



## **Educating, Enlightening, and Entertaining: Audience Perceptions of the Educational Value of a Presentation Competition for Engineering Students**

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Like many of our colleagues at ASEE, the authors of this paper believe that showcasing the ideas and presentation skills of our engineering students benefits both the presenters and the audience. More of the world needs to know about the valuable work our engineering students – future engineers – are doing. And their messages are best delivered by the engineering students themselves. They can educate, enlighten, and entertain their audiences – even about challenging technical topics, from accessible water treatment for developing countries to the potential of quantum computing.

At the authors' post-secondary institution, one place engineering students have had the opportunity to educate, enlighten, and entertain is at Presentation Idol for Engineering Students (aka 'Idol'), a presentation competition that has run at the author's post-secondary institution since the spring of 2011. This competition is one of several other innovative events in North America that showcase the technical knowledge and presentation skills of engineering students. Overbaugh et al.<sup>1</sup> provide an excellent summary of these events.

Previously, we surveyed participants about what motivated them to compete in Idol<sup>2</sup>. Our next step was to survey audience members, and this paper describes the survey results. Engineering students and faculty members in the audience were asked about their perceptions of the educational value of the competition for both the competitors and the audience members. They were also asked about their perceptions of the personal characteristics of the competitors. As this research project was funded through an Instructional Enhancement Grant, the goal was to examine the perceived educational value of Idol. This examination aims to help identify ways learning and teaching are – and can be further – enhanced through Idol.

Overall, the results of the survey pointed to an overwhelmingly positive response to the presentation competition and the educational value it provides. The engineering students and faculty surveyed were impressed by the presentation skills and the technical knowledge of the presenters. They were also inspired by the presentation strategies and ideas presented. At the same time, the students in the audience personally identified with the presenters and were encouraged by seeing “students just like us” presenting so competently. These results will help us capitalize on the educational value of the competition as well as provide directions for future research.

### **What is Presentation Idol?**

Presentation Idol is held every spring at the institute's main campus. Students in any engineering discipline – degree or diploma program – can register to compete for \$3,300 in prizes. Participation in Idol is voluntary and not connected to any courses. However, one of the entry criteria is that participants must have taken a Communication course at the institute within the last five years. In their Communication courses, students get

instruction on preparing and delivering effective presentations and give at least one presentation as an assignment in the course. See Appendix A for a sample syllabus from one of the first-term Communication courses.

Idol is advertised around campus and the opportunity to participate is promoted in classes by instructors. A maximum of 32 students can register. Typically, about 20 to 24 students compete in two rounds, giving six- to eight-minute presentations on engineering-related topics. In the preliminary round, participants are divided among four classrooms. In each room, a judging panel composed of instructors and industry representatives selects two presentations to proceed to the championship round. The preliminary round presentations are open to anyone to attend. They tend to attract about 20 people per room, mostly supporters of the presenters.

The eight finalists selected in the preliminary round compete in the championship round held a week or two later. This event is held in a lecture theatre and is open to anyone to attend. Competitors are encouraged to bring friends and family, instructors in the engineering programs are invited, and the event is advertised around campus and to alumni. This event typically attracts roughly 100 audience members in total. The judging panel comprises administrators, alumni, and industry representatives, as seen in Figure 1 below.



**Figure 1:** 2014 Championship round judging panel (l-r: Patricia Sackville, Associate Dean; Steve Eccles, Dean; Sean Garrity, Electrical Engineering graduate; Matt Younger, Principal, AME Consulting; Paul Dangerfield, VP of Education)

The championship round is intended to be a fun and exciting event. In addition to the presentations, the president of the institute gives opening remarks, refreshments are served, draws for door prizes are held, and the audience gets to vote on their favorite presentation. Audience Choice prize-winners receive \$500 (first place), \$300 (second

place), or \$200 (third place). Judges' Choice prize-winners winners receive \$1,000 (first place), \$700 (second place), or \$400 (third place).

### **The broader context of this project**

Informally, Idol has received positive feedback from students, faculty, staff, and management. These informal observations and feedback led us to begin to investigate the educational value of Idol more methodically. This paper owes a great debt to other engineering educators who have held similar public speaking competitions and written about their experiences. They have helped to provide a context we can situate our competition in, and research frameworks that inform our own<sup>1</sup>.

