**Additional file 2**. Themes from student responses decided upon by two reviewers for the thematic analysis. The percentage of students who mentioned each theme is shown. Only themes related to teleological reasoning and student learning were included in this analysis.

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| --- | --- |
| Theme | Percentage of students who mentioned theme |
| The student mentioned that they: didn’t know about teleology previously -or- teleology was a new concept to them.  | 68.6% |
| The student mentioned that they are more aware of causes, rather than purpose in biology -or- their use of teleological thinking/awareness has changed. | 84.3% |
| The student mentioned that it is easy to think evolution has a purpose -or- difficult to think non-teleologically -or- difficult to think about life (evolution) as a random, non-directed process.  | 70.6% |
| The student mentioned that they view design-based teleological thinking as an obstacle to learning/accepting evolution?  | 37.3% |
| The student mentioned that they now have a deeper understanding of evolution after taking course.  | 94.1% |