

// Foundations

What Works Centre for Children & Families

IMPROVING THE HOME LEARNING ENVIRONMENT

Vita Bax

Evidence and Evaluation Officer



FOUNDATIONS

Foundations is the UK's What Works Centre for Children & Families.

We're generating and championing the actionable evidence that improves family support services, so more vulnerable children have the foundational relationships they need to thrive in life.



VISION

Vulnerable children have the foundational relationships they need to thrive in life.

MISSION

Generating and championing actionable evidence that improves services to support family relationships.

AIMS FOR THE WEBINAR



- Reflect on the foundations of early learning and key risks to children's development
- Learn how a good Home Learning Environment can support language development and early learning
- Discuss the key features of a good Home Learning Environment
- Understand how evidence-based interventions can effectively support children's early learning at home

EXPECTATIONS FOR THE WEBINAR



- Use the chat and put up hands to ask questions.
- Will be recorded – slides and presenter only (no recording of chat).
- Slides and recording will be shared afterwards (available online at What Works).

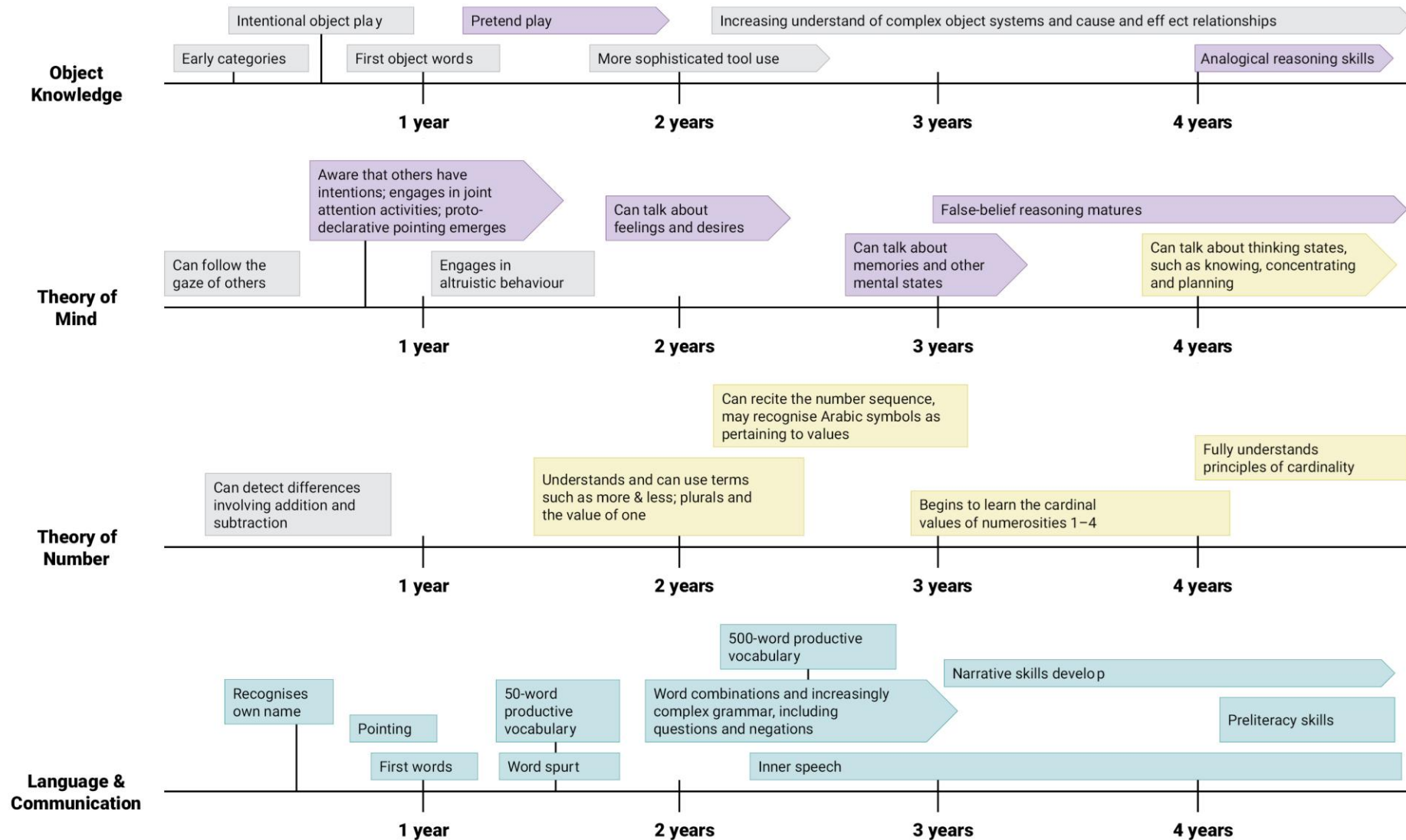
**LIGHT BULB CHECK:
HOW FAMILIAR ARE
YOU WITH THE IDEA
OF THE HOME
LEARNING
ENVIRONMENT?**





CHILD DEVELOPMENT IN THE EARLY YEARS

MILESTONES IN THE DEVELOPMENT OF CHILDREN'S KEY COMPETENCIES DURING THE FIRST 5 YEARS



HOW IMPORTANT IS EARLY CHILD DEVELOPMENT?

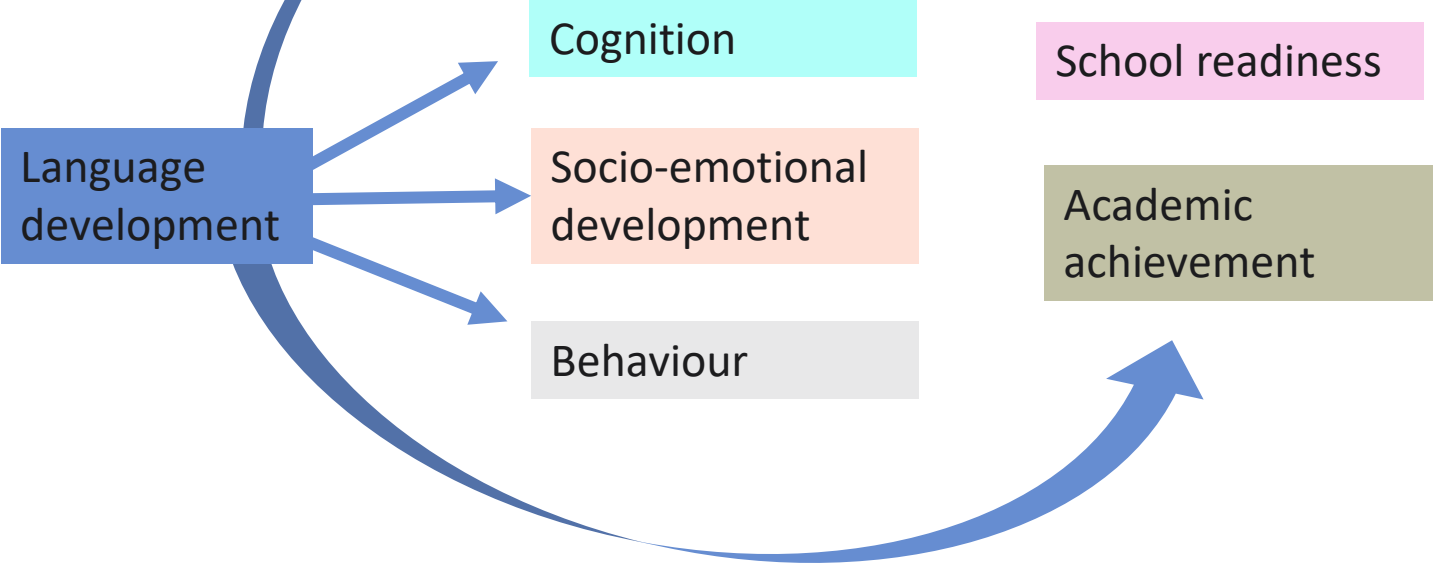


The learning capabilities acquired during the first five years of life provide the foundation for all children's future learning.