In addition to the informal feedback, the authors also observed a number of effects of Idol outside of the competition itself, even among students who did not attend the event, but instead watched videos posted on the Idol website<sup>3</sup>. Students seem to take presentation assignments in Communication classes more seriously, often mentioning that they planned their in-class presentations as a trial run for Idol. One student vowed to “give a [name of previous winner]-quality presentation” for his assignment.

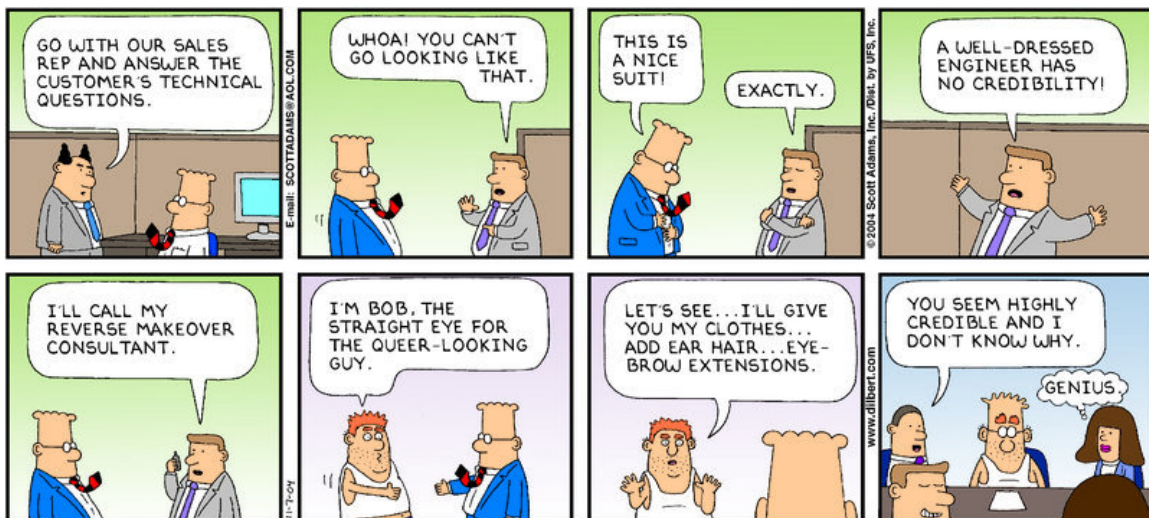
In a previous paper, we explored some of the factors that motivate students to participate in Idol<sup>2</sup>. That Idol motivates *other* students – even students who have not participated in or attended the event – to work harder and do better is not surprising. It shares some elements with collaborative learning or peer tutoring<sup>4</sup>: it provides a “social context” and a “community of knowledgeable peers” (p. 644) that students can participate in, even if that participation is simply sitting in the audience or watching a video of one of their peers presenting. Participation in the social context and community is not always passive, however. As will be described below in the ‘Results of student surveys’ section, Idol so motivated one of the prize-winners that he organized a series of Idol-preparation workshops to coach his classmates for the competition.

Since students, even those who did not attend the Idol-preparation workshops, seemed motivated by their peers' Idol presentations, we became interested in which elements of the presentations drew the students in and encouraged them to follow the lead of the Idol participants. Our survey questions, therefore, ask the audience members to identify aspects of the presentations they found to be effective. These types of questions focused on the introduction, the delivery, and the visuals, as these are widely recognized as key to a strong presentation<sup>5</sup>.

Some participants described participating in Idol as having a transformative effect. The prize-winner who organized the Idol-preparation workshops said Idol “changed [his] life” giving him the confidence in his presentation skills to take on leadership roles on campus and in his co-op work placement. Another told us that while he knew he had good “people skills,” participating in Idol proved he also had excellent public speaking skills, and he began to seek more opportunities to present. Now, as an Engineer-in-Training at an engineering consulting company, he continues to seek public-speaking opportunities at work and in his volunteer roles with his professional association.

These transformative experiences seemed to influence these students' development of their identities as engineers and technologists: They established themselves as people who were both technically competent and talented public speakers. Participating in Idol became an unofficial pathway in the participants' development of their identity as engineers<sup>6</sup>. As Stevens et al.<sup>6</sup> summarize, identity is formed both by how one perceives oneself and by how others perceive them. One survey question, therefore, asks about the audience's perception of the presenters. Would the audience members identify the presenters as engineers- and technologists-to-be who were worth learning from?

