Supplementary Material

# Supplementary Tables

# Supplementary Table 1. Categories chosen for analysis in WoS.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rank | Category | Rank | Category | Rank | Category |
| 1 | Linguistics | 20 | Multidisciplinary Sciences | 39 | Psychology Biological |
| 2 | Rehabilitation | 21 | Genetics Heredity | 40 | Acoustics |
| 3 | Psychology Developmental | 22 | Surgery | 41 | Computer Science Interdisciplinary Applications |
| 4 | Audiology Speech Language Pathology | 23 | Medicine General Internal | 42 | Literature |
| 5 | Psychology Experimental | 24 | Family Studies | 43 | Physiology |
| 6 | Education Educational Research | 25 | Social Work | 44 | Computer Science Information Systems |
| 7 | Pediatrics | 26 | Neuroimaging | 45 | Respiratory System |
| 8 | Education Special | 27 | Health Care Sciences Services | 46 | Biology |
| 9 | Language Linguistics | 28 | Psychology Social | 47 | Music |
| 10 | Psychology Educational | 29 | Communication | 48 | Psychology Applied |
| 11 | Neurosciences | 30 | Radiology Nuclear Medicine Medical Imaging | 49 | Computer Science Theory Methods |
| 12 | Clinical Neurology | 31 | Social Science Interdisciplinary | 50 | Education Scientific Disciplines |
| 13 | Psychiatry | 32 | Sociology  | 51 | Humanities Multidisciplinary |
| 14 | Otorhinolaryngology | 33 | Medicine Research Experimental | 52 | Critical Care Medicine |
| 15 | Psychology Multidisciplinary | 34 | Nursing | 53 | Developmental Biology |
| 16 | Psychology | 35 | Dentistry Oral Surgery Medicine | 54 | Psychology Psychoanalysis |
| 17 | Public Environmental Occupational Health | 36 | Anthropology | 55 | Computer Science Software Engineering |
| 18 | Behavioral Sciences | 37 | Computer Science Artificial Intelligence | 56 | Social Issues |
| 19 | Psychology Clinical | 38 | Social Sciences Biomedical | 57 | Primary Health Care |

# Supplementary Table 2. Top 10 cited source journals about CL research.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Rank | Journal | Links  | TS | TP | Citations | IF | JCR category |
| 1 | Journal of Speech Language and Hearing Research | 219 | 41379 | 1381 | 51331 | 1.873 | Rehabilitation | Audiology & Speech-Language Pathology | Rehabilitation | Linguistics; Rehabilitation| Social Sciences, General |
| 2 | Child Development | 217 | 16932 | 499 | 40774 | 4.891 | Psychology | Educational | Psychology | Developmental |
| 3 | Journal of Autism and Developmental Disorders | 201 | 13542 | 830 | 40738 | 1.43 | Psychology | Developmental |
| 4 | Pediatrics | 191 | 4796 | 421 | 30467 | 2.77 | Pediatrics | Medical Research, General Topics | Clinical Medicine |
| 5 | Developmental Psychology | 210 | 12015 | 421 | 26632 | 3.063 | Psychology| Developmental, Psychiatry |
| 6 | Journal of Child Language | 203 | 15484 | 796 | 21968 | 1.62 | Psychology| Developmental | Psychology, Experimental | Linguistics| Psychiatry |
| 7 | Journal of Child Psychology and Psychiatry | 209 | 8225 | 264 | 21022 | 7.035 | sychiatry | Psychology | Psychology, Developmental| Clinical Psychology & Psychiatry |
| 8 | Cognition | 182 | 7062 | 331 | 19510 | 3.294 | Psychology, Experimental| Psychiatry |
| 9 | Journal of Educational Psychology | 182 | 7062 | 331 | 19510 | 5.028 | Psychology | Educational; Psychiatry |
| 10 | Applied Psycholinguistics | 212 | 12740 | 494 | 16338 | 1.412 | Psychology, Experimental | Linguistics| Psychiatry/ |

Note: TS= Total link strength; TP= Total publications; IF= 2019 Impact Factor; Data Source: WoS.

