## **Code System**

| Code System               | Journal Article | IES Study | Overall Frequency |
|---------------------------|-----------------|-----------|-------------------|
| Code System               | 3027            | 2819      | 5591              |
| Data Collection           |                 |           |                   |
| Observation               | 90              | 97        | 189               |
| Assessment                |                 |           |                   |
| Written Sample            | 30              | 13        | 44                |
| Process Data              | 0               | 22        | 22                |
| Documents and/or Projects | 14              | 29        | 43                |
| Secondary Data            | 34              | 64        | 99                |
| Questionnaire             | 144             | 124       | 279               |
| Tests                     | 48              | 117       | 165               |
| Interview                 | 139             | 97        | 236               |
| Research Design Method    |                 |           |                   |
| Post-test                 | 0               | 8         | 8                 |
| Mixed Methods             | 255             | 17        | 272               |
| Pre-Test                  | 1               | 0         | 1                 |
| Longitudinal              | 23              | 99        | 122               |

| Multiple Baseline  | 2  | 3   | 5   |
|--|----|-----|-----|
| Retrospective Pre/Post Test                              | 1  | 0   | 1   |
| Multiple Assessments Over Time                           | 5  | 138 | 143 |
| Quasi-Experimental                                       | 21 | 17  | 38  |
| Randomized Experiment                                    | 21 | 181 | 202 |
| Random Sampling  | 8  | 5   | 13  |
| Pre Test Intervention Post Test                          | 82 | 66  | 148 |
| Mixed Method   |    | 17  |     |
| Joint Display  | 12 | 0   | 16  |
| Sequential exploratory design                            | 11 | 0   | 11  |
| Event-listing matrix                                     | 1  | 0   | 2   |
| Sequential explanatory design                            | 8  | 0   | 8   |
| Experimental-Comparison Design                           | 1  | 0   | 1   |
| Convergent Parallel (Concurrent) Design                  | 26 | 0   | 31  |
| Quantitative Data Analysis Method                        |    |     |     |
| Multi-directional and Multilevel Analyses 8              | 0  | 30  | 30  |
| Marginal Structural Models                               | 0  | 1   | 1   |
| Multidimensional Random Coefficient<br>Mutlinomial Model | 0  | 1   | 1   |
| MSEM   | 0  | 27  | 27  |
|  |    |     |     |

| Dynamic Systems                            | 0  | 1   | 1   |
|--|----|-----|-----|
| Complier Average Causal Effect<br>Modeling | 0  | 1   | 1   |
| Multidirectional/multilevel Analyses 7     | 11 | 199 | 210 |
| Generalized Linear Mixed Models            | 0  | 1   | 1   |
| Multilevel Propensity Score Matching       | 0  | 3   | 3   |
| Mixed MANOVA                               | 0  | 1   | 1   |
| Mixed ANCOVA                               | 0  | 9   | 9   |
| Nested ANOVA                               | 1  | 2   | 3   |
| Mixed-Design Repeated Measures<br>ANOVA    | 1  | 0   | 1   |
| Multi-level modeling                       | 0  | 4   | 4   |
| Hierarchical Linear Model                  | 9  | 170 | 180 |
| Model Fit Indices                          | 0  | 1   | 1   |
| SEM  | 0  | 23  | 23  |
| Analyses of Time and/or Space 6            | 17 | 66  | 83  |
| Growth Curve                               | 0  | 27  | 27  |
| Gain Score                                 | 8  | 6   | 14  |
| Latent Growth Model                        | 4  | 0   | 4   |
| Value Added                                | 3  | 4   | 7   |
| Trend Differences                          | 0  | 1   | 1   |
| Longitudinal                               | 2  | 32  | 34  |

| Survival Analysis              | 0  | 3  | 3   |
|--------------------------------|----|----|-----|
| Measurement Techniques 5       | 62 | 26 | 110 |
| Multidimensional Scaling       | 1  | 0  | 1   |
| Reliability                    | 47 | 9  | 56  |
| Principal Component Analysis   | 4  | 1  | 5   |
| Factor Analysis                | 18 | 20 | 38  |
| IRT Methods                    | 3  | 24 | 27  |
| Latent Class Analysis          | 1  | 3  | 4   |
| Cross-Validation               | 1  | 1  | 2   |
| DIF                            | 0  | 15 | 15  |
| Equating                       | 0  | 2  | 2   |
| Scale Analysis                 | 0  | 1  | 1   |
| Internal Consistency           | 0  | 3  | 3   |
| Analyses of Group Membership 4 | 4  | 6  | 10  |
| Discriminant Analysis          | 0  | 2  | 2   |
| Cluster Analysis               | 3  | 1  | 4   |
| Multivariate Analyses 3        | 56 | 93 | 149 |
| Split-Plot ANOVA               | 1  | 1  | 2   |
| Repeated ANCOVA                | 2  | 0  | 2   |
| Repeated t test                | 0  | 1  | 1   |