Another inspiration for this survey question about the audience's perception of the presenters came from a conversation with a colleague who holds an engineering degree. He commented that when he was in university, an engineering student who participated in an event like this, or one who simply demonstrated excellent public speaking skills, would have been seen as somewhat of an outsider to the majority of engineering students. They would have been seen, like the stereotype of the well-dressed engineer in the Dilbert comic below, as having no credibility<sup>7</sup>.



**Figure 2:** The stereotype that engineers lack interpersonal skills is illustrated in this Dilbert comic (with permission from the author)

We found this comment a bit disheartening, but not surprising. This stereotype of engineers, however misplaced or inaccurate it may be, is prevalent and popular enough that in a Google search for 'engineer stereotypes', the top five results mention that engineers are seen as "nerds" and "geeks" who lack social skills<sup>8-12</sup>. We wondered if our audience members – many of them engineers and engineering students – had bought into the stereotype. And if they had, would they assume this perceived lack of social skills would carry over to their ability to give an oral presentation? Would the audience members suspect the presenters of not having as much technical knowledge or skill as their peers if they appeared to not fit the stereotype? Would they feel the presenters were perhaps relying on "soft" skills to hide their lack of technical skills? The authors of this paper had heard this stereotype often enough that we felt it was worth investigating.

A number of responses from audience members provide some evidence that they expected the lack of social skills would influence their ability to present effectively. For example, some respondents stated that the presenters seemed extroverted and outgoing “for engineering students.” Other respondents commented on the presenters apparent interpersonal or social skills as demonstrated through their ability to give a strong oral presentation.

Our goal in establishing Idol was to help demonstrate that this stereotype is just a stereotype: a very limited, simplified view of who engineers and engineering students are. Giving the students an opportunity to showcase their excellent presentation skills as well as their excellent technical skills seemed like a good antidote to the stereotype that engineering students lack the interpersonal skills that our audience assumed were necessary to deliver an outstanding presentation.

## **Methodology**

The audience at Idol is made up of family and friends of the presenters, engineering students, engineering faculty, faculty from other areas, as well as some administrators and staff. For this project, we chose to survey engineering students and faculty who teach for engineering programs. They were offered the opportunity to complete a survey during the championship round. Engineering students received slightly different surveys to those given to faculty, but questions on both surveys focused on the perceived educational value of attending Idol. A list of the survey questions can be found in Appendices B and C.

Twenty-one surveys were handed out to faculty at Idol, and 13 surveys, at least partially completed, were returned. Forty-three surveys were handed out to students at Idol, and 23 surveys, at least partially completed, were returned. The survey responses were then transferred to a spreadsheet to make it easier to compare answers side by side and look for themes emerging from the responses. Since the pool of responses is small, this paper’s focus is on qualitative analysis of the results, looking for emerging themes in the responses. In the future, once these surveys have been conducted on several audiences and a large enough data set is developed, we will look to implement more quantitative methods of analysis.

Unlike Overbaugh et al<sup>1</sup>, we were unable to get testimonials from instructors on how much attending the presentation competition accelerated the learning of the students in the audience. This is for two main reasons: 1) the timing of Idol, in the spring, means that the majority of students in engineering programs will have already given presentations in their classes, and 2) attendance at the competition is not required – we do not know if students giving presentations in our classes in later semesters have attended Idol. While our intuition tells us that Idol motivates students to take presenting more seriously and deliver stronger presentations, we are unable to test that hypothesis at the moment.

Another limitation is that we have no control group to compare these results: We cannot compare the perceptions of students and faculty who attend Idol to the perceptions of

those who do not since participation and attendance are voluntary and not connected to any classes. However, as Riley<sup>13</sup> notes, relying solely on randomized controlled trials “limits the diversity of ways of knowing, and limits the types of new knowledge that can be considered valid” (p.4). We are confident that the results described below have value and can inform our decisions about teaching and learning through Idol even though the results do not represent a large enough sample to be statistically significant and generalizable.

## Results from faculty surveys

Of the 13 returned 7 were from faculty who teach for Electrical and Computer Engineering Technology, 5 were from Mechanical Engineering Technology, and 1 was from a faculty member who teaches courses for both of these programs. While there are several other engineering programs at the institute, no surveys were returned from faculty in these programs. Note that the results are discussed in the order the questions appeared on the survey, but in some cases two or three survey questions are discussed together.

