

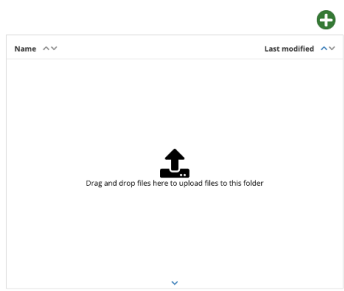
Instructions

Copy or download this document

This document includes the questions that will be when completing this registration template on OSF. Make a copy of this document and use it to plan and prepare for submitting your registration.

Questions with a red asterisk (*) are required.

Questions will offer one of the following input options:

<ul style="list-style-type: none">•	Radio button	You will be provided with a series of options and may select only one.
<ul style="list-style-type: none">•	Check box	You will be provided with a series of options and may select as many as necessary.
Text box	Text box (short or long)	You will type in your response.
	File upload widget	You can upload a file as a response to this question. You may attach up to 5 files and cannot total over 5GB in size.

Landing Page

Intended use

This Generalized Systematic Review Registration Form is intended as a general-purpose registration form. The form is designed to be applicable to reviews across disciplines (i.e., psychology, economics, law, physics, or any other field) and across review types (i.e., scoping review, review of qualitative studies, meta-analysis, or any other type of review). That means that the reviewed records may include research reports as well as archive documents, case law, books, poems, etc. This form, therefore, is a fall-back for more specialized forms and can be used if no specialized form or registration platform is available. Below are some currently available specialized registration tools you may consider:

Specialized registration platform

PROSPERO is a free database of health-related systematic review protocols for health-related outcomes.

Specialized guidance

Consider using the following guidelines when completing your registration:

The Non-Interventional, Reproducible, and Open (NIRO) Systematic Reviews guideline, which includes fields specific to non-interventional reviews: <https://osf.io/f3brw/>

Methodological Expectations of Cochrane Intervention Reviews (MECIR): CID: 20.500.12592/vxj0sb

Methodological Expectations of Campbell Collaboration Intervention Reviews (MECCIR): <https://www.campbellcollaboration.org/meccir.html>

Preferred Reporting Items for Systematic reviews and Meta-Analysis Protocols (PRISMA-P): <https://doi.org/gcpzzq>

Preferred Reporting Items for Systematic reviews and Meta-Analyses literature Search extension (PRISMA-S): <https://doi.org/gh2z2k>

Peer Review of Electronic Search Strategies (PRESS): <https://doi.org/10.1016/j.jclinepi.2016.01.021>

Relation to reporting guidelines

Many disciplines have developed reporting guidelines for specific types of reviews (e.g., ROSES: the RepORting standards for Systematic Evidence Syntheses in environmental research, and PRISMA: the Preferred Reporting Items for Systematic Reviews and Meta-Analyses). Whereas reporting guidelines were optimized for application after conclusion of a systematic review, this form was optimized to publicly register ('freeze') the research plans (or to record adjustments to research plans) before (or during) a systematic review. These different end goals resulted in different choices regarding included items. For example, this form includes a number of questions about planning that are important for a registration but typically are not included in reporting guidelines.

Nonetheless, these reporting guidelines do partly capture the same information as registration forms. For each item in this form, we specified the corresponding PRISMA item (PRISMA items P1-P22

and P25-27 were applicable; P16-P23 cover reporting of results and P24 refers to registration forms like this). Researchers planning to use a specific reporting standard to report the results of their review, should enter the information required by that reporting standard in the corresponding (overarching) fields of this form.

Instructions for effectively using the form

To align with general use and open science best practice, all items are mandatory. Completion makes your registration more useful for readers, funders, and others, so check carefully whether you did not accidentally omit an item. If an item asks about a procedure you do not plan to use or is not applicable, indicate that in the corresponding field (including, ideally, the underlying reason).

You should be transparent about any deviations from the preregistration and provide the rationale for these deviations in your final review. If you already foresee some deviations when filling out the form (e.g., you anticipate that you will not have enough studies in a moderator group), provide a contingency plan for these deviations in the relevant parts of the registration.

Planned improvements / extensions

The aim of this registration form is to be optimally inclusive (i.e., to be usable for registration of any systematic review, regardless of scientific discipline or review type). Because this aim precludes 1:1 correspondence with the existing reporting guidelines, this form is also intended as a basis to develop more specialized forms that do correspond closely to more specific reporting guidelines. Such specialized forms can include, for example, additional fields, added comments, and worked examples. Please contact the Center of Open Science at contact@cos.io if you would like to propose such a specialized version. Please do reach out if you want to be involved in any of these projects.

Citation

Van den Akker, O. R., Peters, G. Y., Bakker, C., Carlsson, R., Coles, N. A., Corker, K. S., Feldman, G., , Moreau, D., Nordström, T., Pfeiffer, N., Pickering, J. S., Riegelman, A., Topor, M., Veggel, N., Yeung, S., Mellor, D., & Pfeiffer, N. Generalized Systematic Review Registration Form. MetaArXiv.. <https://doi.org/q5fj>.

Review Methods

In this section, you register the general type, background, and goals of your review.

Type of review *

This can be, for example, a meta-analysis, evidence map, or a qualitative review. Also indicate whether you used any guidelines, tools, or checklists to prepare your protocol and, if so, which ones. For more information, see: Tricco, A. C., Tetzlaff, J., Moher, D. (2011). The art and science of knowledge synthesis. <https://doi.org/frdpd2>.

This protocol is reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) checklist (Tricco et al., 2018). The subsequent scoping review will adhere to the JBI recommendations and methodology to conduct scoping reviews (Peters et al., 2022).

