2013 Alaska ThinkFast Evaluation Report

Prepared for

TJohnE Productions
and
The Alaska Injury Prevention Center

by

Cynthia George
Open Mind Consulting
CynthiaOMC@gmail.com

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2013 ALASKA THINKFAST EVALUATION REPORT

ThinkFast complements Alaska's existing comprehensive prevention plan as a fun and interactive way for teens to learn important highway and alcohol safety facts within a format that is culturally relevant and engaging for their age group. ThinkFast, operated by TJohnE Productions, is an interactive awareness game show that appeals to all ages with an MTV-style production set, mainstream music, an entertaining host, and informative and engaging trivia. ThinkFast utilizes the Fleetwood Audience Response System (FARS) technology with wireless remote controls that allows teams of students to respond to ThinkFast questions independently. While ThinkFast questions can be tailored to present prevention information on various topics, the program content for this project focused on highway and alcohol safety issues. The program's content was directed locally by the Alaska Injury Prevention Center (AIPC) and focused on providing teens with factual information regarding risks and consequences related to both becoming new drivers and new exposures to environments where alcohol or drugs may be present. ThinkFast was presented to Colony, Kenai, Palmer, Service, South and West High Schools in Alaska during early 2013. Evaluation services were provided by Open Mind Consulting. All data was processed using Statistical Package for Social Sciences (SPSS v20).

PRE AND POST SAMPLE DESCRIPTION

Approximately 10% of teens participating in ThinkFast from each school were asked to complete a survey just prior to the event and another group completed a post survey the following school day. A total of 509 surveys, 256 pre and 253 post, were completed. Table 1 provides a breakdown of the sample by pre and post groups. The groups were relatively balanced in terms of demographics with slightly higher numbers of females and more 9th and

10th graders as compared to 11th and 12th graders. Just over two thirds of the sample held some form of driver's license. 1 teen did not provide their grade in school and 4 teens did not provide their license type. A total of 20 teens did not provide a response for gender, plus 1 teen wrote in "both male and female" and another teen wrote in "other." These surveys are included in the analysis for the full sample, however when making comparisons by gender, grade in school, or license type, the responses were excluded if data was not available.

Table 1: Demographics of participating teens by pre/post

Characteristic	Pre test	Post test	Total Sample	#/%
	% within pre/post	% within pre/post	% within total sample	
Male	111	86	197	#
	43.4	34	38.7	%
Female	138	152	290	#
	53.9	60.1	57	%
9th grade	69	69	138	#
	27	27.3	27.1	%
10th grade	76	88	164	#
	29.7	34.8	32.2	%
11th grade	45	17.6	91	#
	17.6	18.2	17.9	%
12th grade	65	49	114	#
	25.4	19.4	22.4	%
No License	85	73	158	#
	33.2	28.9	31	%
Learner's Permit	90	97	187	#
	35.2	38.3	36.7	%
Provisional License	17	27	44	#
	6.6	10.7	8.6	%
Driver's License	63	53	116	#
	24.6	20.9	22.8	%

MEASURES OF KNOWLEDGE GAINED

In order to obtain a measure of knowledge gained during ThinkFast, the Pre and Post tests included four content-based questions each worth 25 points each in scoring. Table 2 provides a breakdown of scores from pre to post for the entire sample. Tables 4-10 provide the same information for each individual school. Knowledge gains were all statistically significant increases and ranged from +12.104 at Colony High School to +41.250 at West High School, with the mean/average score increases for the entire sample being +26.627 points.

Table 2: Knowledge gained from pre to post for all schools

Test Score	Pre Test		Post Test	
	#	%	#	%
100	71	27.7	230	90.9
75	100	39.1	19	7.5
50	59	23	3	1.2
25	20	7.8	0	0.0
0	6	2.3	1	0.4
Total	***256***	***100%***	***253***	***100%***
Mean/Average Score (M)	**70.51**		**97.13**	
Standard Deviation (SD)	**25.036**		**10.408**	
Mean difference from pre to post	**+26.627 points**			
Statistical significance: p<.001, t(507)=-15.634				

For the entire sample, an independent groups t test compared the average scores from the pre test group (Mean (M) = 70.51, Standard Deviation (SD) = 25.036) with those of the post test group (M = 97.13, SD = 10.408) was found to show a statistically significant difference, t(507) = -15.634, p<.001, indicating that students who had just participated in ThinkFast scored higher on knowledge questions than those tested prior to participation.

A series of separate independent groups t tests were completed to explore the data. The average scores overall of males (M = 79.95, SD =25.585) compared with those of females (M = 85.86, SD =21.475) revealed that there was a statistically significant difference, t(485) = -2.758, p<.01, indicating that female students overall scored on average 5.913 points higher than male students on both the pre and post tests. When assessing whether males or females benefitted more or less from ThinkFast, the average score of males on the pre test (M =68.24, SD =25.881) compared with those of males on the post test (M = 95.06, SD =15.253) revealed that there was a statistically significant difference, t(195) =-8.526, p<.001, indicating that male students scores increased on average by 26.815 points from pre to post. The average score of females on the pre test (M =72.28, SD =23.915) compared with those of females on the post test (M = 98.19, SD =6.499) revealed that there was a statistically significant difference, t(288) =-12.846, p<.001, indicating that female students scores increased on average by 25.908 points from pre to post. While females' scores were higher on both pre and post tests, both genders saw similar increases in knowledge relative to their pre test scores.