### A. Importance of presentation skills

The first survey question faculty members were asked to respond to was about the importance of presentation skills in their courses, in their program, and in industry. No one responded that presentation skills were unimportant. Two respondents ranked presentation skills as *moderately important* in their courses, and one respondent ranked presentation skills as *moderately important* in industry. The majority of respondents ranked presentation skills as *extremely important* or *important* in all categories.

It is notable that the ranking of importance shifted as respondents moved from ranking the importance of presentation skills in their courses, to the program, to industry. The table below shows the total number of respondents for the *extremely important* and *important* categories

**Table 1:** Faculty perception of the importance of presentation skills in their courses, in their program, and in industry.

	<b>Extremely important</b>	<b>Important</b>
<b>Your courses</b>	3	8
<b>Your program</b>	6	5
<b>Industry</b>	8	2

Overall, respondents recognize the importance of presentation skills, but generally found these skills to be less important in their own classes than in the program in general, and less important in the program in general than in industry. One respondent who ranked presentation skills as *moderately important* in both his/her courses and in the program, ranked presentation skills as *extremely important* in industry. This respondent recognized the disparity in the value of presentation skills and commented that “more work is needed to address the gap.”

### B. Most valuable learning experience for competitors

The two most common answers faculty gave to the question “What do you think is the most valuable learning experience competitors get from Idol?” were presentation practice (5 mentions) and confidence (5 mentions). Two respondents mentioned the value of the supportive, safe environment of Idol contributing to the educational value; prizes are on the line, but grades, jobs, promotions, etc. are not. Backing up the perception that Idol provides a safe and supportive environment is a comment one Idol competitor made in conversation after the event: by the time he made it to the championship round, he felt relaxed; he would win some money or he would not, but he had made it that far and felt good about his presentation.

Other responses from faculty about what they felt the competitors learned included getting out of your comfort zone, gaining “real world” experience, honing your craft, learning that engineering is about people, being quick on your feet, building resilience, turning ideas into communicable language and visual stimuli, exposure to industry (judges), gaining status among peers, presenting solo instead of on a team, presenting to a varied audience.

### *C. Educational value for audience members*

Overall, the faculty responded that the most valuable learning experience they saw for students in the audience was watching others present. The students saw first hand what strategies were effective so they could apply those strategies in their own presentations (9 mentions). Two responses in this category coupled learning from “the best” presentations with seeing how much practice and preparation were required to give presentations of that caliber. They felt that students would recognize that “the best” presentations were not simply the result of natural talent; they were the result of hard work, passion, and interest.

Another common response was that being inspired (4 mentions) by their peers was a valuable learning experience: Audience members might start “thinking about doing their own presentation next year;” they might see that if their peers can demonstrate outstanding presentation skills, then “they can do it! It takes practice to become good (just like everything else).” Other responses from faculty included exposure to other engineering disciplines, experience of a context that rewards presentation skills, and seeing the presenters remain calm under pressure.

One faculty member read the survey question as asking what the students learned from seeing faculty in attendance at the event. While this was not the intention of the question, the answer is nonetheless useful: This faculty member felt that his/her presence demonstrated to the students that he/she took the students’ success seriously.

### *D. Faculty perception of Idol competitors*

As mentioned in the description of the broader context above, we were interested in how the presenters were perceived by the audience. Would the audience members have bought into stereotype that engineers have poor social skills and assume that meant they would



also have poor public speaking skills? Would they suspect that these students, with their demonstrated strong social and public speaking skills, have limited technical skills? Would they lose credibility? While we are certainly not suggesting that these stereotypes of engineers are accurate, we felt that it would be useful to get a sense of whether or not the audience was influenced by the stereotypes.

The results of this survey suggest that the audience members were aware of the stereotypes – as evidenced by a few comments about how outgoing the presenters were “for engineering students.” However, they did not feel that not conforming to the stereotype cast the presenters as outsiders. These are not students who are using their strong and effortless “soft” skills to avoid the hard work of becoming technically knowledgeable and competent. Instead, they are perceived as knowledgeable, competent students who have done the additional hard work of developing interpersonal and public speaking skills: “they require a base of technical ability, but more importantly – creativity and an ability to conquer their fear.”



**Figure 3:** Tariq Shobab presenting a video of the motorcycle trailer he designed and built with his team in Mechanical Engineering.

