0%	1.7%	2.4%
<b>Sample Size</b>	<b>N=663</b>	<b>N=418</b>	<b>N=245</b>

Table 35. Knowledge Retention Quiz Q3

**Question:** Which side of the vessel has a green light at night? [Correct answer indicated by \*]

Response	All Students	Boat-Ed	ilearntoat
Stern	1.8%	1.2%	2.9%
Bow	5.3%	5.3%	5.3%
Starboard side*	72.9%	73.4%	71.8%
Port side	20.1%	20.1%	20.0%
<b>Sample Size</b>	<b>N=663</b>	<b>N=418</b>	<b>N=245</b>

Table 36. Knowledge Retention Quiz Q4

**Question:** Under which condition is a person at the greatest risk of developing hypothermia? [Correct answer indicated by \*]

Response	All Students	Boat-Ed	ilearntoat
After being in the wind for a long time	0.9%	0.7%	1.2%
When deprived of liquid	0.5%	0.2%	0.8%
When exposed to cold air	3.2%	3.1%	3.3%
When immersed in cold water*	95.5%	95.9%	94.7%
<b>Sample Size</b>	<b>N=663</b>	<b>N=418</b>	<b>N=245</b>

Table 37. Knowledge Retention Quiz Q5

**Question:** Which of the following is a reason that a boat operator may be directed by an officer to return to shore? [Correct answer indicated by \*]

Response	All Students	Boat-Ed	ilearntoat
Displaying navigation lights in the fog	2.0%	1.9%	2.0%
Not having enough fuel in the bilges	0.8%	0.2%	1.6%
Having PFDs that are the wrong color	2.0%	2.2%	1.6%
Not having enough PFDs on board*	95.3%	95.7%	94.7%
<b>Sample Size</b>	<b>N=663</b>	<b>N=418</b>	<b>N=245</b>

Table 38. Knowledge Retention Quiz Q6

**Question:** From which direction does most bad weather arrive? [Correct answer indicated by \*]

Response	All Students	Boat-Ed	ilearntoat
South	6.6%	6.7%	6.5%
North	17.5%	17.0%	18.4%
West	68.3%	67.9%	69.0%
East	7.5%	8.4%	6.1%
<b>Sample Size</b>	<b>N=663</b>	<b>N=418</b>	<b>N=245</b>

Table 39. Knowledge Retention Quiz Q7

**Question:** A recreational vessel is approaching a U.S. Naval vessel. How far must it stay away from the U.S. Naval vessel? [Correct answer indicated by \*]

Response	All Students	Boat-Ed	ilearntoat
25 feet	0.6%	0.5%	0.8%
50 feet	4.1%	4.3%	3.7%
75 yards	2.4%	2.6%	2.0%
100 yards*	92.9%	92.6%	93.5%
<b>Sample Size</b>	<b>N=663</b>	<b>N=418</b>	<b>N=245</b>

Table 40. Knowledge Retention Quiz Q8

**Question:** Visibility is restricted due to fog. What should the vessel operator do to avoid the risk of a collision? [Correct answer indicated by \*]

Response	All Students	Boat-Ed	ilearntoat
Speed up as much as possible to go around other vessels	0.8%	0.5%	1.2%
Reduce speed to the minimum needed to stay on course*	95.0%	95.9%	93.5%
Maintain the same speed until the other vessel is visible	1.4%	1.7%	0.8%
Stop the engine, and drop a sea anchor	2.9%	1.9%	4.5%
<b>Sample Size</b>	<b>N=663</b>	<b>N=418</b>	<b>N=245</b>

Table 41. Knowledge Retention Quiz Q9

**Question:** Visibility is restricted due to fog. What should the vessel operator do to avoid the risk of a collision? [Correct answer indicated by \*]

Response	All Students	Boat-Ed	ilearntoat
Jump into the water to save the victim	0.3%	0.2%	0.4%
Pull the victim to shore with a rope	0.6%	0.7%	0.4%
Wait for the victim to swim back to you	0.8%	0.7%	0.8%
Toss the victim a throwable device*	98.3%	98.3%	98.4%
<b>Sample Size</b>	<b>N=663</b>	<b>N=418</b>	<b>N=245</b>

Table 42. Knowledge Retention Quiz Q10

**Question:** *When boating on federally controlled waters in an 18-foot boat, what equipment are you legally required to have on board? [Correct answer indicated by \*]*

Response	All Students	Boat-Ed	<i>ilearnto</i> boat
Mushroom anchor and bucket	1.5%	1.9%	0.8%
U.S. Coast Guard-approved visual distress signals (VDSs)	88.2%	87.3%	89.8%
Emergency Position Indicating Radio Beacon (EPIRB)	7.8%	7.9%	7.8%
Compass and map	2.4%	2.9%	1.6%
<b>Sample Size</b>	<b>N=663</b>	<b>N=418</b>	<b>N=245</b>