| Repeated Measures ANOVA    | 18  | 3  | 21  |
|----------------------------|-----|----|-----|
| Machine Learning           | 0   | 11 | 11  |
| Data Mining                | 0   | 7  | 7   |
| Bayesian Knowledge Tracing | 1   | 1  | 2   |
| Bayesian Network           | 1   | 0  | 1   |
| Regression                 | 0   | 1  | 1   |
| MANOVA                     | 14  | 8  | 22  |
| Multiple Regression        | 21  | 61 | 82  |
| Propensity Score Matching  | 2   | 10 | 12  |
| Social Network Analysis    | 3   | 3  | 6   |
| Pairwise Comparison        | 0   | 1  | 1   |
| MANCOVA                    | 3   | 4  | 7   |
| Univariate Analyses 2      | 173 | 56 | 545 |
| ANCOVA                     | 12  | 13 | 25  |
| ANOVA                      | 38  | 12 | 50  |
| t-tests                    | 78  | 7  | 85  |
| z-tests                    | 2   | 0  | 2   |
| Simple Linear Regression   | 7   | 5  | 12  |
| Nonparametric test         | 4   | 6  | 10  |

| Mann-Whitney U test              | 5   | 0   | 5   |
|----------------------------------|-----|-----|-----|
| Wilcoxon Signed-Rank Test        | 12  | 0   | 12  |
| Chi-square goodness of fit       | 1   | 1   | 2   |
| Chi-square test                  | 34  | 2   | 36  |
| Group Mean Comparisons           | 7   | 0   | 7   |
| Inter-item Correlations          | 1   | 1   | 2   |
| Z score                          | 3   | 0   | 3   |
| General Correlational Analysis   | 44  | 21  | 65  |
| Simulation                       | 0   | 2   | 2   |
| Cost Analysis                    | 1   | 20  | 21  |
| Unnamed Quantitative Methods     | 0   | 3   | 3   |
| Sensitivity Analysis             | 0   | 5   | 5   |
| Mediational Analysis             | 0   | 123 | 132 |
| Effect Size                      | 25  | 17  | 46  |
| Descriptive Analyses 1           | 158 | 59  | 217 |
| Data Visualization               | 0   | 1   | 1   |
| Single-Case Analysis             | 0   | 4   | 4   |
| Visual Analysis                  | 0   | 2   | 2   |
| Qualitative Data Analysis Method |     |     |     |
| Complexity Level 1               | 54  | 4   | 58  |

|  |     | 1  |     |
|--|-----|----|-----|
| Systematic Data Analysis                   | 2   | 0  | 2   |
| Enumerative approach                       | 1   | 0  | 1   |
| Interrater Reliability                     | 39  | 2  | 41  |
| Conceptual Maps                            | 1   | 0  | 1   |
| Structured Protocol Analysis               | 0   | 1  | 1   |
| Quantitize Qualitative Data                | 10  | 1  | 11  |
| Magnitude Coding                           | 4   | 0  | 4   |
| Complexity Level 2                         | 131 | 25 | 156 |
| Pattern matching                           | 1   | 0  | 1   |
| Member Check                               | 12  | 1  | 13  |
| Peer Debriefing                            | 6   | 0  | 6   |
| Triangulation                              | 23  | 2  | 25  |
| Domain analysis                            | 4   | 0  | 4   |
| Cross-case analysis                        | 4   | 2  | 6   |
| Template analysis                          | 1   | 0  | 1   |
| Independent Coding and Check for Agreement | 29  | 2  | 31  |
| A Prior Coding                             | 40  | 2  | 42  |
| Case study                                 | 42  | 5  | 48  |
| Ethnography                                | 4   | 1  | 5   |

| Content analysis                       | 25  | 9  | 34  |
|--|-----|----|-----|
| Content analysis                       | 23  |    | 31  |
| Participatory Research                 | 10  | 0  | 10  |
| Action Research                        | 9   | 0  | 9   |
| Linguistic Analysis                    | 1   | 4  | 5   |
| Complexity Level 3                     | 162 | 15 | 178 |
| General Thematic Organization          | 31  | 2  | 33  |
| Narrative inquiry                      | 1   | 0  | 1   |
| Interaction-analysis technique         | 1   | 1  | 2   |
| Phenomenology                          | 7   | 0  | 7   |
| Conceptual Metaphor Theory             | 1   | 0  | 1   |
| Coding Analyzed and Refined Throughout | 26  | 0  | 26  |
| Interpretive Analysis                  | 7   | 3  | 14  |
| Etic and Emic Codes                    | 1   | 3  | 4   |
| Synchronic Analysis                    | 1   | 0  | 1   |
| Discourse analysis                     | 9   | 4  | 13  |
| Constant Comparative Analysis          | 39  | 2  | 41  |
| Theoretical Coding                     | 3   | 0  | 3   |
| Selective Coding                       | 17  | 1  | 18  |

| Axial coding               | 13  | 1  | 14  |
|----------------------------|-----|----|-----|
| Open Coding                | 46  | 1  | 47  |
| Grounded Theory            | 24  | 5  | 29  |
| Purpose                    |     |    |     |
| Other Goal                 | 0   | 12 | 12  |
| Efficacy and Replication   | 77  | 99 | 176 |
| Development and Innovation | 15  | 76 | 91  |
| Measurement                | 3   | 47 | 29  |
| Exploration                | 160 | 81 | 241 |