

**Appendix B. Explanations of how CLASS-Bio statements were modified following student interviews.**

Seven statements were revised as the result of interviews to clarify terminology or context of the question. As most of these were dropped following factor analysis, we will only describe the three that remain on the final version of the survey.

The statement “I do not spend more than five minutes stuck on a biology question before giving up or seeking help from someone else” created several concerns over “five minutes” and thus “five minutes” was replaced with “a few minutes.”

The statement “I will continue to work on a biology problem until I understand why something works the way it does” elicited ambiguous responses depending on whether students thought the context was an exam or a homework problem or how much time was available until homework was due. To clear up this issue of context, the phrase “When I am not pressed for time” was added to the beginning of the statement.

The statement “Spending a lot of time understanding the fundamental experiments behind biological concepts is a waste of time.” Again discrepancies about the amount of time led to the revision of the statement to “It is a valuable use of my time to study the fundamental experiments behind biological ideas”.