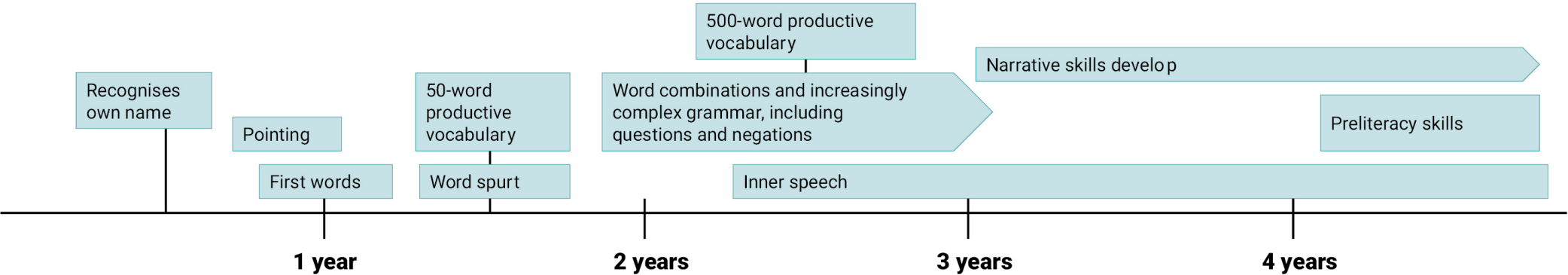
Before children start school aged 5, the majority of children will have:

- a vocabulary of over 10,000 words,
- the ability to listen and follow directions
- the ability to understand numerical values up to 10.

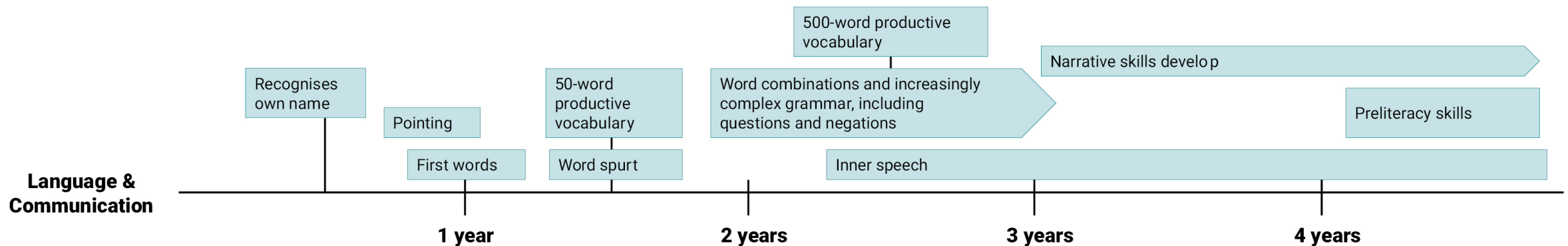
LANGUAGE DEVELOPMENT



Language & Communication



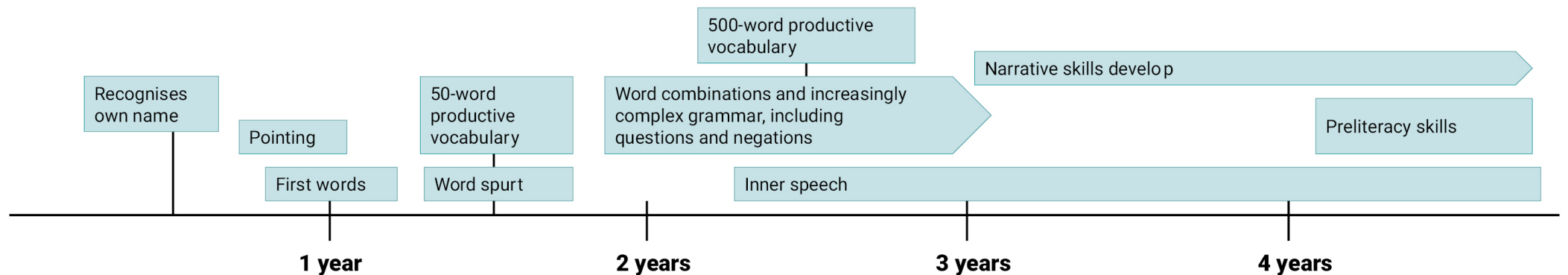
LANGUAGE DEVELOPMENT



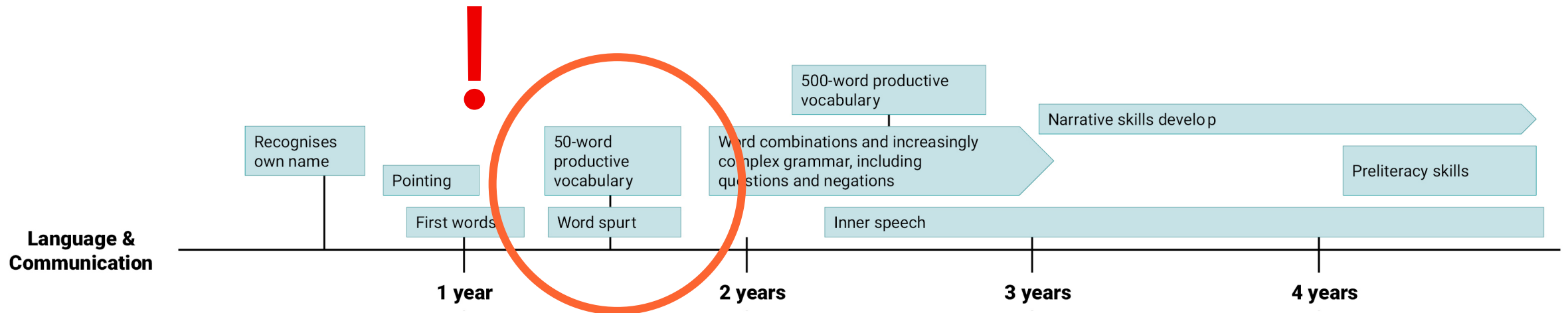
LANGUAGE DEVELOPMENT



Language & Communication



LANGUAGE DEVELOPMENT



LANGUAGE DEVELOPMENT



Language

English (Irish)