Peters, M. D. J., Godfrey, C., McInerney, P., Khalil, H., Larsen, P., Marnie, C., Pollock, D., Tricco, A. C., & Munn, Z. (2022). Best practice guidance and reporting items for the development of scoping review protocols. *JBI Evidence Synthesis*, 20(4), 953-968. <https://doi.org/10.11124/JBIES-21-00242>

Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., ... Straus, S. E. (2018). PRISMA Extension for scoping reviews (PRISMA-ScR) : Checklist and explanation. *Annals of Internal Medicine*, 169(7), 467-473. <https://doi.org/10.7326/M18-0850>

Review stages *

Indicate the stages in which you will conduct this review. Common stages are, in this order, the sections of this form: Search, Screening, Extraction, Synthesis. Sometimes other stages are distinguished, such as Preparation, Critical Appraisal, and Reporting. Additionally, it can be beneficial to include pilot stages for screening and extraction, while mentioning any updates to the preregistration. The stages could then look like: Preparation, Search, Pilot Screening (100 hits), Prereg Update, Screening, Pilot Extraction (10 sources), Prereg update, Extraction, Synthesis.

Preparation, Search, Pilot Screening based on titles and abstracts (25 sources), (Preregistration Update), Screening based on titles and abstracts, Pilot Screening based on full-text (10 sources), (Preregistration update), Screening based on full-text, Pilot Extraction (5 sources), (Preregistration update), Extraction, Synthesis.

Current review stage *

Indicate which stage from the “Review stages” item you are at this moment (i.e., when you freeze this registration). Note that in many contexts, only registrations in earlier stages are considered preregistrations. For example, you can indicate whether you started and/or finished with a certain stage as is customary for PROSPERO registrations. In addition, if this is not the first preregistration (but a second or third update, e.g., after pilot screening or pilot extraction), you can make that explicit here.

The search strategies are completed and the next phase involves the screening of the articles.

Start date *

Indicate the planned start date, or if you already started, the actual start date.

March 26, 2025

End date *

Indicate the planned end date, or if you already completed the review, the actual end date. You can use resources such as PredicTER.org to estimate how long a review will take to complete.

March 26, 2026

Background *

Introduce the topic of your review, its aims, and/or provide a short summary of known literature and what your review adds to this literature. You can describe why the review is needed, as well as which reviews already exist on this or related topics.

The extant literature acknowledges the existence of a relationship between the language used by adults towards children, the linguistic input, and children's language development and learning (Rowe, 2012 ; Weiss et al., 2022). In this line, some authors have focused on teachers' language practices due to their privileged position in interactions with young children (Eadie, 2022), enabling them to interact with numerous children and adopt practices that facilitate learning. Two distinct research streams have analyzed this language: linguists and psycholinguists have examined the linguistic and interactive strategies that support the children's oral language development (Cartmill, 2016 ; Rowe & Snow, 2020), while developmental psychologists have examined teachers' language and its association with the development of specific academic learning (e.g. mathematics, reading comprehension) (Grammer et al., 2016; Urban et al., 2023). Despite the shared objectives, these two research domains evolve independently. A comprehensive description of the data and evidence on teachers' language promoting the development of children's learning (e.g. oral language, written language, mathematics, etc.) will facilitate the identification of the characteristics of teachers' language practices and their potential relationships with these different children's learnings. A scoping review is therefore relevant because it will aim to map and synthesize all the existing evidence about teachers' language practices that have been studied in association with the development of oral language and/or academic learning. Finally, the review will offer an overview and a better understanding of the characteristics and nature of teachers' language addressed to children.

Cartmill, E. A. (2016). Mind the gap : Assessing and addressing the word gap in early education. *Policy Insights from the Behavioral and Brain Sciences*, 3(2), 185-193. <https://doi.org/10.1177/2372732216657565>

Eadie, P. (2022). Oral language skills as a foundation for learning to learn. In J. Law, S. Reily, & C. McKean (Eds.), *Language development: Individual differences in a social context* (pp. 397–419). Cambridge University Press. <https://doi.org/10.1017/9781108643719.021>

Grammer, J. K., Coffman, J. L., Sidney, P., & Ornstein, P. A. (2016). Linking teacher instruction and student achievement in mathematics : The role of teacher language. *Journal of Cognition and Development*, 17(3), 468-485. <https://doi.org/10.1080/15248372.2015.1068777>

Rowe, M. L. (2012). A longitudinal investigation of the role of quantity and quality of child-directed speech in vocabulary Development. *Child Development*, 83(5), 1762-1774. <https://doi.org/10.1111/j.1467-8624.2012.01805.x>

Rowe, M. L., & Snow, C. E. (2020). Analyzing input quality along three dimensions : Interactive, linguistic, and conceptual. *Journal of Child Language*, 47(1), 5-21. <https://doi.org/10.1017/S0305000919000655>

Urban, M., Urban, K., & Nietfeld, J. L. (2023). The effect of a distributed metacognitive strategy intervention on reading comprehension. *Metacognition and Learning*, 18(2), 405-424. <https://doi.org/10.1007/s11409-023-09334-1>

Weiss, Y., Huber, E., Ferjan Ramírez, N., Corrigan, N. M., Yarnykh, V. L., & Kuhl, P. K. (2022). Language input in late infancy scaffolds emergent literacy skills and predicts reading related white matter development. *Frontiers in Human Neuroscience*, 16, 1-19. <https://doi.org/10.3389/fnhum.2022.922552>

Primary research question(s) *

List the specific questions this review is meant to answer (i.e., the questions that ultimately informed the decisions made when designing the search strategy, and screening, extraction, and synthesis plans). You may find it helpful to refer to frameworks such as PICOS where appropriate to pinpoint your research questions. Note that all analyses pertaining to primary research questions should normally be reported in the final report.

What teacher language practices have been studied in relation to the development of oral language and/or academic learning in preschool, kindergarten, and elementary school children?

Secondary research question(s) *

List additional research questions that you will examine, but that took less central roles in informing the review's design. Note that all analyses pertaining to secondary research questions should normally be reported in the final report.

Not applicable.