Six respondents mentioned that they perceived the competitors as having “thorough knowledge” and being “technically competent.” Two respondents perceived the presenters to be “relatively extroverted (for an ‘engineering’ student)” or as having relatively good social and interpersonal skills. While these responses suggest the stereotypes of engineers influence the audience’s perceptions, the competitors’ extroversion and social skills were not seen as evidence of a lack of technical knowledge. The competitors were also perceived to have integrity, to be confident, to demonstrate

leadership potential, to be game to try new things, to be professional, and to be passionate and enthusiastic.

However, we question whether or not this attitude is commonplace or if the respondents, having self-selected to attend Idol, are more likely to feel this way than others might.

#### *E. The most valuable thing faculty learned at Idol*

We were interested to see not just what the students in the audience learned, but what the faculty learned as well. The students, with their varied interests and skills, have a lot to teach us. We received seven responses to this question – too small a number to find meaningful themes, but the responses included learning new technical information, seeing the commitment of the students presenting, as well as the commitment of the faculty who have championed the event.

One respondent learned that at Idol, he/she “might see something in which to become an early investor” (students often present on their own innovative projects). Another was pleased to see that “despite the stereotype, many of our engineering students are very capable presenters.” Another, presumably an instructor who teaches a non-engineering course to engineering students commented that he/she learned that “I can understand engineering concepts.” This speaks to the skill of the presenters that they can make their technical topics accessible to a broad audience.

#### *F. Presentation strategies faculty would use in their own presentations*

Related to the question of what faculty learned is the more specific question about the presentation strategies they saw that they would use themselves. Two respondents said they would not use any of the strategies they saw (“too old to change”), but the majority saw something they would consider using.

The presentation strategy that attracted the most attention was the Pecha Kucha-style presentation. The main rule in a Pecha Kucha presentation is that the presenter has 20 slides and 20 seconds per slide, with slides advancing automatically<sup>9</sup>. The slides tend to be more visual rather than relying on text to convey the message. One presenter, before he began his talk, briefly explained the limitations he’d imposed on himself by choosing this style. Three of the positive responses from faculty were about potentially using “timed slides” in their own presentations. However, one noted that while it would be interesting to try, it was “more for presenting than for teaching.”

The remaining three positive responses were related to the way the presentation was structured: “clear signaling of conclusions,” “pacing, format, introduction,” and “introductions” were listed as strategies faculty audience members saw that they would try to use in their own presentations.

#### *G. Reasons for attending and expectations of Idol*

Of the twelve responses to the questions about reasons for attending and expectations of Idol, eight said that they were there to support the competitors, the faculty who worked on Idol, and the event in general. Two attended out of curiosity and interest, one attended because he/she enjoyed the “great presentations” at “last year’s show,” and one attended because it was “such a great community building exercise.”

All respondents agreed that Idol met their expectations: One appreciated the “great range of styles even in a technical discipline,” and many others commented that they learned a lot, enjoyed the energy and support of the event, and that presenters demonstrated excellence. Overall, the responses in these sections were rife with exclamation marks: “Keep it going!” “Awesome! Rock on!”

Three respondents reiterated the value of Idol to students: “This event is important to provide incentive to engineering students to practice presentation skills as well as a platform for demonstrating their importance;” “Important for students. It will help them in the future.” At the same time, the challenge of increasing participation and attendance was recognized: “Somehow, the benefits of participation need to be emphasized more broadly. Also many students are too stressed and busy at this time to participate.”

### **Results of student surveys**

Of 43 surveys handed out to students, 23 were returned at least partially completed. Of these, 14 were studying Electrical and Computer Engineering Technology (ECET), 2 were in Mechanical Engineering Technology, and 3 were in Civil Engineering Technology. Three respondents did not disclose their disciplines. While the institute has several other engineering programs, no surveys were returned from these programs.

While we are not sure of the reason for the imbalance in the disciplines of the respondents, we suspect the following: As described above, a former Idol winner organized Idol-preparation workshops for his fellow ECET students. This student, in many ways an exemplar of collaborative learning, persuaded a number of students to join the audience for these workshops. We suspect that the buzz he created around the workshops continued to the Idol event and motivated more ECET students to come to Idol to support their colleagues.

