

## Student Paper Contest Student Outcomes Assessment

### a. Ability to apply knowledge of mathematics, science, and engineering

1. Two or more major errors were made in mathematical, science, or engineering knowledge or in their application in a self-chosen petroleum engineering technical presentation, including in answers to judges' questions.	2. One major or several minor errors were made in mathematical, science, or engineering knowledge or in their application in a petroleum engineering technical presentation, including in answers to judges' questions.	3. Mathematical, science, and engineering knowledge was competently applied in a petroleum engineering technical presentation, including in answers to judges' questions, except for a few minor errors or minor lack of knowledge.	4. Mathematical, science, and engineering knowledge was competently & creatively applied in a petroleum engineering technical presentation, including during judges' questions, with only one or two minor mistakes or instances of lack of knowledge.	N/A Not able to assess, did not assess, or not applicable.
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### g1. Ability to communicate effectively orally—*clarity of technical content*

1. Ideas generally not expressed logically or systematically, and statements regarding significance of the topic, problem and its solution (as applicable), or conclusions were generally absent or unclear.	2. Ideas mostly expressed logically, but presentation was somewhat disorganized or two or more statements concerning significance of topic, problem or its solution (as applicable), or conclusions lacked clarity.	3. Ideas expressed logically and in a systematic manner with mostly clear statements of the significance of topic, problem and its solution (as applicable), and conclusions, but a few minor details lacked clarity.	4. Ideas expressed logically and systematically, and clear statements of the significance of topic, problem and solution (as applicable), and conclusions were included; not more than one or two minor points lacked clarity.
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### g1. Ability to communicate effectively orally—*speaker delivery*

1. Ineffective presentation due to excessive nervousness, quiet speaking voice, excessive talking speed, or speaker mannerisms, or presentation was significantly under or over allocated time.	2. Speaker was only partly effective in conveying content because nervousness, quiet voice, mannerisms, or speaking speed detracted from presentation, or presentation was several minutes over or under allocated time.	3. Speaker was mostly effective in conveying content, but nervousness, lack of reference to graphic aids, quiet voice, or rapid speaking speed occasionally detracted from presentation; talk was within and not excessively under or over allocated time.	4. Speaker engaged audience, referred to graphic aids, had appropriate eye contact and speaking voice and speed, and was at ease, except for minor nervousness; presentation was within and not excessively under allocated time.
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**g1. Ability to communicate effectively orally—visual aids**

<p>1. Visual aides were largely ineffective in supporting ideas given during the technical presentation due to inappropriate content, lack of content, excessive number, poor design, or excessive wordiness.</p>	<p>2. Visual aids were mostly informative, but not completely effective, in supporting presentation because of design problems, wordiness, or insufficient or excessive content.</p>	<p>3. Visual aids were informative, but had a few minor instances of wordiness, unnecessary or insufficient content, or design problems.</p>	<p>4. Visual aides were informative, supportive of presentation, well designed, had appropriate content, attractive, not excessively wordy, and in an appropriate number for the presentation, except for one or two minor mistakes.</p>
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**i. Recognition of the need for and an ability to engage in life-long learning.**

<p>1. Absence of critical information in the presentation, including in answers to questions, shows that resources for technical information were superficially or not consulted.</p>	<p>2. Absence of some important information for a presentation, including in answers to questions, suggests that technical research was limited.</p>	<p>3. Competency generally displayed in use of library, online, and other technical resources to research information for the presentation as judged from technical completeness, but minor applicable technical content was lacking.</p>	<p>4. Highly competent use of library, online, and other technical resources to research information was displayed in the presentation as judged from technical completeness.</p>	<p>N/A Not able to assess or did not assess</p>
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