Form

Words and Sentences

Measure

Produces

Grouping variable

None

Filter data

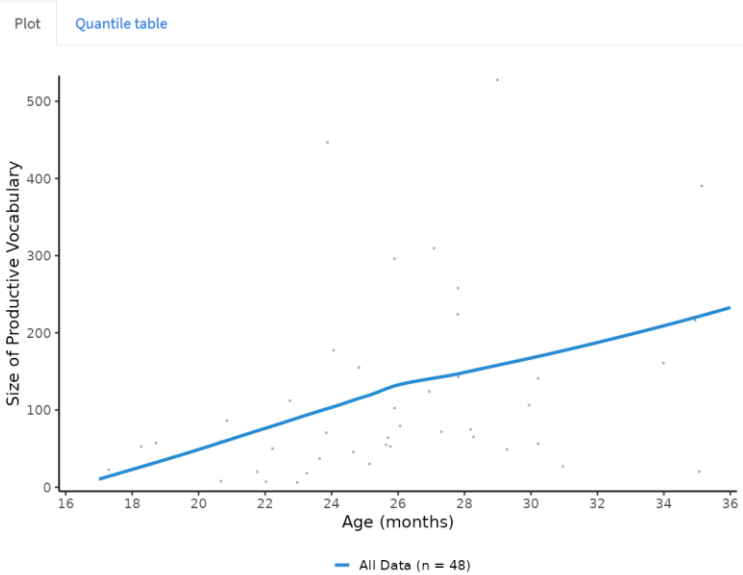
☒ cross-sectional only

☐ normative sample only

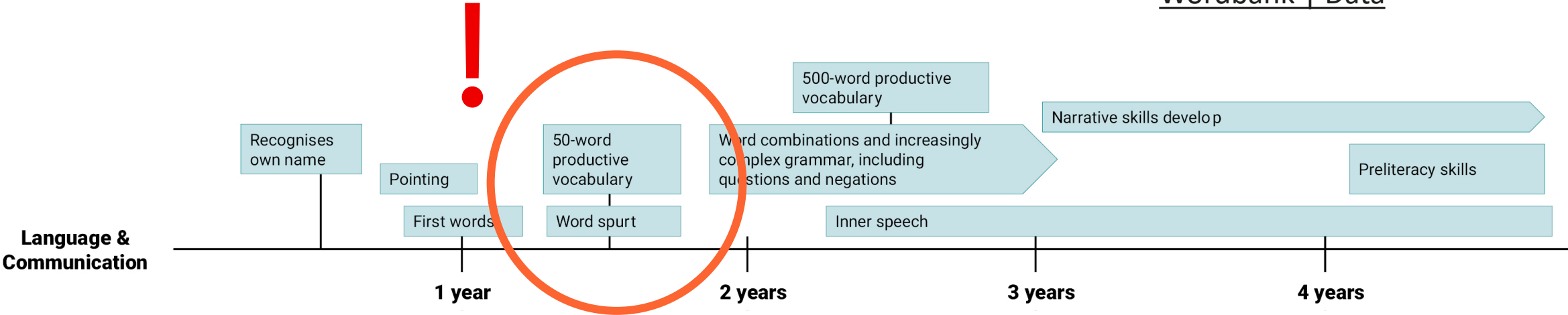
☐ monolingual only

☐ typically developing only

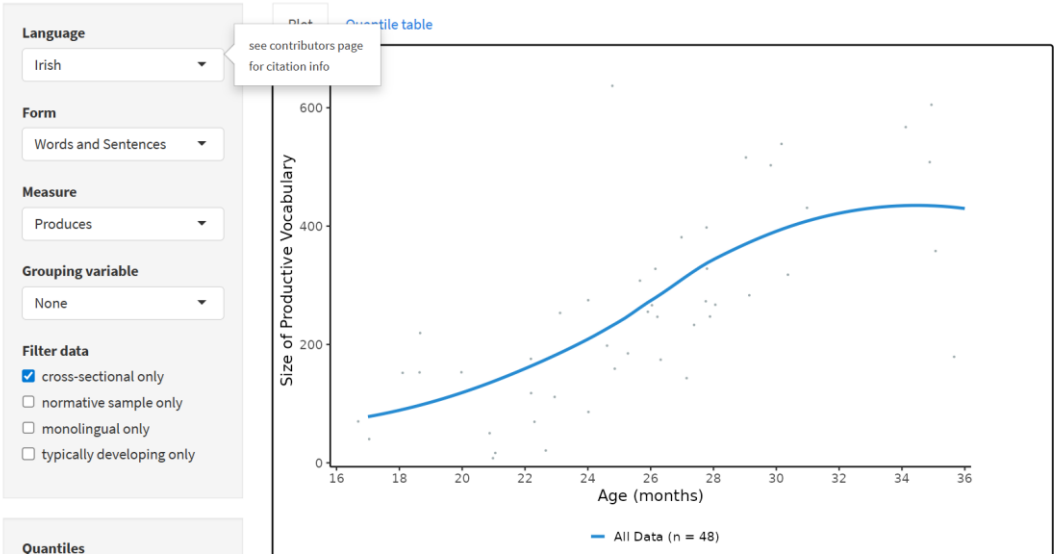
Quantiles



Wordbank | Data

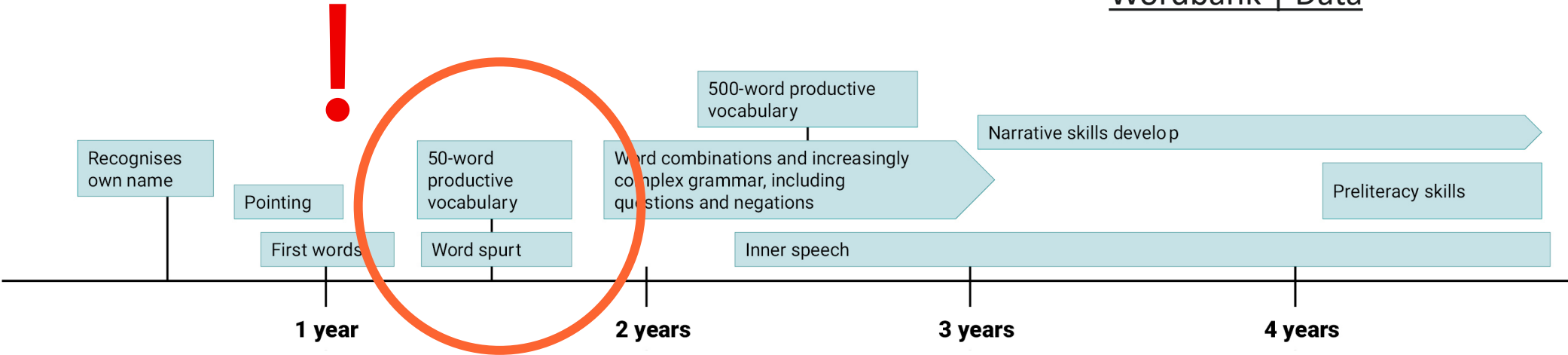


LANGUAGE DEVELOPMENT



Wordbank | Data

Language & Communication



LANGUAGE DEVELOPMENT



Language

English (British)

