MAE4120 Grading Guide

Björn Andersson

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1 Overview of grading scheme

The exam is graded with respect to the following criteria and weights:

- Introduction and formulation of research questions (15%)
- Description and usage of methods (25%)
- Reporting and interpretation of results (25%)
- Conclusions and discussion (15%)
- Overall report structure (10%)
- Formatting and references (10%)

The criteria are rated on a scale from 0 to 5, indicating the degree of fulfillment of each criterion with 0 indicating complete lack of fulfillment and 5 indicating total fulfillment, with intermediate values equally spaced between the extremes. The final grade is determined by the weighted average of the different criteria, given that all the required sections of the report are included. This means that the weighted average is not the sole determinant of a passing grade and that all the parts of the report listed in the exam instructions have to be included for a passing grade. The correspondence between the scores and the letter grades are A: $\geq$4.25, B: $\geq$3.75, C: $\geq$3, D: $\geq$2.25, E: $\geq$2, F: < 2.

2 Detailed descriptions of the grading criteria

2.1 Introduction and formulation of research questions

The introduction states the problem of the study, provides a thorough but succinct review of the literature and introduces the research questions. The introduction is of an appropriate length and does not omit important previous work or give undue weight to a particular point of view. The use of item response theory in the chosen setting is justified. The motivation for the research questions is clearly indicated and references are provided which are relevant to the research questions.

2.2 Description and usage of methods

Correct interpretations of general concepts are demonstrated, such as for example parameters, parameter estimates, parameter estimators, test statistics, hypothesis tests, confidence intervals and model identifiability, if these are relevant to the study. Correct interpretations of central concepts in item response theory are demonstrated, such as for the item characteristic curve/item category response functions, test characteristic curve, item/test information function, latent variable, observed variable, and measurement invariance/differential item functioning. If examining differential item functioning, the exact procedure used is clearly described. The motivation for the usage of the models in the study is included and is clear. The description of the data collection or the sampling procedure is included and clearly outlined. Missing data treatment is described and justified, if applicable. A clear understanding of central concepts in the course is demonstrated. The emphasis regarding the described methods is appropriate for the actual study conducted.

2.3 Reporting and interpretation of results

Results are presented which are relevant to the stated research questions and which are directly linked in the text to the research questions. The results of estimated model parameters are provided and the results are appropriately interpreted. The properties of the items in the study are correctly reported. Model fit and item fit evaluation are presented. A correct interpretation and usage of model fit or item fit statistics is demonstrated, such as a) correctly applying the recommended cut-off criteria, b) correctly interpreting fit measures, and c) correctly interpreting what a certain test statistic tests for.

2.4 Conclusions and discussion

A correct interpretation of the results and an appropriate conclusion that is the consequence of the results is demonstrated. The discussion is sufficiently long and includes how the results can be generalized and how the results are related to other studies. Limitations of the current study are outlined.

2.5 Overall report structure

The abstract provides a stand-alone summary of the study with the main conclusions of the study included and is not too long or too short (maximum 200 words). The correct content is included in each of the sections. For example, the results should not be in the methods section, a description of methods should not be in in the results section, the research questions should not be stated in the methods section, the discussion should not be mixed in to the results section, and new results should not be presented in the discussion section. The text has a good logical flow that makes it easy to follow the presented reasoning. The number of words is within the specified word range allowed (2500 to 3500 words, excluding the abstract, reference list, figures and tables).

2.6 Formatting and references

The text is appropriately structured into paragraphs that are neither too long or too short. Page numbers are included in the submission. The language is clear and any deficiencies do not impact the interpretations or understanding of the text. Total fulfillment can be attained despite grammar issues in the text, if these do not hinder understanding the text. The references are consistent with the APA version 7 guidelines.