#### *A. Effective opening strategies*

Eleven respondents found posing a question an effective opening strategy. Questions – whether or not the audience was actually expected to answer – were effective at engaging the audience. Two respondents mentioned introducing a problem: “I was drawn in and eager to learn how to solve the problem.” Starting with a joke or humor was mentioned seven times as an effective strategy. Other strategies mentioned were using anecdotes, “starting the presentation before introducing himself,” and one respondent said, “I like it when they set up a scenario. ‘Imagine being on vacation and...’”

The respondents said they would use some of these strategies, including asking a question, because it would help the audience feel connected and respond to the presenter and “it makes the audience think and want the answer.” It was also seen as a “comfortable” strategy, whereas using humor was potentially more challenging. One respondent said, although he/she liked the use of humor in the presentations he/she would not use it him/herself because “I’m not very good at humour.” While most respondents focused on how the opening strategy would affect the audience, one respondent mentioned the effect on the presenter as well: “adds to your personal confidence when you hear laughter and see smiles.”

### *B. Effective delivery strategies*

Overall, the students in the audience preferred and would like to use presentation strategies that did more than present information professionally. They wanted “useful and interesting information;” they preferred presenters who were energetic and presentations that engaged with the audience: asking questions, telling jokes and referencing “current events/pop culture.”

Six respondents mentioned they found humor and jokes to be effective delivery strategies that they would like to use. Five said they would ask questions and interact with the audience throughout their presentation. Three said they would like to emulate the energy, enthusiasm, and dynamism of the presenters. One said that the energy of the presenters would “remind me to try a more optimistic presentation.”

### *C. Effective presentation visuals*

Overall, the respondents selected their preferred visual aids – whether they were images, charts, animated slides, videos, props, or prototypes – because they felt these strategies helped the audience visualize what the presenter was talking about and allowed the presenter to emphasize and reinforce important points.

Seven responses to these questions related to the visuals in the Pecha Kucha-style presentation. Pecha Kucha-style presentations require slides only<sup>14</sup>, but this presenter added a series of posters that he stood up in holders in front of him as he presented. At the end of a major section in his presentation, he put up a poster of an image of a key element of that section, as seen in Figure 4 below.



**Figure 4:** Nico Dreyer’s presentation visuals for his Pecha Kucha-style presentation

This strategy, according to the students, was useful to “emphasize points of the presentation,” break up the “PowerPoint monotony,” give the audience a kind of anchor to refer to, and a summary of key points at the end of the presentation. One respondent like the way the posters “created layers” of the posters at the front, the presenter in the middle, and the PowerPoint slides behind him. Another respondent found the posters “make me wonder what would come next and let the audience see how [the parts of the presentation] connected together.”

Six respondents preferred images to text: “simple slides shows/pictures and props” as well as “visuals that appeal to the emotions” and humorous pictures were effective. Visuals that incorporated short video clips were mentioned three times, and those that used animation (“active text with special effects organizing the labels”) were mentioned twice. Five respondents mentioned the use of props and prototypes by the three competitors who presented on their own projects.

Only one respondent said he/she would not use the strategy for visuals that he/she liked best because it would be “too much effort to get pictures printed” for the posters in the Pecha Kucha-style presentation. All the other respondents said they would try the visuals they found to be effective. One commented that using animation in his/her slides would allow him/her “to connect the concept in my head with the audience’s thinking.”

#### *D. Development of presentations skills through attending Idol*

Not surprisingly, the majority of respondents agreed that attending Idol as an audience member would help them “learn new skills”, “know how to better engage the audience,” “learn by osmosis,” and plan their presentations for next year. Two respondents did not

answer this question, and one said he/she did not feel attending Idol would help them develop since he/she had “already been a finalist” in Idol in a previous year.

### *E. Student perceptions of Idol competitors*

As with the faculty respondents, many student respondents felt that Idol participants were passionate (5), knowledgeable (12), confident (5), willing to learn (1), and had used their social skills to connect with the audience (4). Two students also mentioned that the Idol participants appeared to have a good sense of humor. In terms of knowledge, Idol participants were seen to “know more than their own project,” to “have incredible ideas,” and to be able to combine their knowledge with “social skills so they are able to engage the audience and simplify technical concepts.” Not only were the competitors seen to be knowledgeable going into the competition, but participating demonstrated that they are “people who are eager to learn and improve their presentation skills.”

All of the descriptors the student respondents chose to describe the Idol competitors were positive and complimentary. Perhaps the Idol competitors allowed the audience members to see themselves in the best possible light: One respondent said the competitors “just seem like regular engineering students” and that it was “encouraging to see students just like us.”