Expectations / hypotheses *

Describe any hypotheses (common for quantitative approaches) and/or expectations you have. These can pertain to your research questions, the types of sources you will find, social and political contexts, and contextual information that you know may color your interpretations and decisions (common for qualitative approaches).

Not applicable.

Dependent variable(s) / outcome(s) / main variables *

List the dependent / outcome / main variables you are interested in. If this review concerns one or more associations, list the outcome variable(s) or dependent variables. If this review does not concern one or more associations (e.g., in reviews of single variables such as prevalences, or descriptive reviews), list the main variables of interest here.

Not applicable.

Independent variable(s) / intervention(s) / treatment(s) *

If this review's research question(s) concerns one or more associations or effects, list the variable(s) that theoretically cause them or are assumed to otherwise explain the dependent variable(s) / outcome(s). If this is a manipulation, treatment, or intervention, make sure to describe it in full: that means also describing all groups, including any control group(s) or comparator(s).

Not applicable.

Additional variable(s) / covariate(s) *

Here, list any additional variables you are interested in that were not included in the two lists above, such as covariates, moderators, or mediators.

Not applicable.

Software *

List the software you will use for the review, for instance to store and screen search results, extract data, keep track of decisions, and to synthesize the results. Include version numbers and operating systems, if applicable.

Covidence will be used to automatically remove duplicates and to facilitate the screening and extraction of data.

Funding *

List the funding sources for everybody that is involved in this review at this stage. If the work is unfunded, please state this as such.

All the authors are ULiege members. The first author (N.C.) is funded by the FRS-FNRS (National Fund for Scientific Research) in Belgium to undertake the composition of a doctoral thesis, which encompasses the present review. One other author (M.G.) is also a FRS-FNRS member.

Conflicts of interest *

List any potential conflicts of interest (e.g., if there is a potential outcome of this review that can in any way have negative or positive effects for anybody involved in this review in terms of funding, prestige, or opportunities). If there are no conflicts of interest, please state this as such.

The authors declare no conflict of interest.

Overlapping authorships *

Declare whether you expect that anyone involved in this review is a co-author of one of the studies that will likely be included in the review (based on your search strategy) and, if so, how you will address potential bias (i.e., that reviewer is not involved in screening, data extraction, quality assessment, or synthesis of that study). If you are confident that this does not represent a conflict of interest, explain why you think so.

None of the authors involved in this review is expected to be a co-author of any study likely to be included in the review.

Search Strategy

In this section, you register your search strategy: the procedures you designed to obtain all (potentially) relevant sources to review (e.g., articles, books, preprints, reports, case law, policy papers, archived documents).

Databases *

List the databases you will search (e.g., ArXiv, PubMed, Scopus, Web of Science, PsycINFO, AGRIS, BioOne, PubChem). Note that these are different from interfaces (see next question).

The following databases were searched: ERIC, PsycINFO, LLBA (Linguistics and Language Behavior Abstracts), Scopus and Google Scholar.

Interfaces *

For each database, list the interface you used to search that database (e.g., Ovid or EBSCO). Some databases are provided by the same organisation, in which case the interface can have the same name (e.g., PubMed, ArXiv). For more information about the distinction.

ERIC : Ovid
PsycINFO : Ovid
LLBA : Proquest
Scopus : www.scopus.com
Google Scholar : <https://scholar.google.fr>

Grey literature *

List your strategies for locating grey literature (i.e., sources not indexed in the databases you search) such as pre-prints (e.g., disciplinary repositories such as ArXiv or PsyArXiv or university repositories using for example, DSpace), dissertations and theses, conference proceedings and abstracts, government/industry reports etc.

Grey literature will be searched on the various databases mentioned above as well as on Google Scholar. On Google Scholar, the first 200 records retrieved will be reviewed to detect any additional sources that may not have been captured in the previously described database search.

Inclusion and exclusion criteria *

List the specific inclusion and exclusion criteria that you used to inform your search strategy. Also list the framework(s) you used to establish your exclusion and inclusion criteria and use them to develop your search query, if any. Examples of the latter are PICO (Population, Intervention, Comparison, Outcome) and SPIDER (Sample, Phenomenon of Interest, Design, Evaluation, Research type), but many more exist.

The eligibility criteria are defined by the PCC framework (Population, Concept, Context) (Peters et al., 2022).

Population

This review will include preschool, kindergarten and elementary school teachers working in mainstream schools or in special education. There will be no restriction on the teachers' characteristics (such as age, sex, teaching experience). This review will also include preschool, kindergarten, and elementary school children. There will be no restriction on the children's characteristics (such as mono/bi-lingualism, typical development, having or not learning or sensory difficulties, intellectual disability).

Concept

This scoping review will include studies that quantitatively and accurately describe the teachers' language practices that influence the development of oral language and/or academic learning of their students. Teachers' language practices correspond to the set of oral utterances and strategies produced by teachers and addressed to their pupils.

To be included, studies will report teachers' language related to children's performance (language, learning). Measures can be collected at any time during the year.

Studies using global measures of teacher-child interaction (e.g. CLASS) or teacher self-report questionnaires will not be included in this review. Finally, the type of statistics or quantitative methods used to examine the relationship between teachers' language and children's learning will have to be specified.

Context

This review will encompass studies that concentrate on a school context, which is defined as the environment within which teachers interact directly with their pupils. Studies focusing in mainstream or special education will be included. All type of classroom will be included (one grade-class or combined-class). There will be no exclusion on the basis of the socio-economic status of the schools in which the participants work.

Type of sources

This review will consider both quantitative and mixed methods study designs.

The scoping review will encompass both published studies and grey literature (PhD theses and conference proceedings).

Peters, M. D. J., Godfrey, C., McInerney, P., Khalil, H., Larsen, P., Marnie, C., Pollock, D., Tricco, A. C., & Munn, Z. (2022). Best practice guidance and reporting items for the development of scoping review protocols. *JBIM Evidence Synthesis*, 20(4), 953-968. <https://doi.org/10.11124/JBIES-21-00242>

Query strings *

For each database/interface combination, list the query you will input (note that the available fields and operators can differ by database and by interface). The query string can be based on, for example, your inclusion criteria, the entities you want to extract (see “extraction”) and design requirements (e.g., qualitative studies, RCTs, or prevalence studies).

