

## Ozzie Zehner – UBC Reads Sustainability Event

### Feedback Report

**Date:** Thursday, September 27<sup>th</sup>, 2012

**Location:** Thea's Lounge

#### **Event description:**

Ozzie Zehner ([ozziezehner.com](http://ozziezehner.com)) spoke about his book, *Green Illusions*, and engaged in a question and answer session with students from the following two courses:

- APSC 261: Technology and Society I (Instructor: Carla Paterson)
- CEEN 523: Energy and the Environment (Instructor: Tony Bi)

This Mix ‘satellite event’ corresponded with Ozzie’s UBC Reads Sustainability event on Friday, September 28<sup>th</sup>. The ‘mixed’ elements included the combination of undergraduate and graduate students and differences in course content and focus.

#### **Feedback overview:**

Students generally expressed positive feedback about the event and conveyed that they value interdisciplinary engagement.

Students provided feedback on what they found especially interesting or surprising. The following innovative evaluation question encouraged students to engage with one another during their reflection:

Please introduce yourself to the person beside you, and discuss your response to this session. What did you find especially interesting, surprising, or valuable?

Responses varied, with some students commenting on the content of the presentation (particularly their surprise about the drawbacks of solar cell technology), their thoughts about possible solutions, and their impressions of the Q&A session.

The other open-ended question asked:

Did holding this session in a different location than your usual classroom and with students other than those usually in your course enhance your learning experience? Please explain.

Students offered mixed reviews related to the location choice and the level of impact of mixing the courses. While some were pleased with the change in typical venue for the event, others found

Thea's lounge to be too far away from their other course buildings and too small. Another point of critical feedback related to the room set-up and level of interaction between the courses. While many students found the 'mix' of questions from different student perspectives to be stimulating, some would have liked to have more facilitated interaction and opportunity for engagement.

Feedback has been compiled below into charts and lists of responses. Carla Paterson emailed after the event to offer her feedback. One of Dr. Bi's students sent an email to him after the event to elaborate on her reflections.

### **Feedback from Carla**

From my perspective, the Zehner event was successful. Although there was not a lot of opportunity for cross-class discussion, I did ask Tony's students to disperse themselves in the room, so that at least some of my undergraduate students would have had a chance to introduce themselves and chat briefly with Tony's graduate students. I think for my students, even crossing the campus and having a class in Thea's Lounge was useful, since it exposed them to a different locale and one they might become familiar with should they go on to graduate study at UBC. One of the delights of the event for me, was meeting a student in Tony's class who had taken APSC 261 a number of years ago, and been inspired to do the Masters in Clean Energy because of his earlier experience.

### **Post-Event Feedback from Neysa Angeles**

Hi Prof. Bi,

I submitted my feedback form but feel like my input was incomplete. Sorry for the inconvenience, but here is my suggestion for improvement.

Option 1 for author discussion:

- Spreading out the graduate students is a good idea
- The spacing of the seats don't promote interaction. If possible, taking out 1-2 seats every 4-5 chairs will create gaps that might encourage people to group better. (Or try other layout arrangements)
  
- Instead of having students ask questions immediately, have a 10-15 minute break where "chair groups" come together to generate questions. They can be asked to come up with their top 1-2 questions, and \*why\* the question is important. (# of questions depending on # of groups and available time).
- Author can respond to questions and speak about his perspective

I think with this change, the MIX might achieve more collaboration given the current constraints.

Option 2:

I've built and run workshops for corporate clients where we use the "Scan, Focus, Act" approach to generating group output for a given problem. It's usually a 10-hr workshop and involves preparation effort to normalize the group, generate "seed thoughts" and to capture and communicate group output. For a 1.5 hour time block, I would consider the following schedule:

Goal: collaborative information exchange and participation

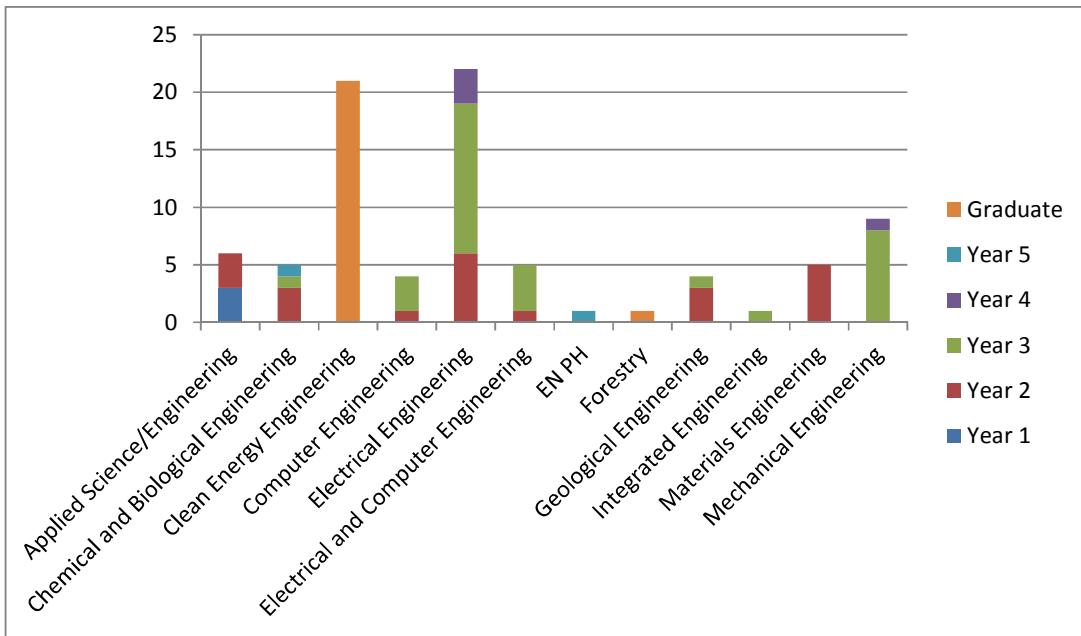
- 15-20 minute "Scan" : brief lecture on a particular topic, ex: " The Effect of Energy Demand on BC Wildlife"
- 5-10 minutes to introduce and arrange for the "Focus" part. Ask a related question, ex: "If a pipeline is to be built from Alberta to Northern BC, what are the most important questions that need to be answered, and why?"
- 15-20 minutes "Focus" : break into groups and brainstorm group response. Professors can walk around to help facilitate group discussion
- 20 - 30 minutes: "Act" : present and discuss groups' output. (People won't feel that they've adequately discussed the results, but that is a constraint and also encourages further discussion outside the setting)

Hope this helps. I'd be happy to discuss if it's of interest.

Thanks,

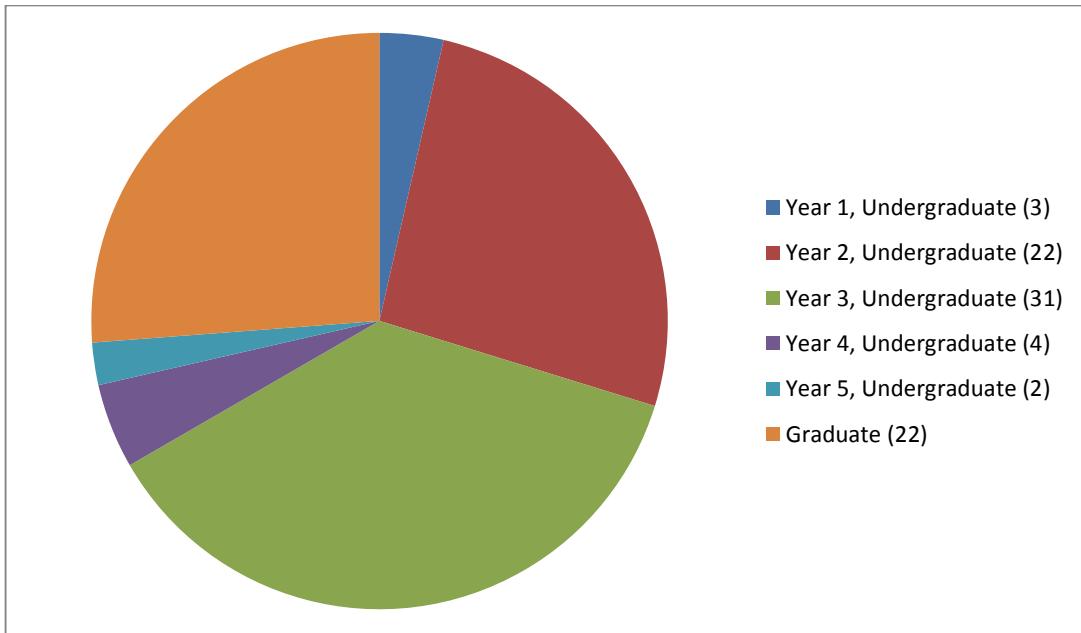
Neysa Angeles  
Candidate, ME Clean Energy  
UBC

