

Student Name: _____

Student Year: _____

RESEARCH QUALIFIER: WRITING QUALIFIER

Writing is a vital part of a student's research abilities, and we want to ensure that students can be successful advocates of their own research and robotics as a whole. The writing qualifier is designed to examine the student's ability to effectively communicate research material in written forms appropriate for audiences at different levels of sophistication and with different requirements for acquiring background and detailed knowledge from the writing. Effective writing includes effective graphics and captions that are integrated with the text and that can be scanned for the gist of the document without reading the text in detail.

Achieving "qualified" status requires that each of the student's committee members read and positively evaluate a technical paper for which the student is the primary author (e.g. a journal paper, conference paper, or technical report) as well as a short summary document (executive summary of the technical paper) written solely by the student. The technical content of the summary (data, analysis, and graphics) may be drawn from the technical paper. The summary should be an "executive overview" of the research paper in the space of about one journal page of text and graphics. The scope of topical background and the level of research detail reported should be appropriate for a reader who is familiar with the broad issues addressed by robotics research, but who does not have detailed knowledge of the specific research topic studied. The Dean of the School of Computer Science is a good example of the kind of target reader we have in mind; another good example is the division manager of the agency or company sponsoring the research.

Possible topics for the paper and executive summary include (but are not limited to): the student's research skills project, the student's research conducted prior to attending the robotics program, and the student's research in support of a thesis proposal.

In order for the student to qualify, all of the questions on this form must be answered by each member of the student's Research Qualifier Committee, the review should address both the summary document and the underlying technical document. The committee member should use his or her own judgement in determining whether the student has sufficient writing ability.

General Questions:

Each of these high-level questions discuss, in broad strokes, the quality of the presentation. For each question, circle a rating, on the scale from excellent to unsatisfactory, and provide at least one sentence of explanation. For each question, the form provides a set of minimum guidelines, but as a committee member, you should use your judgment, as well.

1. **Organization:** The student must be able to present the material in a clear, concise manner, with a scope appropriate to the audience.
 - Did the document include an appropriate balance of introduction, background, research content, conclusions, and preview of future work -- including presentation graphics and references, appropriate for the document type?
 - Was the document sectioning clear, uniform, and sufficiently detailed to give the reader a precise overview of the document and clear road signs as to where he or she was in it at any particular time?
 - Did the conclusions clearly delineate among the results conclusively proven by the research reported, interesting possibilities suggested by the research reported but not yet conclusively proven, and the author's speculations as to where the research might lead given additional breakthroughs and resources, etc?
 - After reading the paper could the reader independently generate the writer's keyword list?
 - Did the writer anticipate and address all of the natural questions and concerns about the nature and motivation of the work?

Excellent

Good

Satisfactory

Unsatisfactory

Explanation: _____

2. **Writing style:** The student should write clearly, use appropriate language, and present himself or herself in a professional manner neither too stodgy nor too colloquial.
 - Was the language and style appropriate and professional?
 - Did the writer leave a good impression by paying scrupulous attention to document formatting, sizing and location of graphics, grammar, punctuation, and spelling?
 - Did the writer credit predecessors, competitors, and collaborators with appropriate acknowledgements in the text, citations, and acknowledgements section per se?
 - Did the writer follow the formatting and style requirements of the publication for which the document was intended?

Excellent

Good

Satisfactory

Unsatisfactory

Explanation: _____

3. Engaging the reader:

- Did the title clearly inform the reader of the topic and the nature of the work reported (e.g., whether it is theory or experiment).
- Did the abstract provide an accurate synopsis, and appropriate enticements to make the reader want to read the article?
- Did the writer keep the reader interested?
- Did the writer anticipate problems that the reader might have and address them with appropriate use of cross references, citations, footnotes, and appendices?

Excellent

Good

Satisfactory

Unsatisfactory

Explanation: _____

Big Picture Questions:

4. Provide a one sentence summary of the document's topic.

5. Provide a one sentence description of the document's intended audience.

6. List three specific strengths of the document.

7. List three specific weaknesses of the document.

Over all, how would you rate the document for the intended audience?

Excellent

Good

Satisfactory

Unsatisfactory

Explanation: _____

This student **HAS SATISFIED** **IS MAKING PROGRESS TOWARD** the writing qualifier.

Committee Member Name: _____ Date: _____

Committee Member Signature: _____