Database: ERIC <1965 to February 2025>

Search Strategy:

- 1 language/ (2078)
- 2 Classroom Communication/ (8883)
- 3 Speech Communication/ (14764)
- 4 Verbal Communication/ (7567)
- 5 Linguistic Input/ (1986)
- 6 oral language/ (9168)
- 7 language usage/ (22953)
- 8 1 or 2 or 3 or 4 or 5 or 6 or 7 (61029)
- 9 teacher student relationship/ (37532)
- 10 Early Childhood Teachers/ or Preschool Teachers/ or Teachers/ or Elementary School Teachers/ (57568)
- 11 9 or 10 (91350)
- 12 8 and 11 (4937)
- 13 ((teacher* or educator*) adj (language or talk*)).ti,ab. (1724)
- 14 ((teacher* or educator*) adj3 input*).ti,ab. (786)
- 15 ((teacher* or educator*) adj3 speech communicat*).ti,ab. (133)
- 16 ((teacher* or educator*) adj5 (oral or verbal)).ti,ab. (2165)
- 17 (classroom* adj2 communicat*).ti,ab. (1316)
- 18 13 or 14 or 15 or 16 or 17 (5965)
- 19 12 or 18 (10203)
- 20 Language Skills/ or Language/ or Language Acquisition/ (35079)
- 21 Academic Ability/ or Academic Achievement/ (105546)
- 22 "Outcomes of Education"/ (41412)
- 23 Mathematics Achievement/ or Mathematics Skills/ or Mathematics/ (40126)
- 24 Reading Skills/ or Reading Ability/ or Reading Achievement/ or Reading/ (43385)
- 25 Sciences/ (6189)
- 26 Writing Achievement/ or Writing Skills/ or Writing Ability/ (20280)
- 27 Learning/ (10122)
- 28 Vocabulary Development/ or Vocabulary/ or Vocabulary Skills/ (26001)
- 29 Emergent Literacy/ or Literacy/ (23923)
- 30 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 (294487)
- 31 children/ or young children/ or Elementary School Students/ or Preschool Children/ (162585)
- 32 30 and 31 (41604)
- 33 ((language or vocab* or math* or read* or writ* or science* or literacy or academic) adj6 (child* or preschool* or kindergarten* or elementary or primary)).ti,ab. (93056)
- 34 32 or 33 (116162)
- 35 19 and 34 (1667)

Database: APA PsycInfo <1806 to March 2025 Week 4>

Search Strategy:

- 1 Language/ (45669)
- 2 Oral Communication/ (24023)
- 3 Verbal Communication/ (14234)
- 4 1 or 2 or 3 (80293)
- 5 Preschool Teachers/ or Teachers/ or Elementary School Teachers/ or Teacher Student Interaction/ (82092)

- 6 4 and 5 (1740)
- 7 ((teacher* or educator*) adj (language or talk*)).ti,ab,id. (891)
- 8 ((teacher* or educator*) adj3 input*).ti,ab,id. (377)
- 9 ((teacher* or educator*) adj5 (oral or verbal)).ti,ab,id. (1583)
- 10 (classroom* adj2 communicat*).ti,ab,id. (552)
- 11 ((teacher* or educator*) adj3 speech communicat*).ti,ab,id. (9)
- 12 7 or 8 or 9 or 10 or 11 (3336)
- 13 6 or 12 (4639)
- 14 Language/ or Language Development/ (72598)
- 15 Academic Achievement/ (66613)
- 16 school learning/ (24916)
- 17 Student Learning Outcomes/ (1169)
- 18 Learning Ability/ or Learning/ (87273)
- 19 Vocabulary/ (11781)
- 20 Mathematics Achievement/ or Mathematics/ or Mathematical Ability/ (31692)
- 21 Reading/ or Reading Skills/ or Reading Achievement/ or Reading Ability/ or Reading Development/ (43535)
- 22 writing skills/ or written language/ (11692)
- 23 Sciences/ (22130)
- 24 literacy/ (18976)
- 25 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 (343834)
- 26 Primary School Students/ or Kindergarten Students/ or Elementary School Students/ or Preschool Students/ (69072)
- 27 25 and 26 (27375)
- 28 ((language or vocab* or math* or read* or writ* or science* or literacy or academic) adj6 (child* or preschool* or kindergarten* or elementary or primary)).ti,ab,id. (98834)
- 29 27 or 28 (114213)
- 30 13 and 29 (1013)

Database: Scopus - March 26, 2025

Search strategy

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(( TITLE-ABS-KEY ( ( teacher* OR educator* ) PRE/0 ( language OR talk* ) ) ) OR ( TITLE-ABS-KEY ( ( ( teacher* OR educator* ) W/3 input* ) ) ) OR ( TITLE-ABS-KEY ( ( ( teacher* OR educator* ) W/5 ( oral OR verbal ) ) ) ) OR ( TITLE-ABS-KEY ( ( classroom* W/2 communicat* ) ) ) OR ( TITLE-ABS-KEY ( ( teacher* OR educator* ) W/3 ( "speech communicat*" ) ) ) ) AND ( TITLE-ABS-KEY ( ( language OR vocab* OR math* OR read* OR writ* OR science* OR literacy OR academic ) W/6 ( child* OR preschool* OR kindergarten* OR elementary OR primary ) ) )
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→ 769

Search Strategy from ProQuest (LLBA) - 26 March 2025

Set#	Searched for	Databases	Results
S1	MAINSUBJECT.EXACT("Child-directed speech") OR MAINSUBJECT.EXACT("Classroom communication") OR MAINSUBJECT.EXACT("Language usage") OR MAINSUBJECT.EXACT("Language ")	Linguistics and Language Behavior Abstracts (LLBA)	50338
S2	MAINSUBJECT.EXACT("Teachers") OR	Linguistics and Language Behavior Abstracts (LLBA)	16661