**Department/Program/Major:**



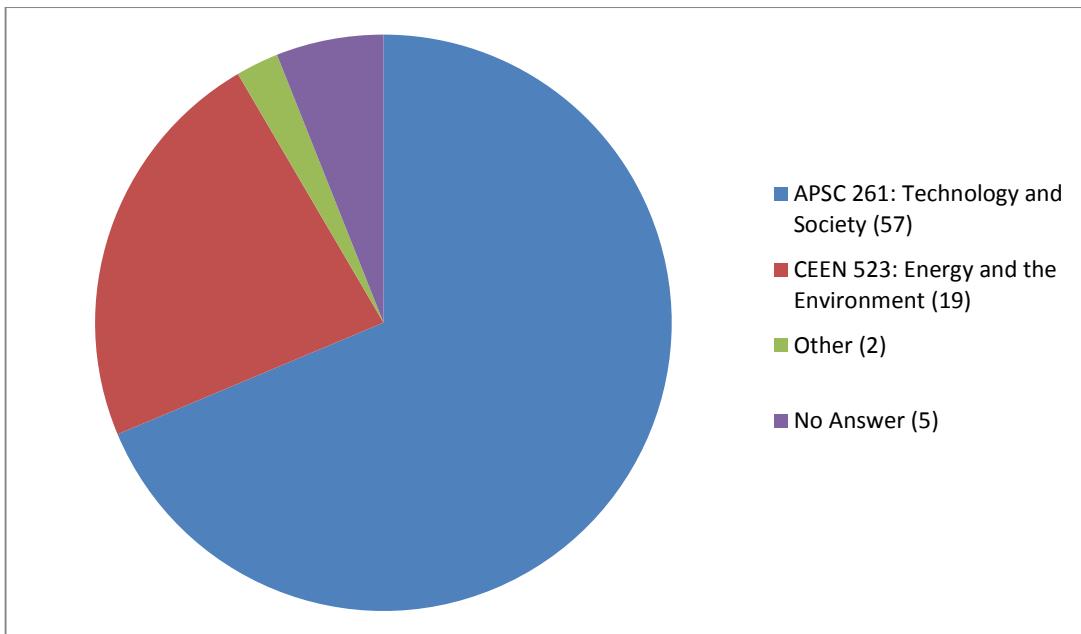
**Please select one:**

- Undergraduate student (Year: \_\_\_)
- Graduate student:
- Staff
- Instructor



**Are you registered in APSC 261: Technology and Society or CEEN 523: Energy and the Environment?**

**If yes, please circle the appropriate course.**



**Note:** Although 5 students wrote 'no answer' and two wrote 'other' responses, their program information provided indicates that there were 62 respondents from APSC 261 or APSC 261-affiliated students (one student had dropped the course) and 22 respondents from CEEN 523 (one student may have attended from another course, but learned about it through Dr. Bi and is a graduate student).