Form

Oxford CDI

Measure

Produces

Filter data

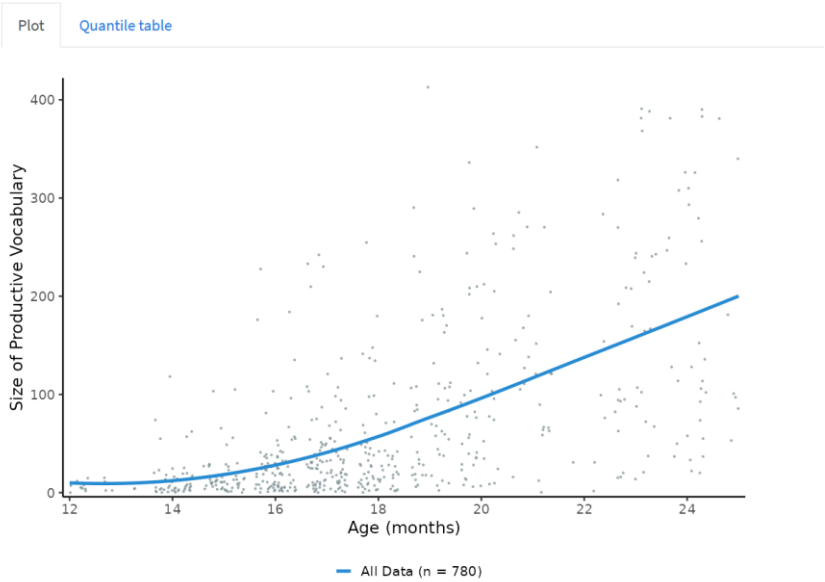
☐ cross-sectional only

☐ normative sample only

☐ monolingual only

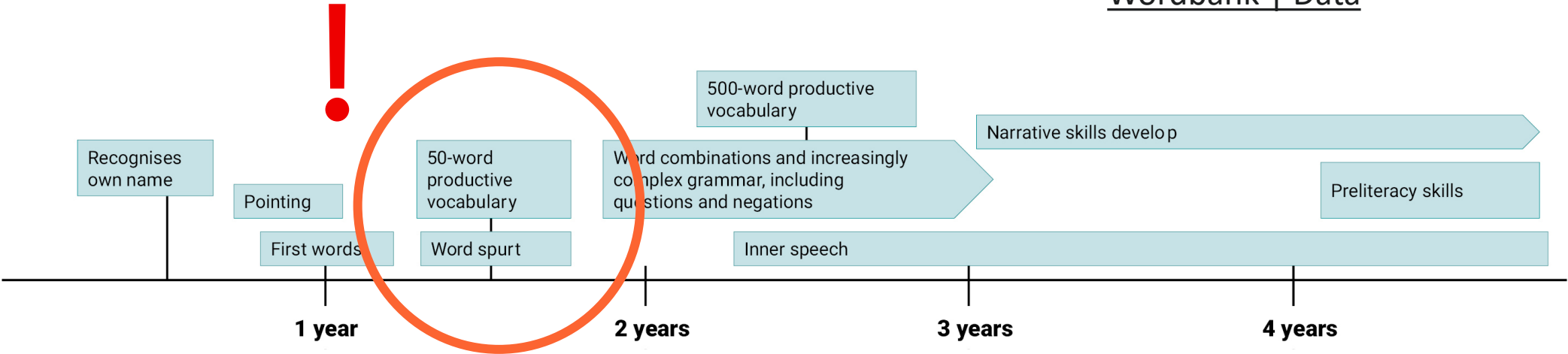
☐ typically developing only

Save settings

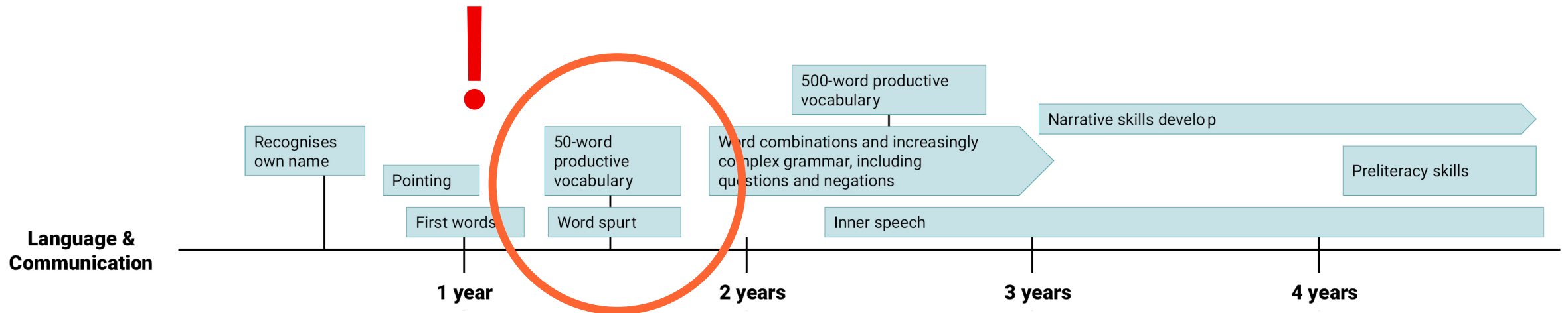


Wordbank | Data

Language & Communication



LANGUAGE DEVELOPMENT



PROMOTING LANGUAGE DEVELOPMENT



Supporting Factors

Family & Birth Order

 Being a firstborn

Caregiver Interaction

 Hearing high levels of infant-directed speech

 Frequent responsive conversations

 Joint attention activities

 Shared book-reading

Environment & Education

 Higher family socioeconomic background

 Childcare from one adult in first two years

 Enriching preschool education

Risk Factors

Parental Factors

 Young or teenage mother

 High levels of parental stress or mental health problems

 Low parental educational qualifications

Family Structure

 High number of siblings

MULTILINGUAL DEVELOPMENT



- 15% of the population of Ireland are multilingual, speaking a language other than English or Irish at home
- 40% of people speak some Irish
- Multilingualism is not just about language competence, but also about identity and heritage

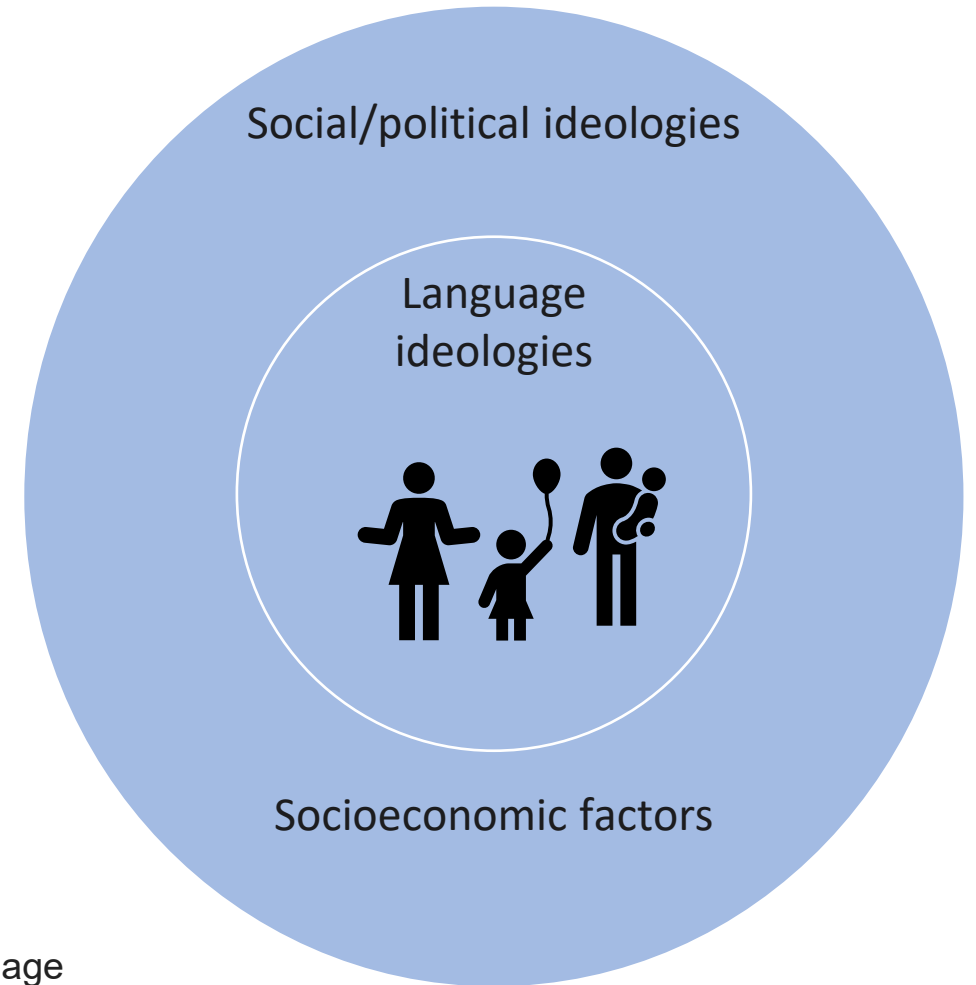
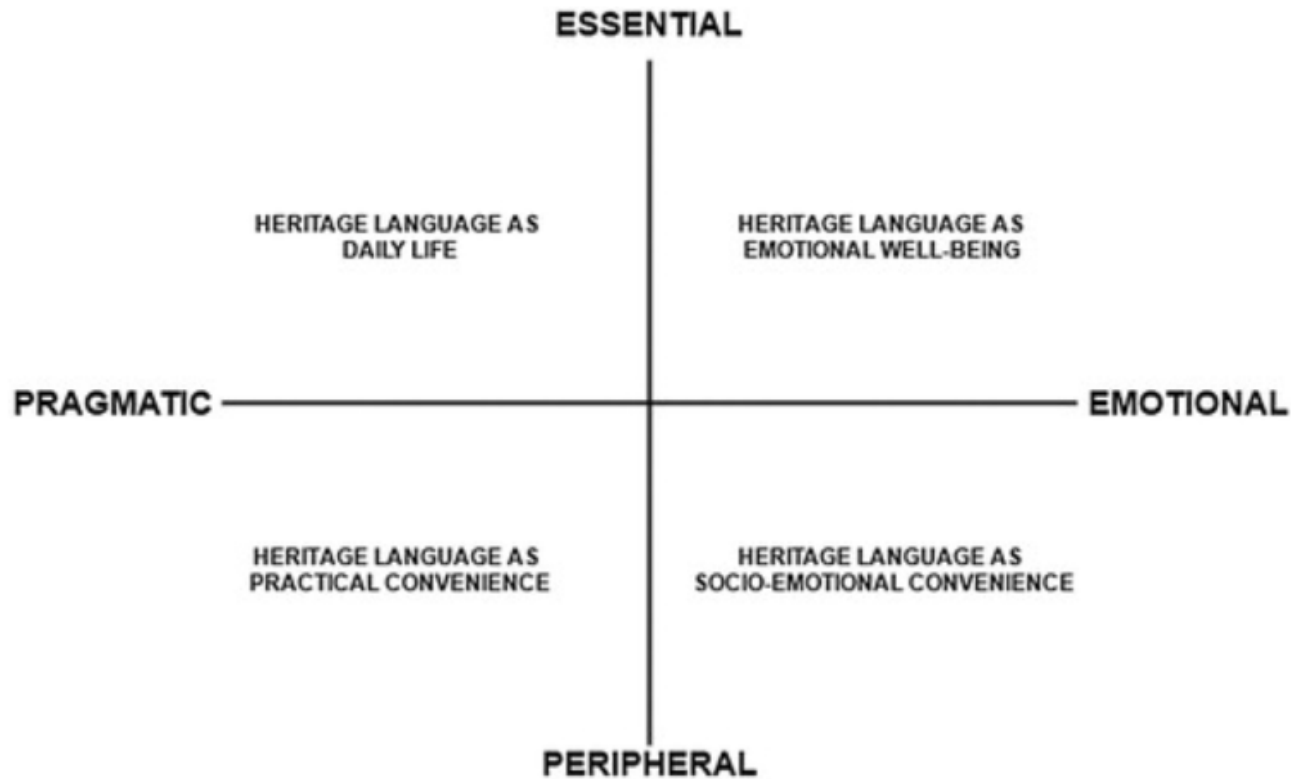