### *F. Reasons for attending and expectations of Idol*

Overwhelmingly, the students in the audience were there to support their friends and classmates (15 mentions). A few were there to learn about new technology (7) or presentation skills (4). Three said they were there for the free food and entertainment.

It might seem unlikely that watching technical presentations could be seen as entertainment, but in response to whether or not Idol met their expectations, all respondents said that the presentations were enjoyable and informative: “It’s not boring. It keeps me listening when not thinking about school work:” “Their ideas/inventions were amazing;” “The presentations are all very professional and informative. And it’s nice to have a bit of competition between the different degrees;” “It was a good show! Fun! Educational! Gave me ideas....” One respondent compared Idol to a “mini-TED.” A concern mentioned by two respondents was that not enough people come out to see the presentations, and that we need to find a way to increase the size of the audience.

## **Conclusions and recommendations**

This project aimed to gather feedback from audience members at Presentation Idol to find out about their perceptions of the educational value of Idol, as well as their perceptions of the presenters. Overall, the results of the survey pointed to an overwhelmingly positive response to Idol and the educational value it provides. Both faculty and students felt that the event was educational, enlightening, and entertaining. They were impressed by the presentation skills and the technical knowledge of the presenters and inspired by the presentation strategies and ideas presented.

One weakness of the survey is that the audience members surveyed have already gone out of their way to attend, despite their heavy workloads and competing priorities. The respondents are, therefore, likely to have strong positive perceptions of Idol and of the presenters. If it were possible to make attendance at Idol mandatory for students and faculty, the overall results might be quite different, more varied, and more likely to capture what skeptics think.

The marketing and promotional opportunities Idol offers the institute are easily and widely recognized by attendees and the institute's administration. One way this is evident is through the survey comments about Idol being a "great show." It is a great testament to the presenters that they have turned their technical work into engaging presentations. However, we do not want attendees and administrators to lose sight of Idol's value as an educational event. As such, ongoing faculty involvement is necessary to maintaining the educational integrity of Idol and should be supported by the institute. As well, participation in Idol, though strictly voluntary, should be recognized as an integrated part of the students' curricula. We are continuing to explore this issue but have found no easy answers.

As noted by two of the students and one faculty member, Idol organizers need to motivate more people – students, faculty, friends and family of competitors, community members, etc – to come to the event. Of course, the most likely reason that more students and faculty did not attend is workload. Idol is competing with other meetings and events held at the same time, as well as the heavy workloads of faculty and students.

Of course, attendance in person is more powerful than simply watching videos online. However, we can capitalize on the educational value of Idol by encouraging more teaching faculty to incorporate the online videos into their classes. Videos could be shown and discussed in class, or the students could be given a homework assignment to watch a video and evaluate it against an evaluation rubric. The videos fit easily into Communication courses in which students are preparing presentations of their own, but since Idol presentations cover a variety of technical topics, they could be used in other courses to supplement instruction on highway design.

Finally, as pointed out by one of the faculty respondents, the mismatch between the importance of presentation skills in engineering classes and their importance in the workplace must be addressed. We believe that simply conducting this survey and asking faculty about the importance of presentations skills in various contexts raises awareness of the mismatch, and as such, is an important step in encouraging faculty to address it in their own classes.

### **Directions for future research**

This current paper is limited in scope, in part, due to the institute's focus on teaching and applied research for industry as opposed to research that might fall more comfortably

under the heading of “social sciences” rather than “engineering and technology.” However, the authors intend to pursue funding to continue and expand this research.

First, should the time be made available, the two surveys conducted for this paper will be conducted again at future Idol competitions. For this iteration, the sample size is too small to see a statistical significance or to draw generalizable conclusions. However, once enough surveys have been conducted, we may be able to supplement our qualitative findings with more quantitative data.

Second, while we have in the past looked at what motivated competitors to participate, we would also like to investigate the effects of participation on competitors after they competed: until they graduated and through their careers. One case that seems particularly rich is that of the student who organized the Idol-preparation workshops for his fellow Electrical and Computer Engineering students. Related to this is the question of how to motivate other Idol participants and winners to become similar ambassadors for the personal and professional benefits of participating in Idol.