	MAINSUBJECT.EXACT("Student teacher relationship")		
S3	[S1] AND [S2]	Linguistics and Language Behavior Abstracts (LLBA) These databases are searched for part of your query.	4483
S4	title(((teacher* OR educator*) PRE/0 (language OR talk*)) OR ((teacher* OR educator*) NEAR/3 input*) OR ((teacher* OR educator*) NEAR/3 ("speech communicat*")) OR ((teacher* or educator*) NEAR/5 (oral or verbal)) OR (classroom* NEAR/2 communicat*)) OR abstract(((teacher* OR educator*) PRE/0 (language OR talk*)) OR ((teacher* OR educator*) NEAR/3 input*) OR ((teacher* OR educator*) NEAR/3 ("speech communicat*")) OR ((teacher* or educator*) NEAR/5 (oral or verbal)) OR (classroom* NEAR/2 communicat*))	Linguistics and Language Behavior Abstracts (LLBA)	2901
S5	[S3] OR [S4]	Linguistics and Language Behavior Abstracts (LLBA) These databases are searched for part of your query.	6985
S6	MAINSUBJECT.EXACT("Language acquisition") OR MAINSUBJECT.EXACT("Vocabulary") OR MAINSUBJECT.EXACT("Vocabulary size") OR MAINSUBJECT.EXACT("Natural sciences") OR MAINSUBJECT.EXACT("Writing acquisition") OR MAINSUBJECT.EXACT("Mathematics") OR MAINSUBJECT.EXACT("Reading") OR MAINSUBJECT.EXACT("Literacy") OR MAINSUBJECT.EXACT("Writing") OR MAINSUBJECT.EXACT("Academic achievement") OR MAINSUBJECT.EXACT("Writing ability") OR	Linguistics and Language Behavior Abstracts (LLBA)	104102

	MAINSUBJECT.EXACT("Early literacy") OR MAINSUBJECT.EXACT("Reading achievement") OR MAINSUBJECT.EXACT("Learning") OR MAINSUBJECT.EXACT("Learning outcomes") OR MAINSUBJECT.EXACT("Language") OR MAINSUBJECT.EXACT("Reading ability") OR MAINSUBJECT.EXACT("Reading acquisition")		
S7	MAINSUBJECT.EXACT("Preschool children") OR MAINSUBJECT.EXACT("Elementary school students") OR MAINSUBJECT.EXACT("Children")	Linguistics and Language Behavior Abstracts (LLBA)	40780
S8	[S6] AND [S7]	Linguistics and Language Behavior Abstracts (LLBA) These databases are searched for part of your query.	19238
S9	title(((language or vocab* or math* or read* or writ* or science* or literacy or academic) NEAR/6 (child* or preschool* or kindergarten* or elementary or primary))) OR abstract(((language or vocab* or math* or read* or writ* or science* or literacy or academic) NEAR/6 (child* or preschool* or kindergarten* or elementary or primary)))	Linguistics and Language Behavior Abstracts (LLBA)	50150
S10	[S8] OR [S9]	Linguistics and Language Behavior Abstracts (LLBA) These databases are searched for part of your query.	57935
S11	[S5] AND [S10]	Linguistics and Language Behavior Abstracts (LLBA) These databases are searched for part of your query.	1198

Google Scholar :

1. "teachers' language" AND "language development" AND children
2. "teachers' language" AND "academic achievement" AND children

Search validation procedure *

Explain whether you plan to employ a search validation procedure, and if so, describe the procedure. For example, you can use a number of sources that you know your search strategy will have to turn up to validate your strategy and make adjustments if needed.

Four relevant studies to the research question have been identified and their presence in the database had to be confirmed. Subsequent adjustments to the strategies have been implemented on the basis of the results obtained from this survey.

Other search strategies *

List any additional search strategies you aim to employ, such as using the ascendancy approach (look through other sources cited in your included sources), the descendancy approach (look through the sources that cite your included sources using systems such as Crossref), or using other systems such as CoCites.

The ascendancy approach will be employed (look through other sources cited in the included sources).

Procedures to contact authors *

Describe your procedures for contacting authors. Will you contact authors? When? How will you follow-up on your first contact? Do you plan to share meta-data about those communications, and if so, how do you ask authors' permission for that? Will you Note that templates are available at <https://osf.io/q8stz/>

Not applicable.

Results of contacting authors *

Describe whether you plan to report the outcomes of contacting the authors (e.g., how many authors responded, how many authors sent data), and if so, how.

Not applicable.

Search expiration and repetition *

Depending on how quickly the literature in an area expands, searches can have limited expiration dates; and for living reviews, repetition is planned regardless of ideas about expiration. Will you repeat your search (for example, in the case of a living review), and if so, how many months or years after your first search?

No repetition of the search is planned.

Search strategy justification *

Search strategies are often compromises, balancing pragmatic considerations with scientific rigour. Here, describe the justifications for your decisions about the databases, interfaces, grey literature strategies, query strings, author contact procedures, and search expiration date.

Databases were selected based on their domains and relevance to the research question. An initial search was conducted in ERIC (Ovid) to identify key terms from titles, abstracts, and indexing terms of studies relevant to the research question. The same procedure was applied to PsycInfo (Ovid), LLBA (ProQuest), and Scopus (www.scopus.com) to elaborate the initial search strategy. These searches led to various modifications and additions of terms, both in free and controlled language, which resulted in a full search strategy. Additionally, the search strategies were developed and executed with the assistance of an evidence synthesis specialist (N.D.).