MULTILINGUAL DEVELOPMENT

We Speak Multi



Figure 1. A conceptual framework of heritage language identities.

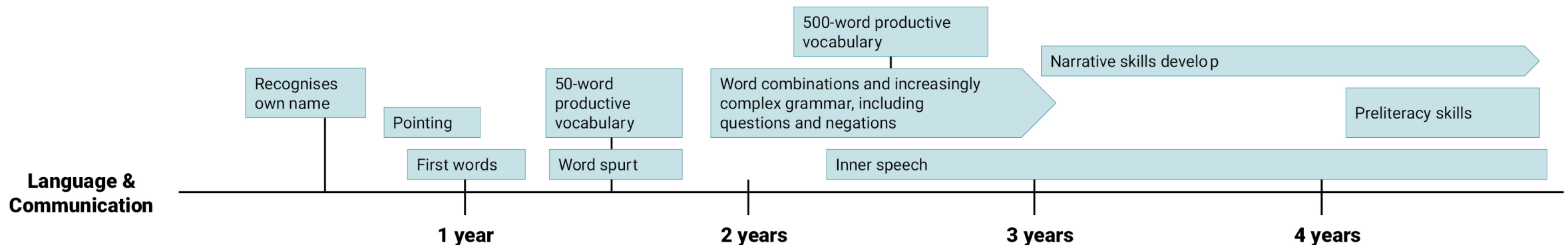
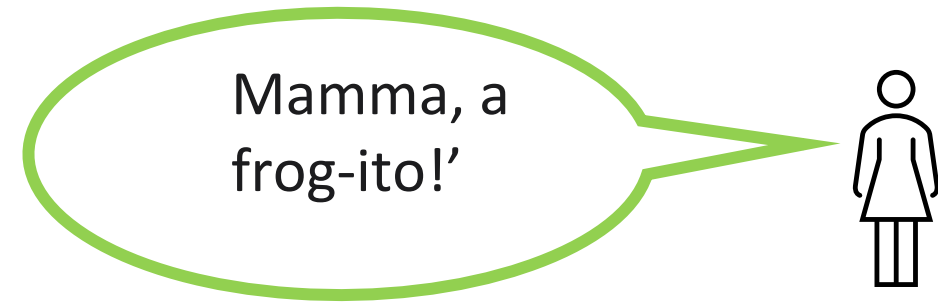


Little, S. (2020). Whose heritage? What inheritance?: Conceptualising family language identities. *International Journal of Bilingual Education and Bilingualism*, 23(2), 198-212.

MULTILINGUAL DEVELOPMENT



- Simultaneous vs sequential development
- Similarities and differences with monolingual development
- At a broad level, major milestones are passed at the same time
- Enormous variation in multilinguals, like monolinguals





KEY FEATURES OF A GOOD HOME LEARNING ENVIRONMENT

WHAT IS THE HOME LEARNING ENVIRONMENT?



The physical characteristics of the home, and the quality of the implicit and explicit learning support which children receive from their caregivers.

The home learning environment is vital for developing children's school readiness.

We know are specific activities and ways of communicating which can help support a child's early language development:

- Responsiveness
- Warm interactions
- Stimulating activities



WHAT IS THE HOME LEARNING ENVIRONMENT?



- Play-based activities that allow children to **physically explore** their environment.
- Play-based activities that help children to learn the **names of objects** and engage in **symbolic play**.
- **Conversations with adults** that follow the child's lead and are specific to the child's interests.
- Enriching **educational materials** which include arts and crafts supplies and educational matching games.
- **Regular outings** to libraries, museums, parks and gardens to provide children with opportunities **to learn about the physical world**.

- Activities that support **preliteracy skills** such as **shared book reading**.
- Activities which encourage children to **count** out objects.
- Conversations **about small and large number values**.
- Activities that develop knowledge of the **counting principles** and Arabic **numerals**.
- Activities which encourage **understanding of the perspectives of others** through **stories and role-play** activities.
- Conversations and materials which facilitate children's **awareness of the thoughts and feelings of others**.