Grade in school was recoded into two categories to compare the average scores overall of 9th and 10th grade teens (M =83.53, SD =23.76) with those of 11th and 12th grade teens (M =84.02, SD =22.908) and found that there was not a statistically significant difference, t(505) = -.235, p=.578, indicating that younger teens in 9th and 10th grades scored about the same as their older peers in the 11th and 12th grades. When assessing whether 9th and 10th grade teens benefitted more or less from ThinkFast, the average scores of 9th and 10th graders on the pre test (M =69.31, SD =25.301) compared with those of 9th and 10th graders on the post test (M = 96.68 , SD =11.670) revealed that there was a statistically significant difference, t(301) =-12.251, p<.001, indicating that 9th and 10th grader scores increased on average by 27.367 points from pre to post. The average score of 11th and 12th graders on the pre test (M =72.05, SD =24.823) compared with those of 11th and 12th graders on the post test (M = 97.89, SD =7.875) revealed that there was a statistically significant difference, t(203) =-9.733, p<.001,

indicating that 11th and 12th grader scores increased on average by 25.849 points from pre to post. Teens from all grades saw relatively equal increases in knowledge, however 9th and 10th graders did increase scores + 1.518 over 11th and 12th graders, as they scored slightly lower on the pre test and slightly higher on the post test.

License type was recoded into two categories to compare the average scores overall of non-licensed teens (M = 76.42, SD =29.761) with those of licensed teens (M =87.03, SD =18.942) and found that there was a statistically significant difference, $t(503) = -4.832$, $p<.001$, indicating that licensed teens overall scored on average 10.608 points higher than non-licensed teens in both pre and post test groups. When assessing whether non-licensed or licensed teens benefitted more or less from ThinkFast, the average scores of non-licensed teens on the pre test (M =67.86, SD =26.105) compared with those of non-licensed teens on the post test (M = 96.47, SD =11.950) revealed that there was a statistically significant difference, $t(343) =-13.027$, $p<.001$, indicating that non-licensed teen scores increased on average by 28.613 points from pre to post. The average score of licensed teens on the pre test (M =77.38, SD =21.4) compared with those of licensed teens on the post test (M = 99.06, SD =4.81) revealed that there was a statistically significant difference, $t(114) =-7.218$, $p<.001$, indicating that licensed students scores increased on average by 21.676 points from pre to post. While both licensed and non-licensed teens saw increases in knowledge, non-licensed teens appeared to acquire slightly more knowledge, closing the gap between from scoring about 10 points less than licensed teens on the pre test, to only scoring about 2 points less than licensed teens on the post test.

MEASURES OF BEHAVIORAL INTENTIONS TO INTERVENE

Three questions were included on both the pre and post tests in order to assess behavioral intentions toward safe driving. Specifically, the questions sought to identify whether or not the teen would intervene to promote safe driving if they were riding as a passenger with a driver who received a text or a call, who was not buckled up, or had been drinking alcohol. Each response was measured using a 5-point Lickert scale ranging from definitely yes (1) to definitely not (5). Table 3 presents the frequencies for these answers from all schools combined. There was one pre test and one post test where the teen wrote in that they would definitely intervene if someone driving them got a text, but probably would not intervene if they got a call. Since this response did not fit with the other data, it was recorded as "no answer" and was excluded from the analysis along with the 3 other teens that left questions blank.

Table 3: Behavioral Intentions from pre to post for all schools

Would you intervene if someone driving you:	**Pre test Intentions**						**Post test Intentions**						**# and/or % within Pre/post**
	Definitely	**Probably**	**Neutral**	**Probably Not**	**Definitely Not**	**No Answer**	**Definitely**	**Probably**	**Neutral**	**Probably Not**	**Definitely Not**	**No Answer**	
Got a text or a call on their cell phone?	64	66	57	51	16	2	112	69	39	27	5	1	#
	25%	26%	22%	20%	6%	0%	44%	27%	15%	11%	2%	0%	%
Was not wearing their seat belt?	133	70	29	16	8	0	173	47	18	10	5	0	#
	52%	27%	11%	6%	3%	0%	68%	19%	7%	4%	2%	0%	%
Had been drinking alcohol?	188	42	9	7	10	0	204	26	10	4	7	2	#
	73%	16%	4%	3%	4%	0%	81%	10%	4%	2%	3%	0%	%

An independent groups t test compared the average behavioral intention to intervene if someone driving them got a text or a call from the pre test group (M = 2.57, SD = 1.263) with those of the post test group (M = 2.0, SD = 1.127) and was found to show a statistically significant difference, $t(507) = 5.336$, $p<.001$, indicating that students who had just participated in ThinkFast reported an increased intention to intervene if someone driving them got a text or a call than those tested prior to participation, with a difference in the means between the two groups of 0.566.