The search strategies focused on two main concepts: teachers' language practices and children's learning (in preschool, kindergarten, or elementary school). The concept of 'school' (context) was not explicitly included in the search strategies, as it was inherently encompassed by the terms used for the other concepts (teachers' language and children's learning). When relevant articles were identified, their reference lists were screened to identify additional studies eligible for inclusion in the scoping review. The review will consider studies written in French or in English, which are mastered by the authors. Articles written in languages other than French and English will be translated using DeepL. Nevertheless, due to budgetary constraints, these translations will not undergo verification.

Miscellaneous search strategy details*

Here, you can describe any details that are not captured in the other fields in this section.

Not applicable.

Screening

In this section, you register your screening procedure: the procedure you designed to eliminate all irrelevant sources from the results of the search strategy (and retain the relevant sources).

Screening stages *

Describe the stages you will use for screening. For example, if you expect many hits, you may want to first screen based on titles only, in a second round also include abstracts and keywords, and in a third round screen based on full texts. Also indicate for each round whether the screening is done by a computer (e.g., AI), a human, or a computer supervised by a human. Don't forget to describe the deduplication procedure, if you implement it.

All identified articles will be uploaded to Covidence (<https://www.covidence.org/>), and duplicates will be automatically removed. After a pilot test, the screening of articles will take place in two stages. First, titles and abstracts will be reviewed by two independent reviewers (N.C. and A.L.) to determine eligibility based on the defined inclusion criteria. Secondly, the full text of each selected article will be assessed in detail against the inclusion criteria by the same independent reviewers. The reasons for the exclusion of articles at the full-text stage will be recorded and reported in the scoping review. At both stages of the selection process, disagreements between reviewers will be resolved by discussion or consultation with additional reviewers. Before starting to select studies, the selection process will be tested to ensure that the reviewers agree on the inclusion criteria. A pilot test will be conducted using 25 studies, with the selection based on titles and abstracts. Subsequently, a second pilot phase will be undertaken using 10 studies, with the selection based on the full text. The results of the search and study selection process will be reported in full in the final version of the scoping review and presented in a PRISMA-ScR flowchart (Tricco et al., 2018).

Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., ... Straus, S. E. (2018). PRISMA Extension for scoping reviews (PRISMA-ScR) : Checklist and explanation. *Annals of Internal Medicine*, 169(7), 467-473. <https://doi.org/10.7326/M18-0850>

Screened fields / blinding *

Describe which bibliographic fields (e.g., title, abstract, authors) are visible during the screening, and which fields are blinded. For example, journal names, authors, and publication years can be hidden from screeners in an effort to minimize bias.

Covidence Software displays the following information: authors, title, year, abstract, Digital Object Identifier (doi) number, and publication information. During the full-text screening, all information become visible.

Used exclusion criteria *

List the specific exclusion criteria that you apply in your screening to eliminate sources from the set of sources identified in your search. Note that inclusion criteria are typically used to inform the search strategy; during screening, as soon as an exclusion criterion is met, an entry is excluded, and so, inclusion criteria are reformulated into exclusion criteria where applicable.

This review will not consider studies which do not:

- Include preschool, kindergarten, or elementary school teachers working in mainstream schools or in special education;
- Include preschool, kindergarten, or elementary school children;
- Quantitatively and accurately describe the teachers' language practices that influence the development of oral language and/or academic learning of their students. Studies using global measures or teacher self-report questionnaires will also not be included;
- Report teachers' language related to children's performance (language, learning);
- Define the type of statistics or quantitative methods used to examine the relationship between teachers' language and children's learning;
- Encompass studies that concentrate on a school context;
- Consider both quantitative or mixed methods study designs;
- Encompass both published studies and grey literature (PhD theses and conference proceedings).

Screeners instructions *

List the instructions provided to the screener(s). You can also specify which file in the associated OSF project contains these instructions.

A list of questions was formulated on the basis of the eligibility criteria, with a view to facilitating the screening of articles by both screeners (*e.g. does the article contain elements of analysis of the teacher's language (addressed to children), excluding global discourse measurement (e.g. CLASS)?*).

During the first screening phase (titles and abstracts) the two reviewers will have to include studies that explicitly meet the inclusion criteria or that do not contain enough information to be excluded. During the second phase, reviewers will have to include studies that explicitly meet the inclusion criteria and to document the reasons for excluding any studies.

Screening reliability *

For each screening round, list the number of screeners and the procedure used to ensure independent screening. This can also mean that you declare that you only use one screener, use multiple screeners that work together, or that you will not implement procedures to ensure that the screening is conducted independently. Also explain the test you will use, if any, to assess screener agreement.

Two screeners (N.C. and A.L.) will ensure independent screening, for each screening phases. Prior to the sources selection process, a pilot screening will be conducted to ascertain the reviewers' consensus on the inclusion criteria. This pilot test will be conducted using 25 studies, with the selection based on titles and abstracts. Subsequent to this, a second pilot screening will be undertaken using 10 studies, with the selection based on the full text. In both phases, the Kappa value will be calculated in order to evaluate the degree of agreement between reviewers. In the event that a substantial level of agreement (Kappa value of 0.75 or higher) is not reached, a second calibration exercise will be conducted. Subsequent to the initial evaluation, a discussion will be initiated among the reviewers to address any disagreements and make the necessary adjustments to the inclusion criteria.

Screening reconciliation procedure *

If you use more than one screener, describe the procedure to deal with divergent screener decisions for each screener round (e.g., through discussion or input from an additional screener).

At both stages of the selection process, disagreements between reviewers will be resolved by discussion or consultation with additional reviewers (C.M. and M.G.)

Sampling and sample size *

Describe whether you plan to use all sources included through the screening procedure, or whether you plan to sample from these sources (note that in most cases, all studies identified at this stage are kept). In case of the latter, describe the procedure you plan to use, the sample size analyses you conducted or will conduct, and the resulting required sample size if that is already available. If you plan to refrain from drawing conclusions, or draw more nuanced conclusions, describe that here as well. Finally, describe what you will do if a minimum required sample size or power is not reached (for your main analysis and any supplementary analyses).