**If no, how did you hear about this event?**

- Dropped out of APSC 261, but interested in the talk
- Dr. Tony Bi

**Please introduce yourself to the person beside you, and discuss your response to this session.**

**What did you find especially interesting, surprising, or valuable?**

- Reducing Energy Consumption as Key Solution
  - I am interested in how to make people to use less energy
  - That solar cells have so many cons and that reducing energy consumption is truly the best way to combat the energy crisis. Furthermore, how much of an impact junk mail and diet have on energy consumption
  - Instead of finding solution for alternative energy, this session is more focussed on how we can reduce the consumption of energy
  - The part where he said that we need to reduce our energy consumption was really surprising. Because it is not possible for anyone to change the people's way of living. But, as a whole, I found it interesting.
  - We will probably be reliant on fossil fuels for years and years to come, but we can do many things to at least reduce our carbon footprint
  - That we need to stop consumption more than turning to production
  - Using energy saving tech helps more than high-tech renewable energy; in my point of view for renewable energy, we have to think in our local possibilities
  - Reduction of consumption vs. alternative energy
  - The entire concept of reduction of consumption vs. new sources of energy, how new technologies may not be the answer and may in fact make the problem worse
  - Reducing energy usage is really important; we need to come up with solution to find alternative energy
  - I was most impressed by the fact that low-tech energy production could end up being much more economic and environmentally friendly than the high-tech methods that are constantly being developed
  - We do not frequently expand our vision of energy consumption, more than the actual energy sources and the desires to find new renewable ones
  - What I found especially surprising is the fact that our energy consumption is so high in comparison to our energy production capabilities
  - There will be many choice and method to be sustainable, not just have new clean-energy, also reduce consumption will help
  - To be energy-sustainable, reducing energy consumption is more important than looking for a new energy source
  - What I am particularly interested in is that how we can balanced out a country's development and the reduced consumption of energies (especially for developing countries)
  - I found the idea of energy consumption reduction is the most efficient solution to the energy crisis valuable
- Looking for Solutions
  - I find it interesting that despite all the hype about green technology we don't have any remotely viable solution to replace fossil fuels yet.
  - We talked about a fusion reactor that is currently being discussed in Europe
  - Although we cannot ideally achieve the best for both social and energy perspectives, we need to work toward a broader point of view
  - Ozzie has a very valid point, but I think he should elaborate more on finding solution

- The interesting part was that there were no good solutions presented. You can reduce energy consumption as much as possible, but you are still using fossil fuels in the end.
  - I find it interesting that ultimately we still don't have an answer to the underlying question of decreasing energy
  - There are no solutions. Also, interesting speaker who had some valid points, but not all.
  - I found the alternative view interesting, however I was expecting a more solidified action plan about where we need to go
  - All alternative energies are just a more expensive form of fossil fuels. Energies that exist such as nuclear, may be the best to solve our energy crisis
- Questions about Green/Alternative Energy and Hi-Tech Solutions
  - This session makes me question about is there really a 'green' energy in reality
  - This is a very different view to mainstream. It leaves me with many additional questions to research or include in my future research.
- Link between Alternative Technologies and Fossil Fuels/Environmental Harm
  - I find that solar cell energy is still an issue if we want to practice it all around the world and people are still dependent on fossil fuels
  - That solar power really is not what a lot of people make it out to be
  - It was interesting in the sense that it made me think about both sides of different situations. I like the idea of clear solar energy but had no idea about the potential costs or ramifications it causes on the environment.
  - Rebranding alternate as rebranded fossil fuels
  - Solar cell technology can be very harmful to the environment
  - I found it surprising that the alternative energy options that I had previously thought as a good and sustainable are actually not good options and have harmful effects
  - I found the idea of our moving towards greener energies may not be sustainable as we all generally believe very valuable. Green energies may not be as sustainable as we all expect.
  - I found that society is very misinformed about the consequences of using technologies such as solar cells. Since the manufacturing byproducts of solar cells do greater harm to the environment compared to the byproducts of gasoline
  - I found it interesting and valuable how inefficiencies are not being addressed before these supposed green technologies
  - I found the fact that solar cells in the long run are more harmful/provide less energy production than regular fossil fuels. I now realize the amount of energy I consume
  - It was a very interesting point of view. I did not about the environmental impacts of solar panels. The /illegible/, green-building, just other sample measures seem a very good option to reduce GHG emissions
  - The broad evaluations of solar cells as an alternative energy source
  - I found the actual total energy savings gained from solar panels surprising as making the switch to energy saving LEDs will actually save a lot more
  - Research; clean energy not as clean as they are.
  - The difference between fossil fuel and alternative energy; the storable transferable etc.