IMPORTANCE OF THE HOME LEARNING ENVIRONMENT



Parenting practices such as **reading** to children, using **complex language**, **responsiveness**, and **warmth** in interactions are all associated with better developmental outcomes:

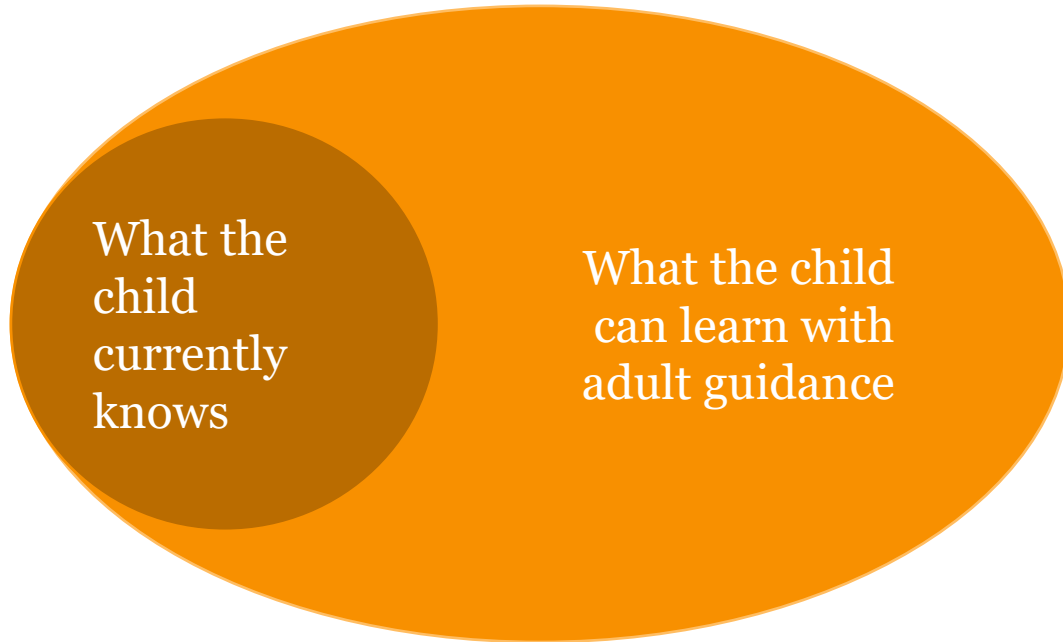
- The HLE supports the emergence of pre-academic skills that are stable into early adolescence.
- The HLE may act as a protective influence, reducing the risk of poor attainment due to other factors.



Bradley, R. (2002). Environment and Parenting. In M. Bornstein (Ed.) Handbook of parenting, 2nd Ed. Hillsdale, N. J.: Lawrence Erlbaum Associates

Melhuish, E., et al. (2008) Effects of the Home Learning Environment and Preschool Center Experience upon Literacy and Numeracy Development in Early Primary School. Journal of Social Issues, Vol. 64, No. 1, pp. 95--114

ZONE OF PROXIMAL DEVELOPMENT



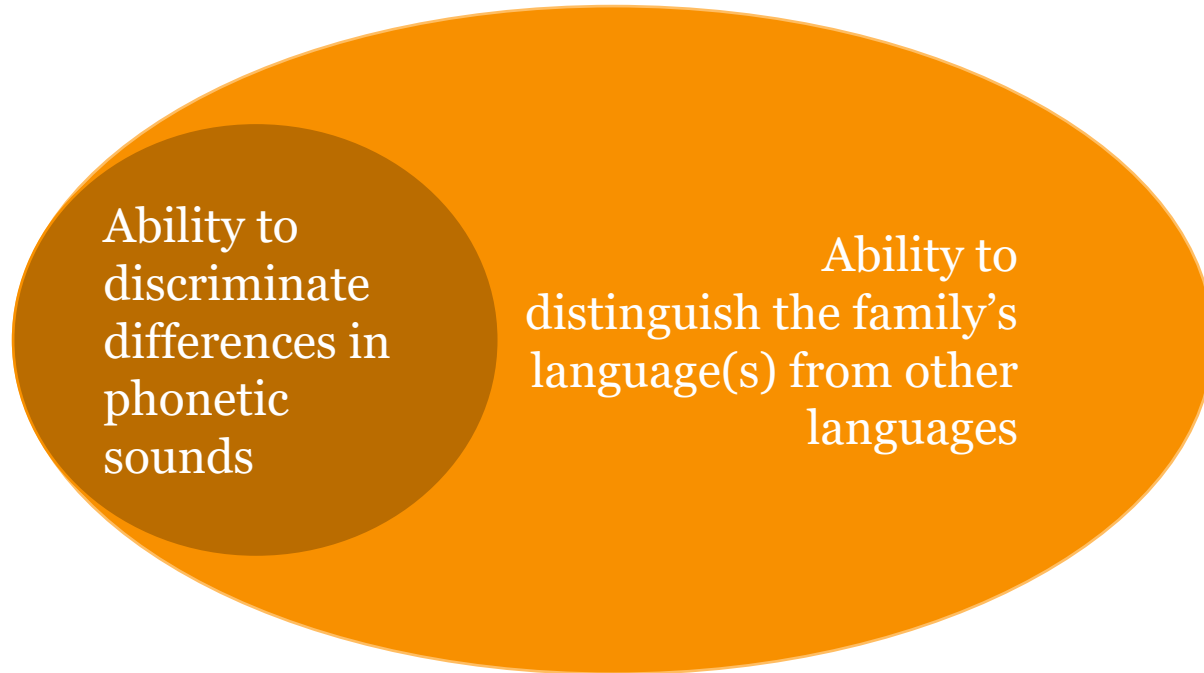
Parental support begins with a **nutrient-rich ante-natal environment**, then by engaging with the baby and by keeping them well-fed and calm.

As babies get older, parents shape their babies learning through **scaffolding**.

Scaffolding: Adult teaching behaviours which occur within the child's proximal zone of development.

Zone of proximal development (ZPD): The gap between what a child currently understands and what they are capable of understanding with others' support.

PARENTAL SCAFFOLDING FOR LANGUAGE



Evidence suggests that babies can distinguish phonetic variation in human speech at birth.

Some of the earliest 'learning' is the ability to recognise the phonetic patterns of their mother's language, which occurs in the first three weeks of life.

Parental scaffolding is most successful when it is **specific to the baby's individual ZPD**. Most parents are good at understanding their infant's ZPD and naturally behave in a way that supports optimal learning within it. For example, by using '**infant directed speech**' (IDS).

Parents who are sensitive to their infant's ZPD modify their behaviour accordingly as the child grows older and their ZPD shifts.

THE CENTRE FOR EARLY CHILDHOOD: SCAFFOLDING EXPLAINER





BARRIERS TO PROVIDING A SUPPORTIVE HOME LEARNING ENVIRONMENT



**WHAT FACTORS ARE
PREVENTING
PARENTS FROM
OFFERING A
SUPPORTIVE HOME
LEARNING
ENVIRONMENT TO
THEIR CHILDREN?**



FAMILY STRESSORS AND LOW INCOME



There are multiple pathways by which low family income can negatively impact children.

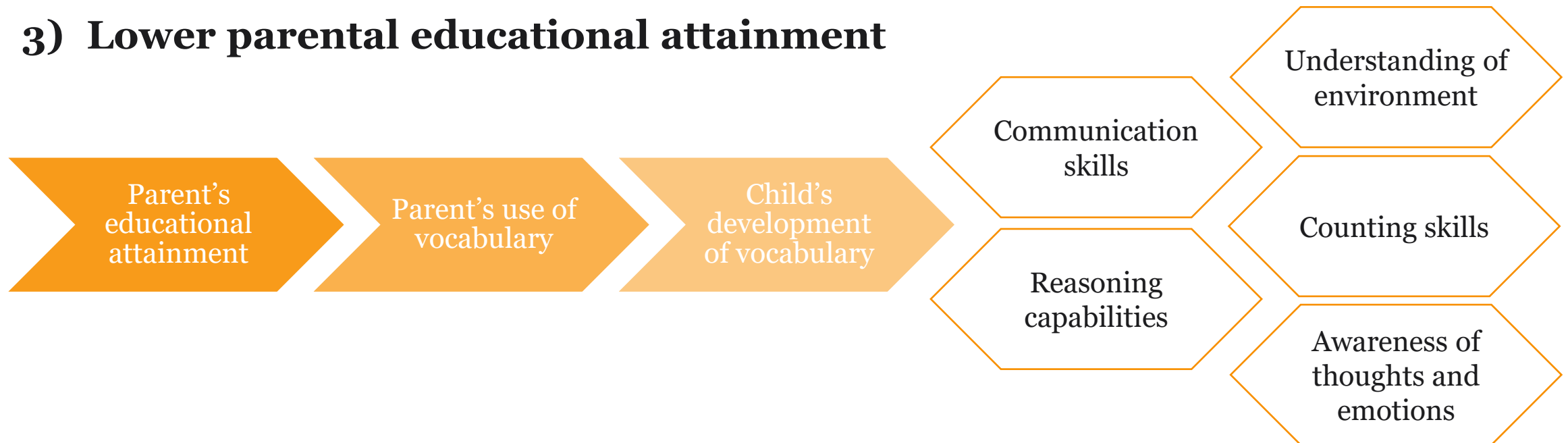
- 1) Resource model
- 2) Family stress model
- 3) Lower parental educational attainment