All sources identified through the screening procedure will be included in the study.

Screening procedure justification *

Screening procedures are often compromises, balancing pragmatic considerations with scientific rigour. Here, describe the justifications for your decisions about the screening rounds, blinding, in/exclusion criteria, assurance, and reconciliation procedures.

Not applicable.

Data management and sharing *

Describe whether and how you plan to share the sources you obtained from the searches in the databases (see Search Strategy) and the decisions each screener made in each screening round. List both the file format (e.g., BibTeX, RIS, CSV, XLSX), the repository, and any potential embargos or conditions for access.

A CSV file containing the decisions made by the screeners will be shared on OSF.

Miscellaneous screening details *

Here, you can describe any details that are not captured in the other fields in this section.

Not applicable.

Extraction

In this section, you register your plans for data extraction: the procedures you designed to extract the data you are interested in from the included sources. Examples of such data are text fragments, effect sizes, study design characteristics, year of publication, characteristics of measurement instruments, final verdicts and associated penalties in a legal system, company turnovers, sample sizes, or prevalences.

Entities to extract *

List all entities that will be extracted from each included source. Entities can be, for example, 1) variables such as values of independent and dependent variables, and potential moderators (e.g., means, standard deviations); 2) estimations of associations between variables or effect sizes (e.g., Pearson's r or Cohen's d); 3) qualitative data fragments (e.g., interview material or synthesized themes); 4) descriptions of the used methods such as the included studies' designs, sample sizes, sample characteristics, time between data collection sessions, and blinding procedures; 5) metadata such as authors, institutions, and year of publication; 6) and (other) risk of bias indicators.

The charting form will extract key data concerning:

Publication characteristics: Author(s), Year, Title, Country, Type of evidence source, Study design (as reported by the authors)

Aim of the study

Teacher characteristics: School characteristics, Class characteristics, Sample size, Dropouts, Gender, Age, Level of education, Teaching experience, Teaching experience in the targeted year

Children characteristics: Sample size, Dropouts, Gender, Age, Socio-economic status (if not specified for schools), Developmental profile, Multi-bilingualism, School year

Teachers measures (teachers' language practices): Type of practice(s)/strategy(ies) used, Data collection method, School subject / activity, Time(s) of assessment, Number of data collector(s), Profile of the data collector(s), Number of coder(s), Profile of the data coder(s), Inter-rater reliability

Children measures (outcomes): Domain(s) assessed, Assessment tool(s) or type of data collected, Time(s) of assessment, Number of data collector(s), Profile of the data collector(s), Number of coder(s), Profile of the data coder(s), Inter-rater reliability

Intervention characteristics and modalities: Domain(s) targeted, Concepts targeted, Strategies learned, Intervention's name, Direct or indirect intervention, Explicit or implicit intervention, Intervention in groups or individual, Functions of intervention (principles), Session duration, Number of session, Total duration of intervention, Trainers profile, Context of training, Equipment used, Location of intervention, Controlled variables, Control group(s)

Statistical analysis

Main Results

Additional information: Limits reported by authors

Extraction stages *

Describe the stages you will use for extraction. Examples of stages are: a training stage, a reliability verification stage, and a final extraction stage; or first extracting primary data and in a second stage risk of bias information; or two extractors working sequentially or in parallel. Also indicate for each stage whether the extraction is done by a computer (e.g., AI), a human, or a computer supervised by a human.

Two independent reviewers (N.C. and A.L.) will extract data from the selected articles using a data extraction form developed by the reviewers in Covidence.

A pilot test will be conducted on 5 studies, followed by a reliability verification stage. Covidence can present studies according to the date of publication or in alphabetical order, ensuring that both reviewers work on the same set of articles. The reviewers will adapt and modify the form if necessary during the process of extracting data from the selected studies. Any modifications will be described in the final version of the scoping review.

Any disagreements between reviewers will be resolved by discussion or, if necessary, consultation with additional reviewers.

Extractor instructions *

List the instructions provided to the extractors (i.e., those performing the data extraction). You can also specify which file in the associated OSF project contains these instructions.

You may attach up to 5 file(s) to this question. Files cannot total over 5GB in size.

Extractor masking *

If masking is used, describe the procedure used to blind extractors from the research questions, hypotheses, and/or specific roles of each entity to extract in this review. For example, extractors can be research assistants who are not informed of the study's background or research questions, but who are trained to extract entities using the coding instructions you developed for each entity; or entity extraction can be crowdsourced to citizen scientists.

Not applicable.

Extraction reliability *

For each extraction round, list the number of extractors and the procedure used to ensure independent extraction (this can also mean that you declare that you use one extractor, or will not implement procedures to ensure that the extractions are conducted independently). Also explain the test you will use, if any, to assess extractor agreement.

Two independent reviewers (N.C. and A.L.) will extract data from the selected articles using a data extraction form developed by the reviewers in Covidence. The form will be adapted if necessary during the process of extracting data from the selected articles. Any modifications will be described in the final version of the scoping review. The reviewers will meet after extracting data from the first 5 selected papers (pilot extraction), to ensure consistency in the extraction process.

Following the extraction of data by the two reviewers, a comparison of the data will be conducted, leading to the establishment of a consensus. The consensus form, generated by Covidence, will subsequently be used as the final data for each study.

Extraction reconciliation procedure *

For each extraction round, describe the procedure to deal with divergent extraction decisions (if applicable, i.e., if you use more than one extractor).

Any disagreements between reviewers will be resolved by discussion or, if necessary, consultation with additional reviewers (C.M. or M.G.).

Extraction procedure justification *

Extraction procedures are often compromises, balancing pragmatic considerations with scientific rigour. Here, describe the justifications for your decisions about the justification of each entity that will be extracted, the extraction rounds, reliability assurance, and reconciliation procedures.

Not applicable.

