

Interventions on raising achievement in English language and/or literacy in pupils with EAL

Victoria A. Murphy & Adam Unthiah
Department of Education,
University of Oxford



UNIVERSITY OF
OXFORD

The purpose of the review



Research in
English as an
Additional
Language

- identify and review controlled intervention studies which focused on and/or included EAL pupils' English language and literacy development
- identify the quality of these studies re: their contribution to understanding teaching and learning for EAL pupils
- identify intervention programmes which might be most suited to the UK/English context
- further research? Gaps in literature?



Why English language and literacy?



- Many children with EAL in England and elsewhere have less vocabulary knowledge than non-EAL peers (Murphy, 2014; Genesee et al, 2006; Hutchinson et al, 2003)
- Even EAL children with well developed oral language skills and above average reading comprehension skills have been shown to have less productive vocabulary knowledge than non-EAL peers (McKendry 2013)
- Children start primary *learning to read* yet end primary *reading to learn*
 - Problems with reading comprehension could therefore be important in the observed achievement gap between EAL and non EAL peers in specific sub groups.
- A focus on interventions can help identify possible best practice (?)



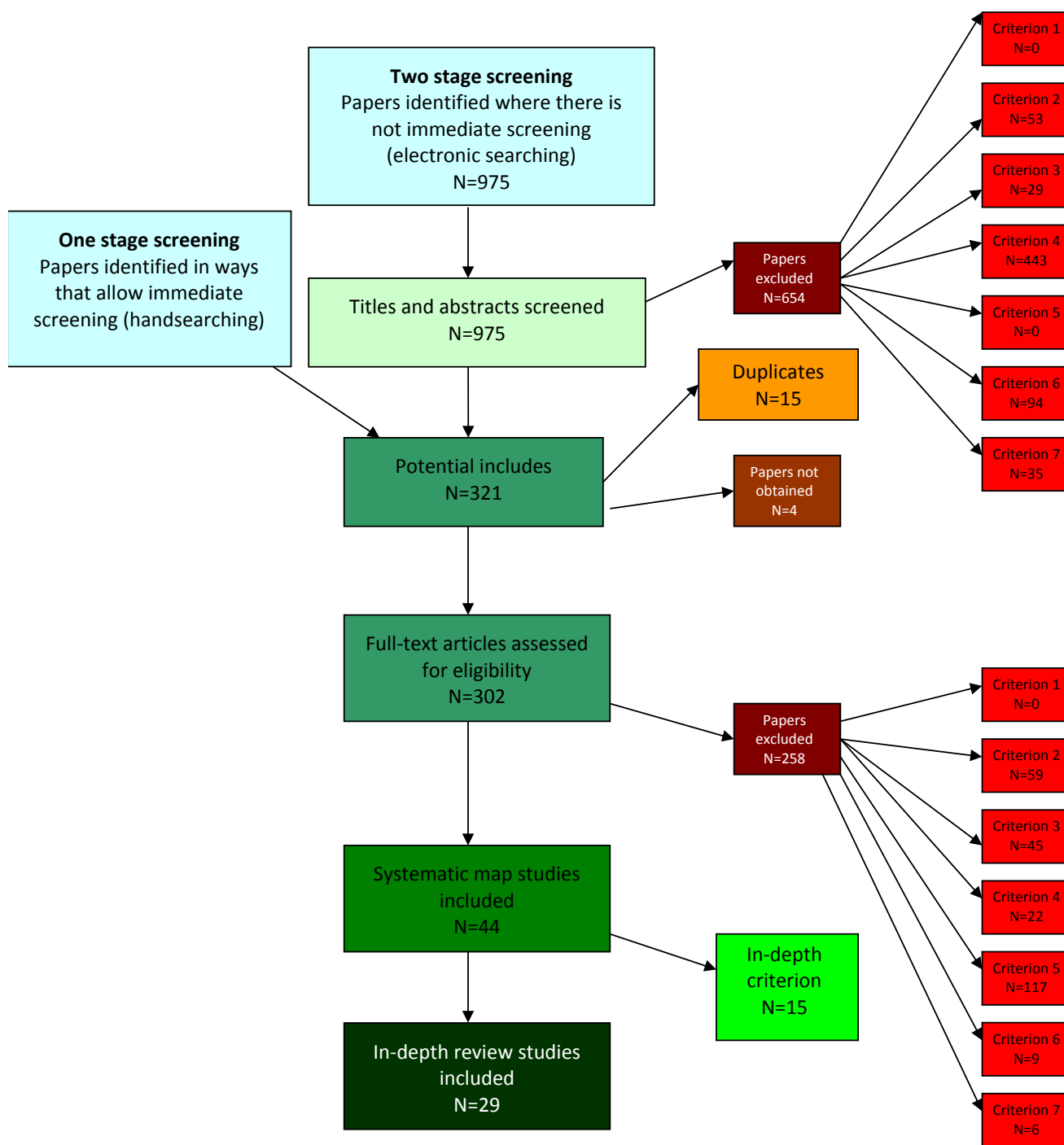
UNIVERSITY OF
OXFORD

Methodology (EPPI-Centre)



Research in
English as an
Additional
Language

- **Identifying key words** (e.g., intervention AND minority language/heritage language/additional language/English language learner/EAL/ESL/ELL AND literacy development)
- **Searching the databases** (e.g., AEI, BEI, ERIC, LLBA, Web of Science)
- **Applying inclusion/exclusion criteria** (e.g., published since 2000; focus on EAL provision; appropriate control/comparison group; peer-reviewed reports; typically developing children)
- **Examining Weight of Evidence**





Weight of Evidence criteria



- **WoE A:** Taking account of all quality assessment issues, can the study findings be trusted in addressing the study aim(s) [High, Medium, Low]
- **WoE B:** What is the appropriateness of the research design and analysis for addressing the aims of the specific review? [High, Medium, Low]
- **WoE C:** What is the relevance of particular focus of the study for addressing the aims of the review [High, Medium, Low]
- **WoE D:** Taking into account the quality of execution, appropriateness of the design, and relevance of focus, what is the overall weight of evidence this study provides to answer the question(s) of this review? [High, Medium, Low]
- Each study read and reviewed by two blind reviewers – (applied linguists)
- Following an evaluation grid asking questions about each element of the study – the reviewers were asked to rate each paper on each of these four criteria