- The value of the low-tech solution rather than the high-tech; we're caught in a stalemate of using fossil fuel to develop technologies to become less dependent on fossil fuels
  - The relationships between fossil fuels and clean energy, and the problems using wind, solar or other renewable sources like geothermal
  - I find the unanimous dependence on fossil fuels in all forms of energy interesting. The fact that any alternative energy requires oil to produce and manufacture.
  - I found very interesting his view on alternative technologies and their dependence on fossil fuels.
  - Learned some of the draw-backs from geo-thermal energy
  - I find the presentation to be shocking. Normally people look forward to solar energy but they don't really see the disadvantages of it.
  - I'm surprised that solar energy leave such a big carbon footprint behind
  - That we need to do a lot of research, that the clean energy that we know maybe is not that clean. We need 'no fossil fuel' thinking.
  - The limitations of current renewable energy technologies were highlighted in this session. This was illuminating as it showed the need for real innovation in this technology sector.
  - That solar system is not just a benefit. Technologies have side effect. Green energy source is not always the best choice.
  - It changes my opinion about those new tech. energy.
  - Fact about solar cells -> the negative impacts; made me think and get interest in method of harvesting energy from sun
  - How solar system would replace other energy sources and also surprised by how hard /illegible/ can be achieved.
  - Alternate energy sources. And the side impact behind solar cell
- Impressions of Presentation Style/Content
  - We found that having the speaker/author actually share his personal thoughts helped explain some questions we had towards the book itself, as it made it clearer to understand Zehner point of view/stand on the topics discussed
  - What surprised me is how based around economics and not tech this presentation was
  - Holistic perspective
  - Comment by Ozzie that he does focus on the future alternative energy sources in book. Suspect the impact of his publisher on forcing the book to look more like it denigrates alternative energies
  - The guest speaker's message was unique, candid, and interesting
  - I found the speaker's take on clean energy to be very different to other info I have heard on the subject. The fact that clean energy is not so clean surprised me.
  - I find the way the author thinks interesting. Especially the way he does diet and everything for energy saving.
  - I was interested in all the other topics that arose in the discussions of sustainable green technologies such as food, water, and social issues
  - The illusions presented were though provoking

- Everything has two sides, and solar cell is not an exception. I am still struck by the real data presented by Dr. Zehner.
  - I found this session to be quite valuable as it allowed me to hear opinions and perspectives of students in a different course, field, and educational level. It was very beneficial to be able to hear new arguments coming from more diverse audiences. In terms of the content of the presentation, I found some of his points conflicts with others. For example, how can we not focus on new energy technologies and reduce consumption in the future?
- Impressions of Q & A Period
  - I feel like the author had little answers to the audience's questions. I think the topic itself is interesting but it's such a broad topic, most of it just brings up more questions than it answers, which could be good or bad
  - The discussion between the speaker and students are really open my mind that different person have different point of view on the same topic
  - The fact that the student was quite interested in sustainable projects in Canada.
  - [Repeated from above] I found this session to be quite valuable as it allowed me to hear opinions and perspectives of students in a different course, field, and educational level. It was very beneficial to be able to hear new arguments coming from more diverse audiences. In terms of the content of the presentation, I found some of his points conflicts with others. For example, how can we not focus on new energy technologies and reduce consumption in the future?
- Other Surprises
  - I thought it was surprising that Zehner was fired for giving his point of view on the solar cells on the house.
  - That Zehner was let go from one of his jobs for saying that solar panels are an incorrect response to sustainability
  - Energy is not only about its efficiency and evaluation, it also relevant to the society, even every person
  - I found this session very valuable as it has open my eyes towards factors of energy consumption/production that I have not consider before
  - Like he stated in his book, every different aspect is correlated with the use of solar cell energy. Anywhere from economics, political to engineering is all needed to work together for installation and the uses of solar energy.

**Did holding this session in a different location than your usual classroom and with students other than those usually in your course enhance your learning experience? Please explain.**

- Yes
  - Yeah, we are able to share our opinions from different class
  - Yes, it was nice to have the material from the reading reiterated verbally by the author himself
  - Yes, it definitely did, great lecture overall.
  - Yes, it felt more formal.
  - Yes, the more we switch up the class, the more my interest can be held.
  - Definitely. We had the opportunity to listen different /perspectives/, and a beautiful location always helps

