

Interventions vs Measurements

|                        | Grades  | Engagement  | Preferences  | Psychological Factors            | Admin Work-load  | Student Work-load   |
|------------------------|---|---|--|----------------------------------|--|---|
| Binary Grading         | [31] [6] [33]<br>[17] [30] [28]<br>[8] [26]   | [6] [28] [17]   | [31] [6] [33]<br>[17] [30] [28]<br>[5] [26]  | [30] [31]                        | [31] [6] [28] [5]<br>[26]                                    | [31] [6] [33]<br>[30] [28] [5]  |
| Bucketed Grading       | [3] [35] [13]<br>[36] [30] [23]<br>[34] [15] [14]<br>[26]   | [3] [13]  | [3] [35] [13]<br>[30] [34] [21]<br>[15] [14] [26]  | [13] [35] [30]                   | [13] [34] [15]<br>[26] [9]                                   | [3] [30] [23]<br>[34] [15]  |
| Mastery Learning       | [13] [6] [17]<br>[26] [3] [24]<br>[31] [19] [30]<br>[27] [25] [10]<br>[28] [32] [33]<br>[23] [22] [15]<br>[8] [1] [7] | [3] [24] [37]<br>[13] [6] [19]<br>[17] [27] [18]<br>[28] [12] [1] [7] | [13] [6] [17]<br>[26] [3] [24]<br>[31] [11] [19]<br>[27] [30] [21]<br>[25] [4] [10]<br>[28] [37] [33]<br>[22] [15] | [31] [13] [19]<br>[30] [10] [22] | [31] [13] [4] [6]<br>[19] [18] [7]<br>[28] [15] [12]<br>[26] | [3] [25] [31]<br>[33] [6] [11]<br>[30] [27] [23]<br>[18] [28] [15]<br>[12]    |
| Resubmissions          | [3] [2] [25] [29]<br>[6] [20] [19]<br>[30] [27] [23]<br>[22] [34] [28]<br>[15] [16]                                   | [3] [2] [37] [6]<br>[20] [19] [27]<br>[28] [12] [16]                  | [3] [2] [25] [37]<br>[29] [6] [20] [4]<br>[19] [30] [27]<br>[22] [21] [34]<br>[28] [15] [16]<br>[5]                | [22] [19] [30]                   | [4] [6] [19] [34]<br>[28] [15] [12]<br>[5]                   | [3] [25] [2] [6]<br>[20] [30] [27]<br>[23] [34] [28]<br>[15] [12] [16]<br>[5] |
| Minimum Grades         | [2]   | [2]   | [2]  |                                  |  | [2]   |
| Student input on grade | [15] [30]   |   | [15] [30]  | [30]                             | [15]   | [15] [30]   |

Measurements vs Populations

|                       | K-12 | Undergraduate   | Instructors       | Introductory Course                             | Gender   | Race     | Accecssibility |
|-----------------------|------|---|-------------------|---|----------|----------|----------------|
| Grades                | [22] | [13] [6] [20]<br>[17] [16] [26]<br>[3] [24] [31]<br>[19] [30] [27]<br>[2] [25] [29]<br>[10] [34] [28]<br>[14] [35] [32]<br>[33] [36] [23]<br>[15] [1] [7] | [34] [28]         | [24] [29] [33]<br>[10] [27] [23]<br>[8] [1] [7] | [23] [6] | [23] [6] | [8] [2]        |
| Engagement            |      | [3] [24] [2] [37]<br>[13] [6] [20]<br>[19] [17] [27]<br>[18] [16] [28]<br>[12] [1] [7]  | [28]              | [24] [27] [18]<br>[1] [7]                       | [6]      | [6]      | [2]            |
| Preferences           | [22] | [13] [6] [20]<br>[17] [16] [5]<br>[26] [3] [24]<br>[31] [11] [19]<br>[27] [30] [21]<br>[2] [25] [29] [4]<br>[10] [34] [28]<br>[14] [35] [37]<br>[33] [15] | [4] [34] [28]     | [24] [29] [33]<br>[4] [10] [27]<br>[21]         | [6]      | [6]      | [2]            |
| Psychological Factors | [22] | [35] [31] [13]<br>[19] [10] [30]  |                   | [10]  |          |          |                |
| Admin Work-load       |      | [31] [13] [4] [6]<br>[19] [18] [7]<br>[34] [28] [15]<br>[12] [5] [26] [9]   | [4] [34] [28] [9] | [4] [18] [7] [9]                                | [6]      | [6]      |                |
| Student Work-load     |      | [3] [25] [2] [31]<br>[33] [6] [20]<br>[11] [30] [27]<br>[23] [18] [34]<br>[28] [15] [12]<br>[16] [5]  | [34] [28]         | [27] [18] [33]<br>[23]                          | [23] [6] | [23] [6] | [2]            |

Populations vs Interventions

|                     | Binary Grading                              | Bucketed Grading   | Mastery Learning   | Resubmissions  | Minimum Grades | Student input on grade |
|---------------------|---|--|--|--|----------------|------------------------|
| K-12                |   |  | [22]   | [22]   |                |                        |
| Undergraduate       | [31] [6] [33]<br>[17] [30] [28]<br>[5] [26] | [3] [35] [13]<br>[36] [30] [23]<br>[34] [21] [15]<br>[14] [26] [9] | [13] [6] [17]<br>[26] [3] [24]<br>[31] [11] [19]<br>[27] [30] [18]<br>[21] [25] [4]<br>[10] [28] [12]<br>[37] [32] [33]<br>[23] [15] [1] [7] | [6] [20] [16] [5]<br>[3] [19] [30]<br>[27] [21] [2]<br>[25] [29] [4]<br>[34] [28] [12]<br>[37] [23] [15] | [2]            | [15] [30]              |
| Instructors         | [28]  | [34] [9]   | [4] [28]   | [4] [34] [28]  |                |                        |
| Introductory Course | [8] [33]                                    | [23] [21] [9]  | [24] [4] [33]<br>[10] [27] [23]<br>[18] [21] [8] [1]<br>[7]  | [29] [4] [27]<br>[23] [21]   |                |                        |
| Gender              | [6]   | [23]   | [23] [6]   | [23] [6]   |                |                        |
| Race                | [6]   | [23]   | [23] [6]   | [23] [6]   |                |                        |
| Accecssibility      | [8]   |  | [8]  | [2]  | [2]            |                        |



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