- **EEF's criteria:** research design, number of cases, attrition, outcome measure, fidelity and validity



29 studies in the in-depth review



- 27 from the US, 1 from Canada, 1 from UK
- L1 of pupils: 23 = Spanish
 - (Latino population in the US)
- 14 early primary, 8 mid to late primary, 8 early secondary, 1 mid to late secondary
 - Focus on more primary likely due to teaching of reading skills
- These basic characteristics of the in-depth review studies highlight the inappropriateness of generalising these results to the UK context



Focus of interventions

- **Language** (n=12) – primary focus was on developing some aspect of language, mostly vocabulary
- **Literacy** (n = 10) – primary focus was on either decoding or extracting meaning from text or very rarely on writing
- **CPD** (n = 5) – primary focus was implementation of specific CPD programme.
- **Family literacy** (n = 2) – primary focus on working with families outside of school time



'Language' interventions



- Academic vocabulary (n=6)
- Verbal interaction (n=1)
- Vocabulary + phonological awareness (n = 2)
- Morphological awareness (n=2)
- General vocabulary (n=2)
- Auditory-perceptual and spoken language skills (n=1)

- Many studies included a combination of these aspects of vocabulary
- included *explicit* instruction/training on these aspects of vocabulary/language



UNIVERSITY OF
OXFORD

An Example: Word Generation

<http://wordgen.serpmedia.org/>



Research in
English as an
Additional
Language

- Snow et al (2009); Lawrence et al (2012) and Mancilla-Martinez (2010) reported on the **Word Generation** intervention aimed at enhancing all-purpose academic vocabulary
- 5 words each session used in different ways (texts, debates, discussion, writing etc) – helps promote oral vocabulary skills as well as targeting key specific academic items
- Picked up by maths, social studies and science teachers – as well as English

Join the national conversation!



Word Generation - Unit 1.01

Focus Words

analyze | factor | function | interpret | structure



WEEKLY PASSAGE

Why do we go to school? Some people think the primary goal of education is giving knowledge to students. They feel there is specific information that all kids should know. For instance, they want kids to know what happened in the Revolutionary War and how the food chain works. Others **interpret** the main role of school as one of preparing students to earn a living. They are most concerned about students learning particular skills, such as reading, writing, and arithmetic.

Some argue that schools should introduce a set of shared values, including liberty and justice. They believe this will help students understand the **structure** of our democratic government. For example, they feel it is important for students to understand that while each of the three branches of government has a different function, the three work together to make sure we all enjoy certain freedoms and live by the same rules.