Third, we intend to investigate industry’s perception of Idol. This may include their motivation for sponsoring the event, the educational benefits they see, and the importance of presentation skills in the workplace, among other topics.

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## Appendix A: Sample Communication course syllabus (for first-term of Electrical and Computer Engineering Technology)

Week	Lecture	Readings	Lab
1	Introduction to technical communication	Textbook: Chapter 1; Course manual: Unit 1	Intro to technical communication
2	Reader access techniques; Style and tone	Textbook: Chapters 2 & 3 Course manual: Unit 2	Practice using effective reader access techniques, style, and tone
3	Incorporating graphics into documents; Writing lab reports	Textbook: Chapters 5 & 7; Course Manual: Units 4 & 5	Graphics and lab report activities; Library tour
4	Writing effective workplace emails and letters	Textbook: Chapter 3, pp. 46-50; Course manual: Unit 6	Analyzing sample emails
5	Writing effective workplace emails & letters	Textbook: Chapter 4; Course manual: Unit 7	Practice writing emails
6	Writing effective workplace emails & letters	See above	In-class writing assignment: Writing an email based on a case (17%)
7	Documentation and ethics	Textbook: Chapter 11; Course manual: Unit 8	Library: research skills class and quiz (3%)
8	Presentation skills (for technical briefing)	Textbook: Chapter 9 Course manual: Unit 9	Presentation skills practice
9	Presentation skills	Textbook: Chapter 10 Course manual: Unit 10	Day 1: Student presentations (15%)
10	Job package: Introduction and skills inventory	Textbook: Chapter 10; Course manual: Unit 10	Day 2: Student presentations (15%)
11	Job package: Resumes	Textbook: Chapter 10, pp. 223-237; Course Manual: Unit 11	Resume analysis activities
12	Job package: Application letters	Textbook: Chapter 10, pp. 237-246; Course Manual: Units 11	Cover letter analysis activities
13	Job package: Review	Textbook: Chapter 10; Course Manual: Units 10 & 11	In-class writing assignment: Tailoring your resume and cover letter to a co-op job ad
14	Writing technical instructions	Textbook: Chapter 5, pp. 116-120; Course Manual: Unit 12	Practice writing instructions

15	Writing technical definitions and descriptions	Course Manual: Unit 13	Practice writing definitions and descriptions
16	Final Exam (25%)		

## Appendix B: Survey questions for engineering students

1. A strong **opening** is a key element of a good presentation. What opening strategy did you see today that you found to be most effective?
2. Can you imagine yourself using this **opening strategy** in your own presentations?
  - Yes  No Why?
3. Describe a strategy for **delivering** a presentation you saw used today that you'd like to incorporate into your own presentations.
4. Describe the presentation **visuals** (slide design, props, or other visual aids) you saw today that you found to be effective.
5. Why do you think these visuals were effective?
6. Would you use the techniques used in these visuals in your own presentation?
  - Yes  No Why or why not?
7. Do you think attending Idol as an audience member will help you develop your own presentation skills?
  - Yes  No Why or why not?
8. What is your perception of Idol competitors? For example, what personality characteristics, interpersonal skills, or technical skills do you expect of someone competing in Idol?
9. What program are you studying in?
10. Why did you decide to come to Idol today?
11. Did Idol meet your expectations?
  - Yes  No Why or why not?
12. Is there anything else you'd like to say about Idol?

## Appendix C: Survey Questions for Engineering Faculty

1. Please rate how important presentation skills are in the following contexts. You can use the space below to explain your rankings:

	Extremely important	Important	Moderately important	Unimportant
the courses you teach				
your engineering program				
the engineering workplace				

2. What do you think is the most valuable learning experience *competitors* get from Idol?
3. Do you think attending Idol as *audience members* helps engineering students develop or improve upon their own presentation skills by observing Idol competitors and presentations?
- Yes  No Why or why not?
4. What do you think is the most valuable learning experience students in the *audience* get from Idol?
5. What is your perception of Idol *competitors*? For example, what personality characteristics, interpersonal skills, or technical skills do you expect of someone competing in Idol?
6. What's the most valuable thing *you* learned by attending Idol today?
7. Did you see any presentation strategies used by Idol competitors that you would adopt for your own presentations?
8. Which engineering program do you teach for?
9. Why did you decide to come to Idol today?
10. Did Idol meet your expectations?
- Yes  No Why or why not?
11. Is there anything else you'd like to say about Idol?