Undergraduates in Research: What is in it for me?

This is a short module to introduce undergraduate students to the concept of research and connect it with EML. Through the module undergraduate students will see the benefits of being involved with research. The following is offered as a guide to help with facilitating discussion. The discussion can take place in any classroom or small group setting. It is targeted to new students (such as incoming freshmen) who might not have considered getting involved in research however, it could be appropriate at any academic level. It could be part of an introduction to engineering course, a new student orientation, or possibly with a student group professional society such as an ASME Student Section. Exposure earlier in a student's career can increase the time of their involvement in research.

To set up the video, begin by asking the students to come up with a short definition of research and should/can undergraduates to be involved. Can undergraduates contribute meaningfully to research? This could be done in a think, pair, share session or as a general group discussion. If a think, pair, share technique is used, bring the class together and talk for a few minutes about the definitions. Then play the video. It is only 1 minutes and 56 seconds long.

After the video, ask if the group if they want to change their definition of research and their decision on undergraduate involvement in research. Have them comment on the role of EML in commercialization:

> Curiosity – identify the need for curiosity in research
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> Connecting Information –How do students learn information? How does research use this?
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> Creating Value – applying knowledge to create value, possibly with commercialization

Ask the following questions to determine the interest/understanding by the students:

1. What do you want to do in our future? Can research help determine this?
2. How is research useful to an undergraduate?
3. How does research help students learn? What questions do we ask in research?
4. What is the application of research?
5. The video talks about the passion for research. What is that?
6. The video ends with a student saying this:

> > Classrooms give you one interaction with a topic and then you move on
> >
> > Research is taking one topic and squeezing it for all it is worth.
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> Do you agree with his statement? What role does classroom instruction play in research? Is the statement a fair assessment of research? What is right about this statement? What is wrong about this statement?

Discuss ways for undergraduate students to be involved with research.