Some think schools should teach students to critically **analyze** what they see, hear, and read. They want students to be able to think carefully about different perspectives, to respect and challenge other viewpoints, and to form their own opinions about issues that affect them. Although many people say that they want kids to be able to think for themselves, students do not always have the freedom to do so in the classroom.

What do you think the **function** of school is? What do you consider the most important **factors** in providing a good education? Which ingredients are essential in your recipe for a good school?

What is the purpose of school?

FOCUS WORDS OF THE WEEK

analyze : (verb) to examine; study

FORMS:

EXAMPLES OF USE:

NOTES:

factor : (noun) something that influences the result of something else

FORMS:

EXAMPLES OF USE:

NOTES:

function : (noun) purpose; role; use

FORMS:

EXAMPLES OF USE:

NOTES:

interpret : (verb) to understand or explain something's meaning

FORMS:

EXAMPLES OF USE:

NOTES:

structure : (noun) way that parts of something relate to each other and work together

FORMS:

EXAMPLES OF USE:

NOTES:

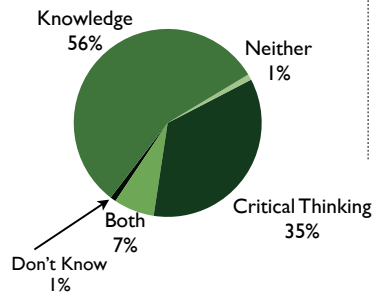
What is the purpose of school?

PROBLEM OF THE WEEK

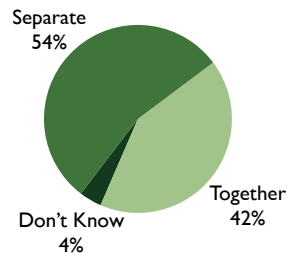


How do Americans view their public schools? **Analyze** the three graphs below. The information comes from a telephone survey taken in 1999.

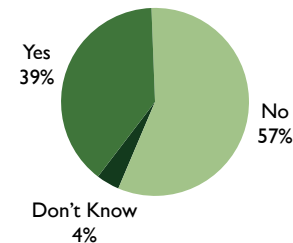
What is the proper **function** of American schools? Should they focus on giving students knowledge, or should they focus on teaching students to think critically?



What is the best class **structure** for elementary schools? Should top students, average students, and struggling students have separate classes, or should different ability levels be taught together?



Should standardized test scores be a **factor** in determining the level of funding a school receives?



Option 1: Which of the following is the best **interpretation** of the data shown in these three graphs?

- A) Americans disagree or are divided on major educational issues.
- B) Americans agree on major educational issues.
- C) Americans want all students to be equally well educated.
- D) Americans are disappointed with today's schools.

Option 2: Answer Option 1. Then determine:

What is the probability that a person responded YES to both questions: "Schools should focus on giving students knowledge," AND "Yes" to the question about making standardized test scores a factor in school funding?



Discussion Question: Many teachers believe that classrooms **function** more effectively when students are actively involved. In social studies, students might present an **analysis** of U.S. foreign policy and our relationship to other countries. In Spanish class, students might **interpret** and act out a play written by a Colombian author. Students prepare and present, while the teacher acts as a guide. Is this kind of **structure** realistic for a math class? Or, when you're learning how to multiply or **factor** numbers, is having a teacher give knowledge by explaining the facts the best option?

What Is the Purpose of School?

THINKING SCIENTIFICALLY

The students in Ms. Kahn's class are learning how to **analyze** substances according to their properties.

"One important property of a substance is its density," says Ms. Kahn. "Can anyone tell me what density is?"

"Isn't it sort of like how massive something is?" says Marian. "I mean, that's not it exactly, but mass is an important **factor** in density... It's hard to explain. Density is sort of how tightly mass is packed into something."

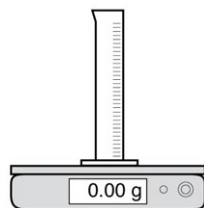
"Yeah," Jamal adds, "density is how much mass a certain volume of something has. Say you have two things that are the same volume, but one has more mass. Then the one that's the same size but more massive is more dense."

"Right," says Ms. Kahn. "Density is the ratio of mass to volume. We can write it as an equation, like this..." Ms. Kahn writes $d = m/v$ on the board, then says, "Density equals mass divided by volume. Scientists often compare the density of different substances to water, because water has a density of exactly one gram per milliliter. But don't take my word for it—see if you can figure out the density of water for yourselves."

