

Assessment of Writing in Computer Science

1. **Student Learning Outcome:** *Be able to effectively communicate in written form*
2. **Method(s) of Assessment:** Two assessment methods were utilized. First, the upper division Writing Proficiency Exam (WPE) scores for all computer science majors over the last five years were evaluated. This was done primarily to determine whether there had been any changes over the last five years in the writing proficiency of computer science majors as measured by the WPE. Second, the writing proficiency of computer science majors was assessed by examining the term papers written by students in Comp 450 during the Fall 05 semester. These term papers were read and scored by three members of the department who were not currently teaching Comp 450. Each term paper was randomly assigned to two different reviewers who assessed the writing proficiency using a rubric (given in the appendix) developed for measuring writing proficiency of college papers. The rubric was designed for evaluating the papers on six factors with possible scores on each factor of 0, 1 or 2. A score of 1 was considered to be adequate for each factor. The total score, therefore, could range between 0 and 12 with a total of 6 deemed to be adequate. When the scores of the two reviewers were the same or differed by only one, the score was deemed to be valid and the average of the two reviewer's scores was recorded. When the scores differed by more than one, the third reviewer also read the paper. If the score by the third reviewer was the same as that of one of the original reviewers that score was used. If it differed by one from the score of one of the other reviewers and was between the two previous scores then it was also used. In all other cases the three reviews met and discussed the reasons for their scores and a consensus was reached on the score.
3. **Analysis of the Assessment Results:** The data containing the WPE scores for computer science majors over the last five years was analyzed in several different ways. First the average score was computed for each of the last five years based on when the WPE was taken. Then the average score was computed for each year based on the year the student took Comp 450. In neither case was there a significant difference in the average scores from year to year. Current results are statistically equivalent to the results of five years ago.
4. **Recommendations for Actions/Changes:** Based on an analysis of the assessment results the following are recommended:
 - a. **If this was an informal assessment, is there a need to perform formal assessment(s) with respect to this SLO?**
N/A
 - b. **If this was a formal assessment, should it be repeated? If so, when?**
Based on the generally positive results it does not seem necessary to repeat this assessment in the near future. It is recommended that this, or a similar assessment activity be conducted in about five years.
 - c. **Should changes be made in the way this assessment was done? If so, describe the changes.**
This assessment activity seemed to work well although it might be wise to modify the scoring rubric slightly before the assessment is done again. In

particular, the rubric should contain evaluation criteria for the appropriate use and reference of outside sources of information.

d. Should there be any changes in curriculum? If so, describe recommended changes.

No changes in curriculum seem necessary based on the results obtained.

e. Should any other changes be made?

Based on the detection of plagiarism in two of the papers of computer science students, it is recommended that the department continue its efforts to both educate students regarding what constitutes plagiarism and to increase efforts to detect and penalize occurrences of this form of academic dishonesty by computer science majors.

Appendix Term Paper Scoring Rubric

Assessment Rubric for Term Papers	Strong 2	Acceptable 1	Weak 0
EFFECTIVENESS OF THE THESIS: Term papers written in an academic context are expected to contain a thoughtful and insightful thesis, main idea, position, or claim that is sustained throughout the paper.	The thesis is clear, insightful and thought-provoking. It is sustained consistently throughout the paper.	The thesis is clear and plausible. It is sustained consistently throughout the paper.	The thesis is weak or absent. It is not sustained throughout the paper.
RESPONSE TO ASSIGNMENT: Papers written in an academic context are expected to address the topic and issues set forth in the assignment and address all aspects of the writing task. Usually requires some discussion and refutation of an opposing view point.	The paper responds to the assignment and addresses the topic and issues. Discussion of a counter-argument is included when appropriate.	The paper responds to the assignment and addresses the topic and issues. Some discussion of a counter-argument is included when appropriate.	The paper does not respond to the assignment or treats the assignment in a superficial, simplistic, or disjointed manner. Little or no discussion of a counter-argument is included.
SUPPORT: Papers written in an academic context are expected to provide support for main points with reasons, explanations, and examples that are appropriate for intended audience.	The thesis is fully and convincingly developed, supported with good reasons, explanations and examples.	The thesis is adequately developed, supported with reasons, explanations, and examples.	The thesis is inadequately developed, unsupported with reasons, explanations, and examples.
ORGANIZATION: Papers written in an academic context are expected to be well-organized, in both overall structure & paragraphs.	The paper is well-structured; its form contributes to its purpose. Paragraphs are well-organized and carefully linked to the thesis.	The paper is generally well-structured, with only a few flaws in overall organization. Paragraphs are adequately organized and generally linked to the thesis.	The paper is poorly structured; organizational flaws undermine its effectiveness. Paragraphs are not well organized; nor are they linked to the thesis.
STYLE; Papers written in an academic context are expected to be stylistically effective – that is, to contain well-structured sentences, well-chosen words, and an appropriate tone, as a means of achieving its purpose.	The sentence structure, word choice, fluency, and tone of the paper enhance its effectiveness and reinforce its purpose.	The sentence structure, word choice, fluency, and tone of the paper contribute to its effectiveness and adequately support its purpose.	The sentence structure, word choice, fluency, and tone of the paper detract from its effectiveness or are inappropriate to its purpose.
GRAMMAR AND MECHANICS: Papers written in an academic context are expected to maintain sentence level correctness in terms of syntax, grammar, spelling, punctuation, and format.	The paper is correct in terms of its syntax, grammar, spelling, punctuation, and format.	Sentence level errors do not seriously detract from the paper's effectiveness.	Sentence level errors are so frequent and disruptive that they detract from the paper's effectiveness.

