Motivation and Purpose

Of increasing importance in today’s research environment, which is highly constrained by limited funding and extraordinary competition, is the ability for scientists to explain their findings, and justify the funding provided by taxpayers to produce them, in ways that a general, non-expert/public audience can both understand and appreciate. This term project is designed to help you learn how to perform a critical review of a topic of personal interest to you in mesoscale meteorology, and present it in oral form to a general audience. It also is designed to provide you experience conducting an anonymous peer review of work by your peers and responding thoughtfully to their critiques of your own work. The project accounts for 15% of your final grade (see below).

Process

Following the schedule shown below, you will select a mesoscale topic of interest and develop an understanding of a particular research topic within it by reading a minimum of three refereed journal articles and using at least three other sources of information. You then will prepare a five-minute oral presentation on the topic appropriate for a general/public audience, i.e., non-experts and certainly non-meteorologists. You will be allowed to use graphics or slides, but your presentation must be free of discipline-specific jargon. You should contextualize your topic by noting its importance or relevance to society, describe the topic and the particular research associated with it, and then state questions or issues that remain to be addressed and justify the use of taxpayer dollars to continue advancing knowledge. You may use notes, but you may not read from a script.

A five minute question and answer period will follow your presentation, and the next day, Dr. Droegemeier will provide you with three other questions to which you will provide brief (no more than 1/3rd page for each question) written responses. See below for grading information.

Schedule

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<tr>
<th>Date</th>
<th>Event</th>
<th>Details</th>
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<tr>
<td>By Friday, February 5</td>
<td>Submit topic and at least 6 references (3 journal and 3 other) to <a href="mailto:kkd@ou.edu">kkd@ou.edu</a></td>
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<tr>
<td>TBD</td>
<td>Presentation sessions, most likely evenings and weekends</td>
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<tr>
<td>TBD</td>
<td>Written responses to the three questions due</td>
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Review Information

Each student will conduct a written, anonymous review of 3 presentations including the Q&A period. The total review must be limited to one-half, single-spaced page (12 point font) and should include comments on the following: context setting, command of the material, clarity of presentation regarding the research performed, avoidance of jargon, use of mental illustrations and analogies to make key points, justification of using taxpayer dollars to continue work, ability to answer questions during the Q&A period, etc. Bring in other points as you see fit. You will provide an overall rating of: excellent, very good, good, fair, or poor.

Grading

Your grade for this project will be based upon a) the written critiques provided by your peers of your presentation and the Q&A session, b) Dr. Droegemeier’s assessment, c) your written responses to the three questions provided by Dr. Droegemeier, and d) your three critiques of peer presentations.

Resources

The Alan Alda Center for Communicating Science has a number of excellent “before” and “after” examples available for teaching researchers how to communicate effectively. Check it out: HERE and HERE.