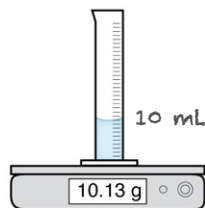
→ Marian and Jamal set out to check the density of water, but each **interprets** Ms. Kahn's assignment differently.



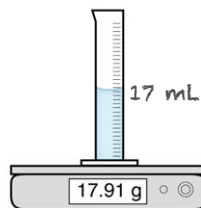
Marian puts a graduated cylinder marked off in milliliters on a scale and resets the scale to zero so that it will not count the mass of the cylinder:



Then Marian pours some water into the cylinder and records the volume and mass of the water.



Next, Marian adds some more water and records the volume and mass again.



Finally, Marian calculates the density of water based on her measurements.

$$10.13\text{g}/10\text{mL} = 1.013 \text{ g/mL}$$

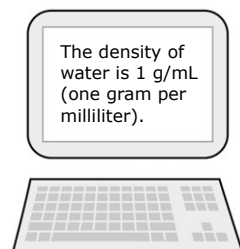
$$17.91\text{g}/17\text{mL} = 1.054 \text{ g/mL}$$

Take the average of the two measurements:

$$(1.013 + 1.054) \div 2 = 1.034.$$

So the density of water is about 1.034 g/mL

Meanwhile, Jamal goes online and finds the following information on three reliable web sites:



TURN AND TALK:

Which student do you think got the most accurate answer, Marian or Jamal? _____

Which student do you think demonstrated the clearest understanding of how science **functions**, Marian or Jamal? Why?

What might be some reasons for the difference in their answers?

What is the purpose of school?

DEBATING THE ISSUE

Get ready...

Pick one of these positions (or create your own).

A

The primary function of school is to prepare students for the work force. Therefore, knowing what jobs students expect to have is an important factor in determining what they need to know and to be able to do.

B

The primary function of school is to teach students how to think for themselves. Therefore, they should spend time in class learning how to learn, analyzing different perspectives, and defending their own positions.

C

The primary function of school is to prepare students for democratic citizenship. Therefore, students should learn how to actively participate in the structures of society and government that help to ensure life, liberty, and the pursuit of happiness.

D

The primary function of school is to make sure that all students have specific knowledge about history, science, literature, and mathematics. Therefore, students should spend more time learning accepted facts than making their own interpretations.

E

Get set...

Be ready to provide evidence to back up your position during your class discussion or debate. Jot down a few quick notes:

GO!

Be a strong participant by using phrases like these.

I believe that...

I agree with you because...

Can you show me evidence in the text that supports what you said?

You make a good point, but have you considered...





Focus Words

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.



WoE of 'Language' interventions

- Mostly **Medium to High** on WoE
- Mostly **Medium** strength of effect sizes
- Mostly **Medium** on EEF's criteria of *Research Design; Number of cases; Attrition; Outcome Measure; Fidelity and Validity*
- Suggests some promising results from interventions that might be useful in the UK context



'Literacy' interventions



- Shared reading (n=2)
- Reading with software (n=1)
- Reading Rescue (recovery) (n=1)
- Reading comprehension (n=6)
- Phonics instruction through texts (n = 2)
- Reading fluency (n=5)
- Decoding (fluency, phonological awareness) (n = 5)
- Many studies included a combination of these



Almaguer (2005)



- Peer-assisted learning strategies have been successful, particularly with less able readers
- Grade 3 ELLs (Mexican descent) in south Texas
- 30 minute sessions every day with a total of 2 hours and 30 mins per week spent on dyad reading activities (9 weeks for intervention)
- Dyads of more and less able reader – ‘lead’ vs. ‘assisted’ reader.
 - **Lead reader** reads a book of the dyad’s choosing in a natural and fluent manner, pointing to words as they are being read, **assisted reader** reads in unison and repeats as many words throughout the reading of book
 - Teachers attending training on how to set up the dyad reading
- **Results:** dyad reading groups had higher scores on reading fluency, reading accuracy and comprehension compared to comparison group.
- Study suggests dyad reading is beneficial for both reading fluency and reading comprehension for ELL children – may specifically help ELLs who are shy/reluctant to speak out loud.