When comparing the average behavioral intention to intervene if someone driving them was not buckled up from the pre test group (M = 1.81, SD =1.065) with those of the post test group (M = 1.53, SD = 0.932) a statistically significant difference was revealed, $t(507) =3.232$, $p<.05$, indicating that students who had just participated in ThinkFast reported an increased intention to intervene if someone driving them was not buckled up than those tested prior to participation, with a difference in the means between the two groups of 0.287.

Comparing the average behavioral intention to intervene if someone driving them had been drinking alcohol from the pre test group (M = 1.47, SD =0.978) with those of the post test group (M = 1.33, SD =0.864) was also found to show a statistically significant difference, $t(507) =1.719$, $p<.05$, indicating that students who had just participated in ThinkFast reported an increased intention to intervene if someone driving them had been drinking alcohol than those tested prior to participation, with a difference in the means between the two groups of 0.141.

Intentions to engage in all three intervening behaviors did show a statistically significant increase from pre to post, with the greatest increase being to intervene if the driver gets a text or call. Teens at pre test were most likely to intervene when someone driving them was either not wearing their seatbelt or driving under the influence, thus increases in scores were lower.

INDIVIDUAL SCHOOL REPORTS

Table 4: Knowledge gained from pre to post for Colony High School

Test Score	Pre Test		Post Test	
	#	%	#	%
100	24	56	34	85
75	9	22	6	15
50	7	17	0	0
25	1	2	0	0
0	0	0	0	0
Total	***41***	***100%***	***40***	***100%***
Average Score	**84.15**		**96.25**	
Standard Deviation	**21.474**		**9.041**	
Mean difference from pre to post	**+12.104**			
Statistical significance: p<.001, t(79)= -3.291				

Table 5: Knowledge gained from pre to post for Kenai High School

Test Score	Pre Test		Post Test	
	#	%	#	%
100	12	29	40	100
75	20	48	0	0
50	9	22	0	0
25	0	0	0	0
0	0	0	0	0
Total	***41***	***100%***	***40***	***100%***
Average Score	**76.83**		**100**	
Standard Deviation	**18.019**		**0**	
Mean difference from pre to post	**+23.171**			
Statistical significance: p<.001, t(79)= -8.131				

Table 6: Knowledge gained from pre to post for Palmer High School

Test Score	Pre Test		Post Test	
	#	%	#	%
100	3	16	16	84
75	11	58	2	11
50	1	5	1	5
25	4	21	0	0
0	0	0	0	0
Total	***19***	***100%***	***19***	***100%***
Average Score	**67.11**		**94.74**	
Standard Deviation	**25.073**		**13.383**	
Mean difference from pre to post	**+27.632**			
Statistical significance: p<.05, t(36)= -4.238				

Table 7: Knowledge gained from pre to post for Service High School

Test Score	Pre Test		Post Test	
	#	%	#	%
100	9	26	24	71
75	10	29	7	20
50	7	20	2	6
25	8	23	0	0
0	1	3	1	3
Total	***35***	***100%***	***34***	***100%***
Average Score	**62.86**		**88.97**	
Standard Deviation	**29.933**		**21.489**	
Mean difference from pre to post	**+26.113**			
Statistical significance: p<.01, t(67)= -4.152				

Table 8: Knowledge gained from pre to post for Soldonta High School

Test Score	Pre Test		Post Test	
	#	%	#	%
100	13	33	40	100
75	16	40	0	0
50	9	23	0	0
25	2	5	0	0
0	0	0	0	0
Total	***40***	***100%***	***40***	***100%***
Average Score	**75**		**100**	
Standard Deviation	**21.926**		**0**	
Mean difference from pre to post	**+25**			
Statistical significance: p<.001, t(78)= -7.211				

Table 9: Knowledge gained from pre to post for South High School

Test Score	Pre Test		Post Test	
	#	%	#	%
100	5	13	40	100
75	21	53	0	0
50	12	30	0	0
25	2	5	0	0
0	0	0	0	0
Total		***100%***		***100%***
Average Score	**68.13**		**100**	
Standard Deviation	**18.766**		**0**	
Mean difference from pre to post	**+31.875**			
Statistical significance: p<.001, t(78)= -10.743				

Table 10: Knowledge gained from pre to post for West High School

Test Score	Pre Test		Post Test	
	#	%	#	%
100	5	13	36	90
75	13	32	4	10
50	14	35	0	0
25	3	8	0	0
0	5	13	0	0
Total	***40***	***100%***	***40***	***100%***
Average Score	**56.25**		**97.50**	
Standard Deviation	**29.281**		**7.596**	
Mean difference from pre to post	**+41.250**			
Statistical significance: p<.001, t(78)= -8.624				