# Supplementary Table 3. The top 10 strong co-authorship linked document-productive authors

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Rank | Label | Cluster | Links | TS | TD | TC | NC | APY | AC | AN | A1 |
| 1 | Justice, L.M. | 7 | 15 | 205 | 172 | 4838 | 240.35 | 2014 | 28.13 | 1.40 | 64 |
| 2 | Bishop, D.V.M. | 8 | 6 | 24 | 69 | 2968 | 96.78 | 2011 | 43.01 | 1.40 | 60 |
| 3 | Leonard, L.B. | 3 | 6 | 36 | 69 | 1671 | 64.85 | 2013 | 24.22 | 0.94 | 59 |
| 4 | Verhoeven, L. | 21 | 3 | 65 | 126 | 1726 | 96.47 | 2014 | 13.70 | 0.77 | 11 |
| 5 | Conti-Ramsden, G. | 13 | 9 | 85 | 67 | 2167 | 88.21 | 2013 | 32.34 | 1.32 | 30 |
| 6 | Tomasello, M. | 15 | 6 | 43 | 64 | 3000 | 93.45 | 2014(2012) | 37.58 | 1.46 | 16 |
| 7 | Reilly, S. | 4 | 14 | 120 | 81 | 1623 | 99.26 | 2016 | 20.04 | 1.23 | 8 |
| 8 | Tager-Flusberg, H. | 1 | 11 | 41 | 64 | 2633 | 139.47 | 2014 | 41.14 | 2.18 | 13 |
| 9 | Snowling, M. J. | 9 | 3 | 45 | 62 | 2233 | 137.14 | 2014 | 36.02 | 2.21 | 15 |
| 10 | Goldin-Meadow, S. | 5 | 4 | 25 | 74 | 2860 | 126.23 | 2013.78 | 138.65 | 1.71 | 25 |

Note: TS: total link strength; TD: total documents; TC: total citations; NC: norm. citations; APY: avg. pub. Year; AC: avg. citations; AN：avg. norm. citations. A1：The first author

# Supplementary Table 4. The top 10 strong co-authorship linked document-productive organizations

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Label | Cluster | Links | TS | TD | TC | NC | APY | AC | AN |
| University of Toronto | 3 | 128 | 928 | 809 | 26,544 | 1,045.94 | 2012 | 32.81 | 1.29 |
| Harvard University | 4 | 142 | 1,023 | 767 | 36,282 | 1,368.13 | 2011 | 47.30 | 1.78 |
| University of North Carolina | 1 | 102 | 748 | 729 | 33,466 | 1,075.34 | 2011 | 45.91 | 1.48 |
| University College London | 2 | 111 | 615 | 713 | 25,797 | 1,055.35 | 2013 | 36.18 | 1.48 |
| Vanderbilt University | 1 | 103 | 632 | 632 | 21,446 | 1,006.83 | 2012 | 33.93 | 1.59 |
| Ohio State University | 1 | 103 | 545 | 620 | 12,587 | 649.63 | 2014 | 20.30 | 1.05 |
| University of Washington | 1 | 118 | 735 | 616 | 24,501 | 940.13 | 2010 | 39.77 | 1.53 |
| University of Wisconsin | 1 | 104 | 531 | 614 | 21,256 | 706.41 | 2011 | 34.62 | 1.15 |
| University of California | 1 | 120 | 624 | 587 | 27,000 | 963.11 | 2010 | 46.00 | 1.64 |
| University of Oxford | 2 | 103 | 502 | 531 | 24,044 | 864.74 | 2011 | 45.28 | 1.63 |

 Note: TS: total link strength; TD: total documents; TC: total citations; NC: norm. citations; APY: Avg. pub. year; AC: avg. citations; AN: Avg. norm. citations.

