**General Technical Report Writing (15%) [EM@FSE2.0 m]**

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|  |  | **Not at all** | **Somewhat** | **Adequately** | **Fully** |
| (3%) | The report is free of grammatical, spelling, and punctuation errors. | Numerous errors, language needs serious polishing. | Many errors. | Minor errors. | No errors. |
| (4%) | The report is well organized and easy to follow. | E.g., no headings, flow of logic is confusing, etc. | E.g., only some headings are appropriate, structure of sections and subsections can be improved to facilitate easier flow of logic, transition sentences are needed at some places, etc. | E.g., sections and subsections are clearly labeled with headings, the structure of sections and subsections is clear and logical, but transition sentences are needed at some places, etc. | E.g., sections and subsections are clearly labeled with headings, the structure of sections and subsections is clear and logical, the flow of idea and arguments is rational with proper transition, etc. |
| (4%) | The report is written concisely in professional and yet simple language that a bright high school senior can understand. | The report is not concise, or professionally written with simple language. | Student writing achieves one of the three aspects. | Student writing achieves two of the three aspects. | The report uses concise, professional, and simple language. It is okay to use technical terms, whenever appropriate, as long as the terms are clearly explained. |
| (4%) | The report is professionally prepared with proper citation and cross-referencing. | E.g., figures, tables, and equations are not numbered, or not referenced in the narrative; references are not cited in the text, etc. | E.g., figures, tables, and equations are numbered, but not referenced appropriately in the narrative; citations are present, but not appropriate or not correct, etc. | E.g., figures, tables, and equations are numbered and referenced appropriately in the narrative; citations are present, but not appropriate or not correct, etc. | E.g., figures, tables, and equations are number and referenced appropriately in the narrative; references are well organized and cited correctly in the text. |

**Technical Content: Synthesis (50%) [EM@FSE2.0 a, g, q]**

***(42%) Understanding***

Does the report show clear understanding of the topics?

* (4%) Purpose of yellow interval
* (5%) Intent of the ITE formula
* (5%) Variables in the ITE formula
* (8%) Assumptions in the ITE formula
* (10%) Critiques of the ITE formula by the two articles
* (10%) Modifications of the ITE formula proposed by the two articles

Grading Rubric (0 – 4 scale)

* + **4**: Demonstrates complete understanding of the topic. All requirements of the task are included in response.
  + **3**: Demonstrates considerable understanding of the topic. All requirements of the task are included.
  + **2**: Demonstrates partial understanding of the topic. Most requirements of the task are included.
  + **1**: Demonstrates little understanding of the topic. Many requirements of the task are missing. (There is still something salvageable.)
  + **0**: Left blank or shows no demonstration of understanding of the topic.

***(8%) Synthesis***

The report effectively synthesizes information from different sources. (This applies to Questions #4 - #6, and possibly #7)

Grading Rubric (0 – 4 scale)

* + **4**: Demonstrates complete understanding of how information from different sources relate to each other. The information is integrated and synthesized concisely and precisely in a well-organized manner.
  + **2**: Demonstrates partial understanding of how information from different sources relate to each other. The information is somewhat integrated and synthesized.
  + **0**: No demonstration of understanding of how information from different sources relate to each other.

**Technical Content: Exploration (30%)**

Do you agree with the papers regarding Questions #4 and #5? Analyze the evidence, findings, and arguments from the papers. Make your own arguments based on the analysis. **[EM@FSE2.0 c]**

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|  |  | **Below Expectation (1/4)** | **Approaching Proficient (3/4)** | **Proficient Plus (5/4)** |
| (8%) | Analysis of the papers (detailed examination of the evidence, findings, and arguments from the papers  in order to understand their nature and / or to determine their essential features) | Little to no analysis. The report does not go beyond summarizing the main points of the papers. | Satisfactory analysis. The report provides some analysis and discussion of the main points of the papers, beyond simply summarizing them. The analysis and discussion have some merits and show some original thinking. | Comprehensive analysis. All key points of the papers are thoroughly analyzed, carefully thought through, and systematically discussed. |
| (5%) | Gathers data to support and refute ideas | Arguments are not well supported by evidence from the papers or other credible sources. Your arguments are not based on sound analysis and reasoning. | Arguments are supported by evidence from the papers, and are based on your own analysis and reasoning. Your analysis and reasoning have some merits and show some original thinking. | Arguments are supported by evidence from the papers and other credible sources, and are based on your own analysis and reasoning. Your analysis and reasoning are sound, thorough, and original. |

What other possible modifications can you think of? Provide at least two and discuss their pros and cons. **[EM@FSE2.0 b, i, n]**

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|  |  | **Below Expectation (1/4)** | **Approaching Proficient (3/4)** | **Proficient Plus (5/4)** |
| (3%) | Multiple possible modifications  **[EM@FSE2.0 b]** | The number of alternatives provided is less than required. Alternatives are not based on distinct original ideas. | Provides the minimum number of alternatives required. The proposed alternatives show some original thinking. There might be some overlap of the essential ideas underlying the proposed alternatives. | Provides more alternatives than the minimum number required. All alternatives are based on distinct, original ideas. |
| (7%) | Intent of the proposed modifications  **[EM@FSE2.0 i]** | The intent of the proposed modifications is not clearly described. Little to none reasoning is provided to support the proposed alternatives. | The intent of the proposed modifications is sufficiently described. The argument to support the proposed alternatives could be strengthened. | The intent is clearly and concisely described. The intent is based on sound reasoning, supported by firm and credible evidence, and makes intuitive sense. |
| (7%) | Pros and cons of the proposed modifications  **[EM@FSE2.0 n]** | Shallow discussion with little to none reasoning. The discussions are only from one perspective (technological, human factors, societal, etc.) | Sufficient discussion with reasonable conjecture. The discussion show some original thinking. Most of the discussions are focused on only one perspective (technological, human factors, societal, etc.), with other perspectives briefly mentioned. | Comprehensive, original discussion with credible evidence. The pros and cons are discussed from multiple perspectives (technological, human factors, societal, etc.). |

**Technical Content: Addressing Feedback (5%) [EM@FSE2.0 h]**

The report is properly and sufficiently modified based on feedback

Grading Rubric (0 – 4 scale)

* + **4**: Demonstrates complete understanding of the feedback. All comments are addressed in the response letter and the manuscript.
  + **3**: Demonstrates considerable understanding of the feedback. All comments are addressed in the response letter and the manuscript.
  + **2**: Demonstrates partial understanding of the feedback. Most of the comments are addressed in the response letter and the manuscript.
  + **1**: Demonstrates little understanding of the feedback. Many comments are left unaddressed in the response letter and the manuscript. (There is still something salvageable.)
  + **0**: Left blank or shows no demonstration of understanding of the feedback.