FAMILY STRESSORS AND LOW INCOME



There are multiple pathways by which low family income can negatively impact children.

- 1) Resource model
- 2) Family stress model
- 3) Lower parental educational attainment**



SCREEN TIME AND TECHNOLOGY USE IN THE HOME



Of children aged 3 – 5 years old:

- 19% have their own mobile phone.
 - 56% use messaging sites/apps.
 - 91% use video-sharing platforms.
- 
- 37% use social media.
 - 60% have their own social media profile.

WHO SCREEN TIME GUIDELINES (2019)

UNDER 1: NO SCREEN TIME IS RECOMMENDED

1 YEAR OLD: NO SEDENTARY SCREEN TIME RECOMMENDED

2 – 4 YEARS OLD: NO MORE THAN 1 HOUR OF SCREEN TIME RECOMMENDED, AND LESS IS BETTER.

PARENTING AND SCREEN TIME



- Just over two in ten (23%) parents of 3-12s see the benefits to their child of using social media outweighing the risks, compared to 39% of parents of 13-17s.
- One third (33%) of parents of 3-12s find it hard to control their child's screen time compared to half (50%) of parents of 13-17s.
- 59% of parents of children aged 3 – 5 report that they sit beside their child to watch or help them while they are online.



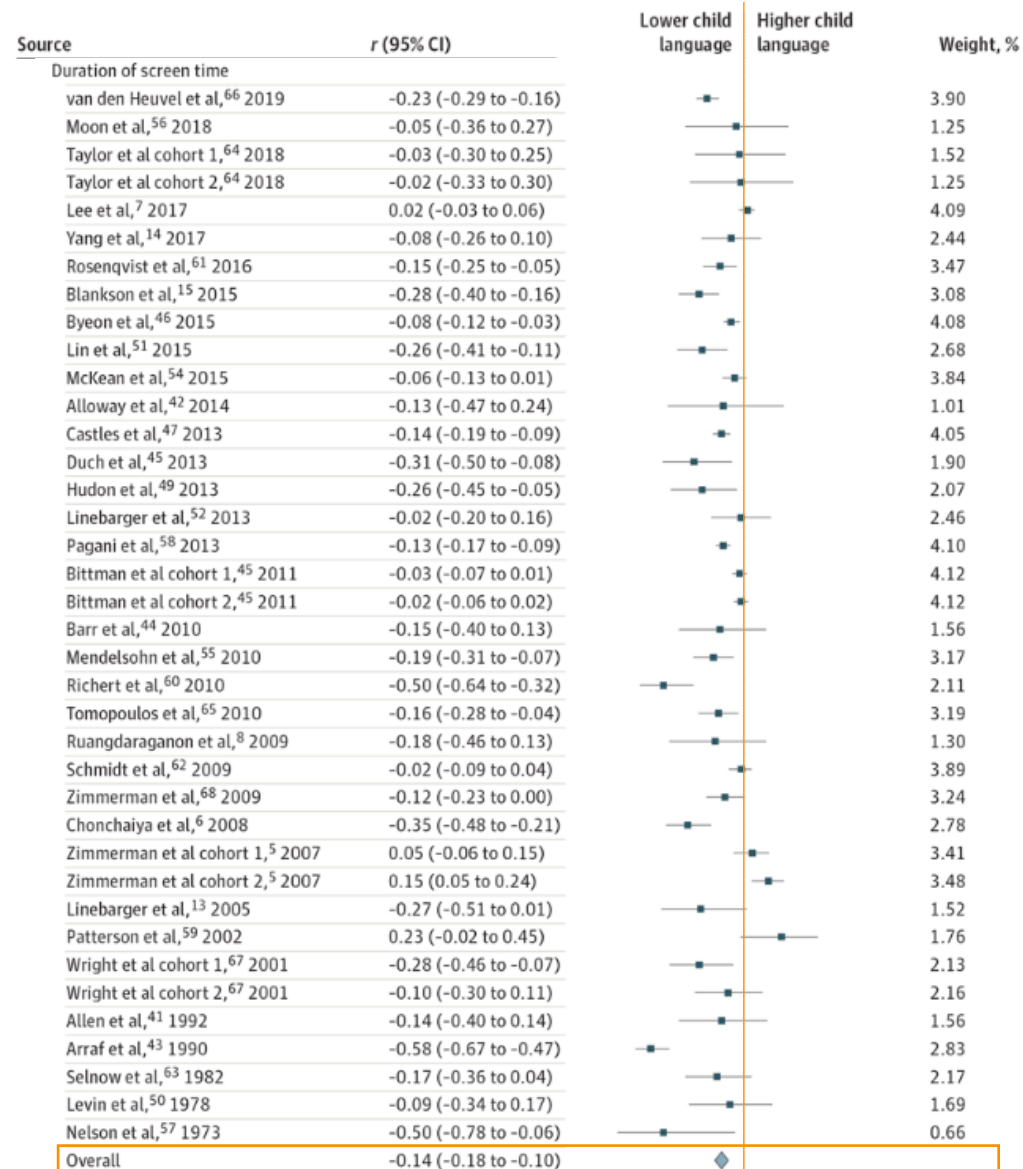
WHO SCREEN TIME GUIDELINES (2019)

UNDER 1: NO SCREEN TIME IS RECOMMENDED

1 YEAR OLD: NO SEDENTARY SCREEN TIME RECOMMENDED

2 – 4 YEARS OLD: NO MORE THAN 1 HOUR OF SCREEN TIME RECOMMENDED, AND LESS IS BETTER.

SYSTEMATIC REVIEW EVIDENCE



- Finding associations between screen use and child language skills
- Systematic review and meta-analysis including 38 primary studies (18 313 participants).
- Significant and negative combined effect size: $r = -0.14$ (95% CI, -0.18 to -0.10).
- Greater quantity of screen use was associated with lower child language.

SCREEN USE AND SCHOOL READINESS



US population-based study including 9,323 children aged 3 – 5 years, using data from the National Survey of Children's Health.

Investigated the relationship between media use and school readiness, while controlling for demographic and socio-contextual factors.

Small but significant linear association between **screentime** and **child self-regulation** and **social-emotional skills**, but less so for early learning skills.

Family income moderated the relation between screentime and self-regulation, such that the relation was stronger for children from low-income backgrounds. **Family income had no moderating effect on early learning or social-emotional skills.**

In addition, no evidence of a moderating effect of sleep, reading, exposure to adverse childhood experiences (ACEs), or parent stress was found.