# Supplementary Table 5. The topmost 10 strong co-authorship linked document-productive countries/regions

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ROa | Countries/regions | Clusters | Links  | Total link strength | Documents | Citations | APYb |
| 1 | USA | 2 | 77 | 5952 | 22783 | 697456 | 2010 |
| 2 | England | 4 | 77 | 4046 | 5336 | 184135 | 2011 |
| 3 | Canada | 5 | 72 | 2238 | 3659 | 109686 | 2011 |
| 4 | Australia | 5 | 70 | 1951 | 2895 | 60624 | 2013 |
| 5 | Germany | 1 | 68 | 1880 | 1873 | 43756 | 2013 |
| 6 | Netherlands | 1 | 67 | 1643 | 1845 | 39247 | 2013 |
| 7 | Peoples R China | 5 | 66 | 1178 | 1539 | 23610 | 2015 |
| 8 | Italy | 1 | 62 | 1169 | 1451 | 31107 | 2013 |
| 9 | France | 1 | 59 | 1289 | 1262 | 33873 | 2012 |
| 10 | Spain | 3 | 63 | 1008 | 1087 | 16107 | 2015 |

Note: a RO: Ranking Order; b APY: Average Publication Year.

# Supplementary Table 6. The link and total link strength of the top 25 occurrence key words

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Rank | Key words | Cluster | Links  | TSb | Occurrences | APY c |
| 1 | children | 3 | 138 | 50447 | 15263 | 2011 |
| 2 | language | 4 | 138 | 43430 | 11896 | 2012 |
| 3 | acquisition | 2 | 138 | 17000 | 4319 | 2012 |
| 4 | speech | 3 | 138 | 15656 | 3901 | 2011 |
| 5 | young-children | 4 | 138 | 12806 | 3105 | 2012 |
| 6 | skills | 2 | 138 | 15024 | 3012 | 2013 |
| 7 | autism | 4  | 138 | 9883 | 2443 | 2012 |
| 8 | infants | 3 | 137 | 8662 | 2281 | 2012 |
| 9 | intervention | 1 | 138 | 10203 | 2239 | 2013 |
| 10 | comprehension | 2 | 138 | 10205 | 2224 | 2012 |
| 11 | age | 3 | 138 | 9088 | 2207 | 2012 |
| 12 | communication | 4 | 137 | 8673 | 2014 | 2012 |
| 13 | vocabulary | 2 | 138 | 10228 | 1999 | 2014 |
| 14 | performance | 3 | 138 | 8320 | 1971 | 2012 |
| 15 | language impairment | 2 | 138 | 8153 | 1913 | 2012 |
| 16 | outcomes | 1 | 138 | 8049 | 1905 | 2014 |
| 17 | impairment | 4 | 138 | 8355 | 1900 | 2013 |
| 18 | adolescents | 1 | 138 | 6912 | 1880 | 2013 |
| 19 | working-memory | 2 | 135 | 8723 | 1867 | 2014 |
| 20 | English | 2 | 137 | 6919 | 1831 | 2013 |
| 21 | literacy | 1 | 137 | 8043 | 1706 | 2013 |
| 22 | perception | 3 | 138 | 6297 | 1586 | 2012 |
| 23 | knowledge | 2 | 138 | 6640 | 1555 | 2013 |
| 24 | Individual-differences | 2 | 138 | 6771 | 1487 | 2012 |
| 25 | behavior | 1 | 137 | 5383 | 1434 | 2011 |

Note: a RO: Ranking Order; b TS: Total link strength; cAPY: Average Publication Year.

# Supplementary Table 7. The top 10 journals in the co-citation network.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Label | Cluster | Links | Total Link Strength | Citations |
| Child Development | 2 | 280 | 1728349 | 51394 |
| Journal of Speech Language and Hearing Research | 1 | 280 | 1405268 | 40071 |
| Developmental Psychology | 2 | 280 | 1189953 | 32092 |
| Journal of Autism and Developmental Disorders | 1 | 280 | 934277 | 29678 |
| Journal of Child Language | 4 | 280 | 816668 | 25778 |
| Journal of Child Psychology and Psychiatry | 1 | 280 | 902666 | 25081 |
| Cognition | 4 | 280 | 947295 | 24186 |
| Pediatrics | 1 | 280 | 466098 | 21884 |
| Journal of Educational Psychology | 2 | 280 | 770591 | 21056 |
| Journal of Speech and Hearing Research | 1 | 280 | 604690 | 19884 |

