#### Before this section you would talk about data screening and other participant information.

#### *Path Analysis.* A path model of the relationship between expected grade, grading, and overall evaluation questions were analyzed using the *lavaan* package in *R* and maximum likelihood estimation. The following fit indices were examined to determine model adequacy: root mean square residual (RMSEA: Steiger, 1990), Normed Fit Index (NFI: Bentler & Bonnett, 1980), Tucker-Lewis Index (TLI: Tucker & Lewis, 1973), and the Comparative Fit Index (CFI: Bentler, 1990). Small values (<.06) are preferred for the RMSEA and RMR indices, and high values closer to 1.0 indicate better fit for the NFI, TLI and CFI.

#### Because of the strong inter-correlation between grading questions, these questions were averaged to create one overall score for grading in a course. Figure 1 shows the path analysis. A student’s expected grade was thought to influence their ratings on the fairness and appropriateness of grading in the course, which then influences their overall evaluation of the course. A student who is performing poorly in a course may perceive the grading to be unfair, which will then lower their evaluation of the course as a whole.

The fit statistics for the model are in Table 1, and show excellent fits in NFI, TLI, CFI, RMR, and a good fit for RMSEA. The chi-square statistic is a little high, but this statistic is influenced by sample size. The path between expected grades to grading was found to be 0.41 (*SE* = 0.02). As student’s expected grade increased, their perception/rating of grading and assignments also increased. The relationship between grading and overall evaluation was 1.16 (*SE* = 0.02), indicating that as ratings of grading increased, overall evaluation also increased.

Table 1.

*Fit Statistics for Path Analysis*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Model | *X2* | *df* | SRMR | RMSEA | NLI | TFI | CFI |
| All evaluations | 12.68 | 1 | 0.003 | 0.057 | 0.997 | 0.992 | 0.997 |

Overall Evaluation

Class Grading

Expected Grade

*Figure 1*.