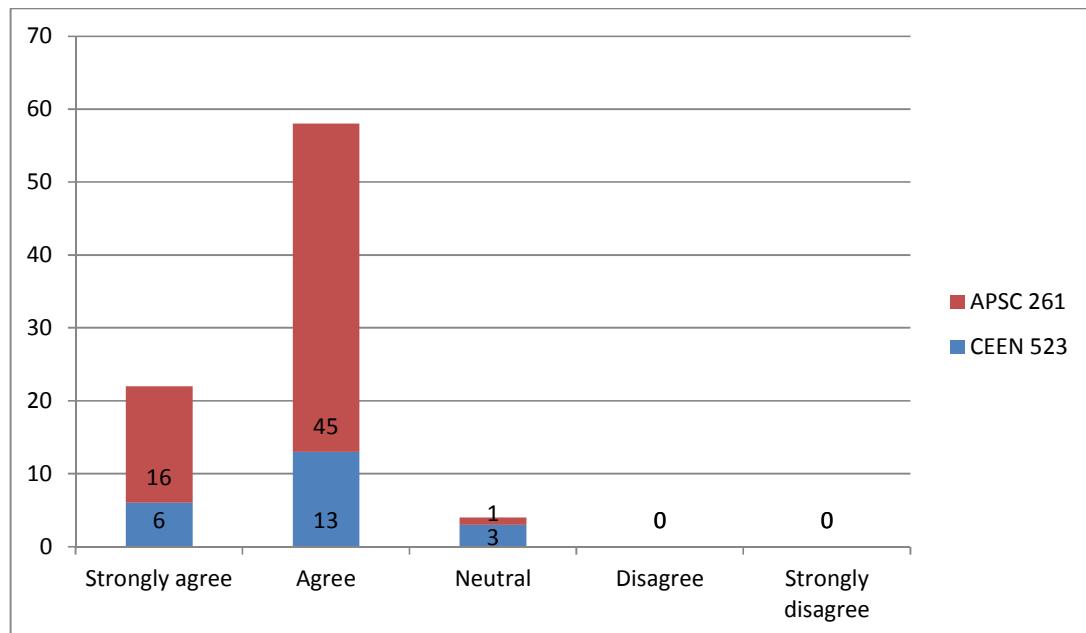
- Yes it did. There were more opinions. Grad student questions were very good.
- Yes, it creates a different surround which helps to free our mind a bit from the ordinary classroom materials
- Yes, it is good to interact with grad students.
- Yes. We can have more chances to exchange our ideas with other students.
- Yes, this session actually enhances my learning experience; the Q&A session was usually informative; I found out that even a food diet can affect energy industry
- Yes. In a way we can hear other people thoughts, opinions, viewpoints. Especially from those grad students which typically have broader viewpoint.
- Yes, it makes me to think in a different perspective and hearing other student opinion is good for your knowledge
- Yes, more informal
- Yes, it gives you a bigger perspective about the issues we all care about
- Yes, because we got to hear questions from the other class that we may not have covered in ours
- Yes, the change was refreshing and the set up felt more relaxed and engaging at the same time
- Yes, I had the opportunity to commingle with others having a slightly different perspective than myself
- Yes, it diversified the question base, and enhanced the discussion
- Yes, this change really enhanced my experience because I was able to engage in discussions with others who were not in my class. They provided me with valuable inputs and really enhanced my learning experience
- Yes, many people from other class asked questions and expressed their ideas. This gives me another perspective to the energy issue.
- Yes! I love this atmosphere and appreciate lectures from different aspects
- Yes, because there were students studying in a different program than I who had different viewpoints and input in the Q&A
- Yes, we can share different experiences
- Yes, different people have different opinions, this kind of session can bring in more information
- That's great, we can exchange our thoughts from different angles and research fields
- Yes, it makes me feel more special about this session and happy to learn from one another
- Yes, it provides us with a chance to work with student with different disciplinary background. This allows us to share our different views on issues such as the energy crisis.
- Yes. Having graduate students and undergrad students asking different questions during the Q&A session provided different perspectives of the topic and got the discussion flowing nicely
- Yes. I think some people from different department have different point of view.
- Yes being in a different environment enhanced my experience
- Yes, it does, as a pool of experience/ingenuity increases in multidisciplinary class, so does learning experiences (because) it gives chance of exploring new ideas