Data management and sharing *

Describe whether and how you will share the files with the extracted entities (as specified in the corresponding field above; i.e., everything extracted from every source, including metadata, method characteristics, variables, associations, etc). List both the file format (e.g., CSV, XLSX, RData), the repository, and any potential embargos or conditions for access. Describe efforts made to share FAIR, 5-star open data, if any such efforts will be made.

A CSV file containing the extracted information will be shared on OSF.

Miscellaneous extraction details *

Here, you can describe any details that are not captured in the other fields in this section.

Not applicable.

Synthesis and Quality Assessment

In this section, you register the procedure for the review's synthesis: the procedure you designed to use the data that was extracted from each source to answer your research question(s). This often includes transforming the raw extracted data, verifying validity, applying predefined inference criteria, interpreting results, and presenting results. Additionally, you register procedures you designed to assess bias in individual sources and the synthesis itself.

Not applicable.

Planned data transformations *

Describe your plans for transforming the raw extracted data. This may include converting effect sizes to other metrics (e.g., convert all metrics to Pearson correlation coefficients); recoding or (re)categorizing extracted qualitative data fragments (e.g., coding extracted music genres within an existing taxonomy); and aggregating extracted data prior to the main synthesis procedures (e.g., compute the mean of a variable over all samples in one source). Applying these transformations to the raw extracted entities from the Extraction section should yield data that corresponds to the variables of interest listed in the Review Methods section.

Not applicable.

Missing data *

Describe how you will deal with missing data (i.e., cases where it is not possible to extract one or more entities from the source material, and your efforts to obtain the missing information, for example by contacting the authors, are not fruitful).

Not applicable.

Data validation *

Describe your process of ensuring that the data are correct and useful (e.g., identifying outliers, identifying retractions, or triangulating with other sources). Also describe your criteria for assessing data validity and how you will deal with data violating those criteria.

An investigation will be conducted to ascertain whether the studies have been retracted, prior to the extraction phase. Retracted studies will be excluded from the final synthesis.

Quality assessment *

Describe the analyses you plan to do to assess and weigh the quality of the included sources with respect to your research question(s). Examples of tools to use for quality evaluation are Cochrane's Risk of Bias tool, GRADE, and GRADE-CERQual.

Not applicable.

Synthesis plan *

Describe the specific procedure you will apply to arrive at an answer to the research question(s). For example, in meta-analyses this is the full analysis plan, including any planned subgroup analyses and moderator analyses, the (multilevel) model specification, and preferably the analysis code. For a qualitative review, it is the procedure you plan to use to collate your results into a coherent picture. If you distinguish synthesis tiers (e.g., primary and secondary analysis, or confirmatory and exploratory analyses), list them and indicate which procedures you plan to use for each. Also specify what you will do if parts of the plan can't be properly executed.

The results of the study will be presented in a series of tables, which will also serve to answer the research question. One table will present the characteristics of the studies, including the authors, year of publication, country, study design (as reported by the authors), and the study's aim. A second table will display the teachers' language practices examined in relation to children's learning, in order to determine which practices have been associated with specific learning outcomes. Furthermore, this table will illustrate how the authors designate the strategies studied. Finally, a table will present the data according to the targeted learning, the grade level studied, and the profile (developmental or socio-economic) of the children included in the studies.

The data will also be presented in a narrative summary that connects the results to the study's objectives and research question. Other information, such as teacher characteristics, intervention characteristics and modalities, the statistical analyses employed, main results, and additional information, will also be included in the narrative summary. Where relevant, a pie chart will accompany the text to display the proportion of strategies studied and analysed for each learning outcome in both preschool/kindergarten and elementary school. This visualization will facilitate the representation of the most studied practices at these educational levels. Any additional analyses conducted during the review process will be explicitly documented within the manuscript.

Criteria for conclusions / inference criteria *

If you plan to draw your conclusions based on pre-specified criteria (e.g., a minimal effect size of interest, a significance level, or a saturation point), list these here.

Not applicable.

Synthesist blinding *

Describe the procedure, if any, used to blind synthesists (i.e., the persons synthesizing the extracted data to arrive at answers to your research question(s)) from the research questions, hypotheses, and/or specific roles of each extracted entity/variable in this review. For example, for meta-analyses, an analyst external to the main research team can be engaged to perform the analyses without knowing the study's hypotheses. For qualitative reviews, for the synthesis, other researchers can be involved who are unaware of and are not informed about the research process and expectations.

Not applicable.

Synthesis reliability *

List the number of synthesists and the procedure used to ensure independent synthesis (this can also mean that you declare that you use one synthesist, or will not implement procedures to ensure that the syntheses are conducted independently).

Not applicable.

Synthesis reconciliation procedure *

Describe the procedure to deal with divergent synthesis decisions (if applicable).

Not applicable.

Publication bias analyses *

Describe the analyses you plan to do to assess publication bias (if any). For an overview of commonly used publication bias correction methods, see Table 1 in <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0215052>

Not applicable.

Sensitivity analyses / robustness checks *

Describe the sensitivity analyses or robustness checks you plan to conduct (if any).

Not applicable.

Synthesis procedure justification *

Extraction procedures are sometimes compromises, balancing pragmatic considerations with scientific rigour. Here, describe the justifications for your decisions about your planned transformations (e.g., if based on assumptions, how do you know those are feasible), your data integrity and missing data checks and corrections, your synthesis plan, the criteria you chose to drive your conclusions/inferences (if any), and your procedures for blinding, and reliability assurance/reconciliation if you use multiple synthesists.

Not applicable.

Synthesis data management and sharing *

Describe whether and how you will share the files with the analysis scripts, notes, and outputs. List both the file format (e.g., R scripts, RMarkdown files, plain text files, Open Document files), the repository, and any potential embargos or conditions for access. See <https://osf.io/5nk92> for a generic example of an analysis script.

Not applicable.

Miscellaneous synthesis details *

Here, you can describe any details that are not captured in the other fields in this section.

Not applicable.