# Supplementary Table 8. The top 10 authors in the co-citation network.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Label | Cluster | Links | Total Link Strength | Citations |
| Bishop, D. V. M | 2 | 119 | 76,546 | 7,367 |
| Wechsler, D. | 2 | 119 | 47,311 | 6,586 |
| Dunn, L. M. | 2 | 119 | 41,185 | 5,068 |
| Tomasello, M. | 1 | 118 | 32,953 | 4,249 |
| Gathercole, S. E. | 2 | 119 | 47,148 | 4,205 |
| Lord, C. | 4 | 117 | 31,382 | 4,088 |
| Bates, E. | 1 | 119 | 34,900 | 3,947 |
| Bialystok, E. | 3 | 117 | 22,985 | 3,889 |
| Leonard, L. B. | 2 | 119 | 40,287 | 3,879 |
| Rice, M. L. | 2 | 119 | 39,041 | 3,447 |

# Supplementary Table 9. The top 10 most cited references in the co-citation network.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Label** | **Title** | **Cluster** | **Links** | **Total link strength** | **Citations** |
| Hart & Risley (1995) | Meaningful Differences in Everyday Experience of Young American Children | 1 | 172 | 6391 | 1521 |
| Cohen (1988)a  | Statistical power analysis for the behavioral sciences | 3 | 174 | 4140 | 1486 |
| Dunn and Dunn (1981) | The Peabody Picture Vocabulary Test | 3 | 173 | 3697 | 1330 |
| American Psychological Association (2013) | Diagnostic and statistical manual of mental disorders: DSM-5™ (5th ed.) | 3 | 158 | 2456 | 1025 |
| Lord et al. (1994) | Autism Diagnostic Interview-Revised: A revised version of a diagnostic interview for caregivers of individuals with possible pervasive developmental disorders | 1 | 167 | 2838 | 908 |
| Tomblin et al. (1997) | Prevalence of specific language impairment in kindergarten children. | 3 | 138 | 2803 | 870 |
| Mullen E.M. (1995) | Mullen Scales of Early Learning | 5 | 167 | 3108 | 837 |
| Snow et al. (1998) | Preventing Reading Difficulties in Young Children | 3 | 141 | 2717 | 836 |
| Fenson et al. (1993) | MacArthur Communicative Development Inventories | 4 | 171 | 3182 | 823 |

Note: Cohen (1988)a reference is a book on (statistical) effect size, not child language. Rather, researchers cite this reference as the formula they use to compute effect size.

Dunnb and hiswife and son have published several revisions of “The Peabody Picture Vocabulary Test” (PPVT).

# Reference:

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders: DSM-5 (5th ed.). Washington, DC: American psychiatric association.

Cohen, J. (1988). Statistical Power Analysis for the Behavioural Science (2nd Edition). In *Statistical Power Anaylsis for the Behavioral Sciences*.

Dunn, L. M., and Dunn, L. M. (1981). *Peabody Picture Vocabulary Test-Revised.* Circles Pines, MN: American Guidance Service.

Fenson, L., Dale, P. S., Reznick, J. S., Thal, D., Bates, E., Hartung, M. S., Pethick, S., & Reilly, J. S. (1993). *MacArthur Communicative Development Inventories*.

Hart, B., & Risley, T. R. (1995). Meaningful Differences in Everyday Experience of Young American Children. *Brookes Publishing Company, Inc., P.O. Box 10614, Baltimore, MD 21285-0624.*

Lord, C., Rutter, M., & Couteur, A. L. (1994). Autism Diagnostic Interview-Revised: A revised version of a diagnostic interview for caregivers of individuals with possible pervasive developmental disorders. *Journal of Autism & Developmental Disorders*, *24*(5), 659–685.

Mullen, E. M. (1995). Mullen Scales of Early Learning. Circle Pines, MN: American Guidance Service.

Snow, C. E., Burns, M. S., & Griffin, P. (1998). Preventing Reading Difficulties in Young Children. *Beginning Reading*.

Tomblin, J., Bruce, Records, Nancy, L., Buckwalter, Paula, Xuyang, & Zhang. (1997). Prevalence of specific language impairment in kindergarten children. *Journal of Speech, Language & Hearing Research*, *40*(6), 1245.