- Yes. We can meet other people outside our faculty and graduate students as well. We can experience something different from our own faculty and get to know other people.
  - YES. As a undergrad students, there's not that many chance to interact with graduate students. They have a lot more experience/knowledge.
  - Yes, it's a nice change.
  - Enhance, it was interesting being in a different setting, and sitting and talking with different people than usual
  - It is nice to be in a new location and having a mix of disciplines enhanced the experience. There was a wide range of questions asked.
  - Yes, it gives a nice different perspective
  - Yes. It's good to get out of the classroom once in a while.
  - Yes, net benefit to mixing it up. Forces people out of normal comfort areas and makes them open to new thoughts
  - We receive a wide range of questions depending on the impact of the Q&A
  - It was good to know a new lot of people and knowing, learning new stuff from them which I had not known of. Ya, the class is interactive
  - I agree interacting with students other than those in my usual course enhances my learning experience because having the chance to meet with people of different expertise enriches my education and broadens my perspectives.
  - Broad range of questions
  - One benefit that is apparent is that there are more questions and more perspectives that students get to experience
  - Yes, you get new ideas and points of view from listening to other people's questions.
  - It felt more like a 'formal' setting. Good location.
- No
  - NO
  - No, felt the same
  - I do not believe a change in location and peers enhances the learning experiences, because there is minimal group activities
  - Not really because the message would have been the same and there is still many diverse voices in my usual classes
  - It would have been better to hold the discussion in a bigger room
  - Not really since the location was hard to find and many students might be late, and for whoever sits in the far back is really hard to enhance and comprehend.
  - No, because I have to walk so far!
  - Not really, didn't have much chance/need to talk to other students in other programs
  - Nope, it made it worse, I would rather have it in our lecture hall (earth science building)
  - No. Too shy.
  - No, I think it was much worse here as it was smaller, not sloped, only one screen, /illegible/ and uncomfortable. Also harder to see and hear. I also think it was very far, which made many people late.
  - No. The squished seating was uncomfortable.

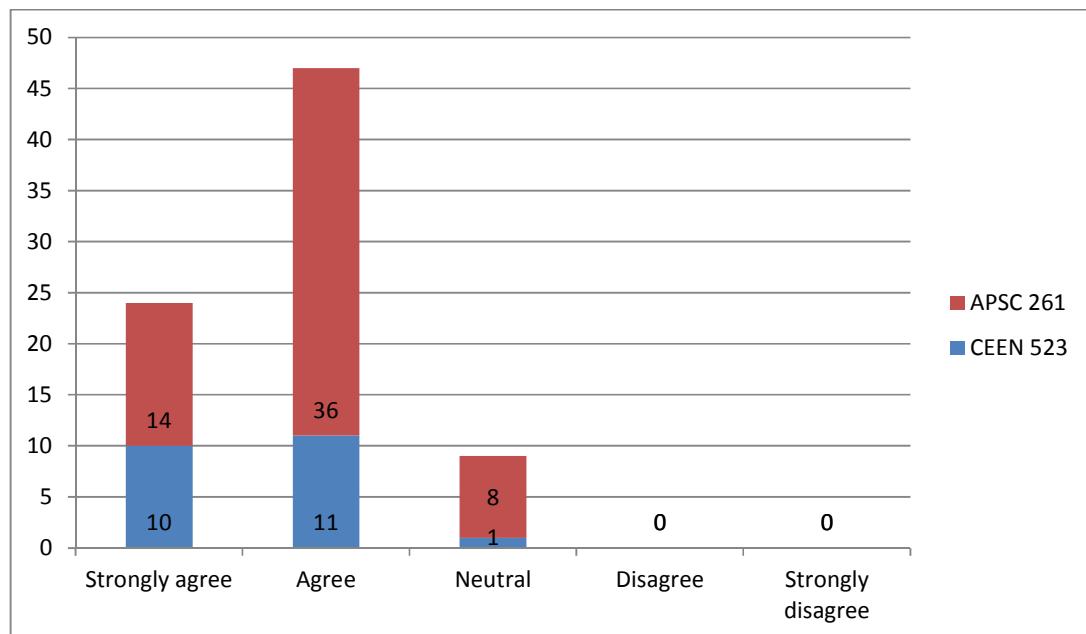
- No, it was cramped
  - Not really, because most of the interaction is with the speaker
  - No – small room here and no desk.
  - No because we were still sitting in rows, eyes on the front
  - Location was hard to find. Not much ‘interaction’ with other student made no difference with being with different student
- Yes and No
  - The classroom was too small, would not say it enhanced the experience. Being a mix of graduate and undergraduate students was a good idea
  - It does enhance my learning experience by attending this kind of sessions with different people from different classes. However, the location is a bit too far from engineering building (where more than 50% of the people are coming from). This may cause more energy for people from engineering than from other faculties.
  - No + Yes. The location made no difference. The people interacted very little.
  - In a way. New environment sometimes aids in remembering the talk.
  - The location of session does not matter. The valuable part of Mix is the fact that we were able to listen, learn, and discuss with students of a different course/background
  - I cannot comment as this is my first APSC 261 tutorial (registered this week), but I did enjoy the location
  - It was interesting to hear more perspective, though there was nothing I haven’t heard before
  - Somewhat. It was better with students from other courses since more views/opinions were shared. The location was not ideal though.
  - I feel the same as I do not know everyone in my class yet
  - There could have been more facilitated interaction. The questions were asked were good food for thought and enriched the experience.
  - I explored a new part of the campus. I would have preferred a classroom – it would have been more comfortable.
  - The different location does not really help if the new location is small than your lecture class room; students in different faculties provide a different perspective to the discussion and as a result enhance the learning experience
  - The change of classmates introduced new opinions and questions, but I don’t think the change of venue necessarily made a difference
  - Yes and no. The place doesn’t matter, but with students with different courses might give you a different perspective.
  - The type of presentation, especially the question and answer period, made much more of a difference than change of class location
  - It is not an issue about ‘places’, the important thing is to share with people from other disciplines
  - It’s fresh to be at another location, and hear perspectives from people of different disciplines, but the choice of location can be better – decided to suit everyone’s convenience, so that people won’t be late because it’s hard to find the place
  - /illegible/