WoE of 'Literacy' interventions



Research in
English as an
Additional
Language

- Medium to Medium-High on WoE criteria
- Medium to Medium-High for Effect Sizes
- Medium to Medium-High for EEF's criteria
- Promising results re: implementing these in the UK



UNIVERSITY OF
OXFORD

'CPD' interventions



Research in
English as an
Additional
Language

- Integrating literacy skills with content (Science) (n=2)
- Cognitive strategies approach to writing
 - One of the very few interventions to include writing, also with older pupils
- Content Focused Coaching for reading comprehension and reading achievement
- 'Talking Partners' – to promote better interaction in class



Example – Short et al 2012



- Focus on **Sheltered Instruction** (integration of language and content teaching) using **SIOP** (Sheltered Instruction Observation Protocol)
- Middle/high school teachers (grades 6-12) in New Jersey
- **SIOP**:- summer institutes and workshops, school-based coaching, class observations, technical assistance.
- Focuses on instructional strategies for teaching academic English literacy skills and content knowledge to ELLs – 7 days of CPD in year 2, 3 additional days in year 2.
- **Results**:- students taught by teachers in intervention group performed better on writing, reading and oral language tests than comparison students.



WoE of 'CPD' interventions



- Mostly **Medium** on WoE
- 3/5 studies did not report effect sizes – remaining 2 were **Low to Medium**
- Mostly **Low to Medium** on EEFs criteria
- Quality of evidence of CPD interventions seems generally lower than the language and literacy



'Family Literacy' interventions



- Parent-child activities to help parents enhance child's literacy skills
 - Rated mostly **High** on WoE
 - **Low to Medium** Effect Sizes
 - Mostly **Medium** on EEF's criteria
- Summer literacy workshops to help prevent summer reading loss
 - Mostly **Medium** on WoE
 - No effect sizes
 - Mostly **Medium** on EEF's criteria



Example: Harper et al (2011)



- Aim to evaluate a family literacy program on EAL children's early reading development
- Early Years/Reception children and their parents (year 1) in Canada (Toronto)
- 9-week family literacy programme – 90 minutes once per week for 9 weeks during scheduled lunchtime period (mostly mum who attended)
- Joint parent-child activities related to language/literacy and provided parents with information and ideas for creative and meaningful ways to enhance children's emergent literacy
 - i) choosing books for young children, ii) talk to your child, iii) get it write, iv) reading all around us, v) read to me and help me become a reader, vi) narrative and story telling, vii) thinking about words and sounds, viii) letter names and sounds, ix) fun with math
- **Results:-** EAL children who participated had higher scores on inferring meaning from print compared to NS children and non-participating EAL children



Summary/Conclusions

- **Very limited research outside US context**
 - *Urgent need for more controlled intervention studies examining ways to enhance English language/literacy development in children with EAL – particularly w.r.t the most at risk sub-groups identified in Strand et al (2015).*
- **Most interventions included some form of explicit vocabulary/word-level instruction**
 - *Teaching vocabulary, particularly Academic Vocabulary, can have positive effects on children's reading and comprehension (e.g., Word Generation Intervention)*
- **Teaching word analysis strategies can also be effective**
 - *Teaching all the words a child needs to know is impossible, hence an intervention which focuses on word-analysis strategies can have a positive impact (e.g., morphological decomposition)*
- **Children who are 'at risk' and/or struggle with reading accuracy (decoding) can benefit from interventions targeting word analysis, phonemic/phonological awareness**
 - *Strand et al's analysis identifying more at risk sub-groups in the UK context might enable us to provide more targeted support*
- **Students who are good readers (i.e., decoding) but are weak in comprehension can benefit from interventions which target explicit vocabulary teaching**
 - *Poor comprehenders are less visible in the classroom due to advanced conversational skills and good single word reading skills. Explicit focus on word (semantic) knowledge, particularly with academic vocabulary and less frequent words can be beneficial*
- **A Comparative lack of interventions looking at CPD and inservice training for teachers.**
 - *Teachers need support in their work with children with EAL and we need to offer them (more) evidence-based in service training*
- **The role of the home (and home language environment) is under-represented in intervention research**
 - *Research has illustrated a facilitative effect of developing the home language (literacy) knowledge. We therefore need to do more research exploring how to effectively support home language knowledge in linguistically diverse classrooms in the UK*

Thank You

victoria.murphy@education.ox.ac.uk -- please email me if you have any questions/comments

Acknowledgements:

EEF, Unbound Philanthropy, The Bell Foundation,
Applied Linguistics Research Group at OUDE