Please indicate your agreement with the following statements.

This event was educationally valuable to me.



In general, connecting with students and instructors in other courses or disciplines enriches my education.



#### Additional Comments

- Please indicate your agreement with the following statements.
  - This event was educationally valuable to me.

- Student's comment: don't see the difference from reading the book but hearing author's perspective was interesting.
  - Student's comment: till certain points we have to invest in new technology
- In general, connecting with students and instructors in other courses or disciplines enriches my education.
  - Student's comment: But this event was not organized (from a physical layout mostly) to be conducive to discussion.]

**Do you have anything else to say about this event or interdisciplinarity?**

- 'No' responses
  - No.
  - Nope.
  - No.
  - N/A
  - No
  - Nope
  - Nothing else
  - No
  - No
  - No
  - N/A
- General Comments
  - Would like to read his book. Also would like to find out more...
  - The event works more as an information session for me than educational since it is not closely related to area of my study
  - It was a little stale
- Presentation Content
  - I hope there will be more time to discuss about other energy generation options.
  - Not enough time to mingle, you need hours for this!
  - I liked the views of the presenter
  - Great talk.
  - It is a good valid opinion, but he threatens the capitalist system to its core (not that it's a bad thing)
  - The presentation was both informative and thought provoking
  - Should of presented something other than the solar cells since we already read that
- Room
  - Need more seats.
  - Maybe find a way for people to be closer to the speaker, it felt quite distant at the back
  - Different classroom next time?
  - It was enjoyable to be in a new location
  - Maybe have a snack bar at the back. That would be great
- Room Organization/Discussion Format
  - The room could have been organized better to facilitate discussion – chairs facing inward, etc. Small group discussion would have been awesome for those who don't like to talk in front of 140 people.
  - Interdisciplinary mix is critically important and would benefit from more effort towards a more 'workshop' type forum.
  - More chance to participate?
- Requests for More Mixes
  - Should have MORE interactions/networking opportunity events
  - They should have more of these in other courses
  - Should have more events like this

- Should happen more often!
  - We should have more of this events.
  - Mix is a great idea – we should do more of these in our course
  - Yes, these kind of classes and seminars should be promoted
  - It's really great. If it can be held 3-4 times per term, will be great.
- Values of Mixing
  - It is pretty interesting to do like a mixed faculty/grad and undergrad meeting again next time
  - It makes student to think in a different perspective
  - Very worthwhile