A Population-Based Study of Associations Among Child Screen Media Use, Social-Contextual Factors, and School Readiness

Shayl F. Griffith, PhD, Yuxi Qiu, PhD

ABSTRACT: *Objective:* Results of studies examining relations between child media use and school readiness have been inconsistent. Importantly, studies often focus on a single outcome domain (e.g., academic, social, or behavioral), making the comparison of relative importance difficult; fail to account for confounding variables; and fail to investigate social-contextual moderators. This study investigated relations among child media use exposure, social-contextual factors, and multiple domains of school readiness in preschool-aged children. *Methods:* Multivariate regression analyses were used to examine relations between child media use and 3 domains of school readiness (early learning, social-emotional skills, and self-regulation), controlling for demographic and social-contextual factors, and to investigate differential susceptibility by examining family income and 4 social-contextual factors (sleep, exposure to adverse childhood events, frequency of shared reading, and parent stress) as moderators in a large US population-based sample (N = 9323) of 3 to 5 year olds. *Results:* After controlling for confounding variables, higher screentime was negatively related to children's social-emotional skills and self-regulation, but less so for early learning. Effect sizes were small. The relation between screentime and self-regulation was significantly moderated by family income, such that the relation was stronger for children from low-income backgrounds. No other evidence of significant moderation was found. *Conclusion:* Results add to evidence that the relation between screen media use and outcomes in young children is likely complex. Future work should prioritize examining impacts of screen media use on social and behavioral functioning to further inform the evaluation of relative benefits and costs of child screen media use.

(J Dev Behav Pediatr 43:529-536, 2022) **Index terms:** screentime, school readiness, differential susceptibility to media, media use.

School readiness, including early competencies in academic, social, and behavioral domains that develop before the start of school, is an important indicator of children's future success. However, inconsistent findings from previous research have illustrated this inconsistency, although evidence is arguably clearer for behavioral, as compared to academic outcomes. For example, previous research has found that children with higher levels of screen media use have lower levels of school readiness, but this relationship is often weak and inconsistent across studies. This study investigated the relationship between screen media use and school readiness, while controlling for demographic and socio-contextual factors, and to investigate differential susceptibility by examining family income and 4 social-contextual factors (sleep, exposure to adverse childhood events, frequency of shared reading, and parent stress) as moderators in a large US population-based sample (N = 9323) of 3 to 5 year olds. *Results:* After controlling for confounding variables, higher screentime was negatively related to children's social-emotional skills and self-regulation, but less so for early learning. Effect sizes were small. The relation between screentime and self-regulation was significantly moderated by family income, such that the relation was stronger for children from low-income backgrounds. No other evidence of significant moderation was found. *Conclusion:* Results add to evidence that the relation between screen media use and outcomes in young children is likely complex. Future work should prioritize examining impacts of screen media use on social and behavioral functioning to further inform the evaluation of relative benefits and costs of child screen media use.

SCREEN TIME AND THE HOME LEARNING ENVIRONMENT

- We are still building the evidence base on the effect of screen time on school readiness and child development.
- We know that screens are becoming an even more common feature of the home learning environment.
- Do we need to do more to help parents use screens safely and effectively with their children?





INTERVENTIONS TO SUPPORT THE HOME LEARNING ENVIRONMENT

HOME LEARNING INTERVENTIONS ON THE EVIDENCE HUB



ParentChild+: name begins A - H

Parents as First Teachers: name begins I - P

Raising Early Achievement in Literacy: name begins Q - Z

Please answer these questions:

1. What is the level of need is the intervention designed for (how is it targeted)?
2. What is the mechanism (theory of change) of the intervention?
3. What are the outcomes which the intervention is expected to support?
4. What rating does the intervention have?
5. What is the evidence which supports this intervention? How many studies, and what types are they (RCT, QED)?

WHAT LEVEL OF NEED: TARGETING FAMILIES WHO NEED SUPPORT



Specialist

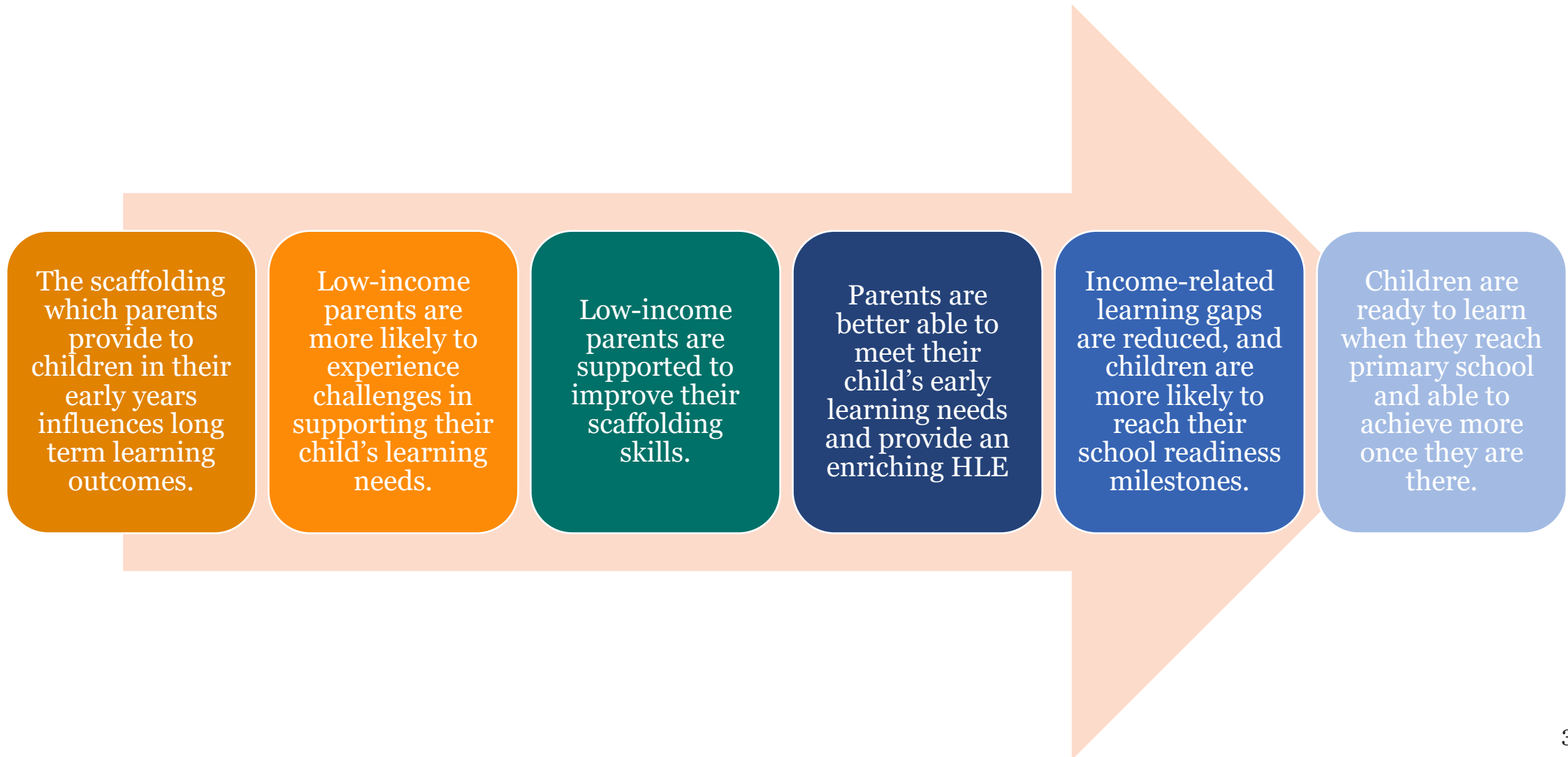
Targeted-indicated

Targeted-selected

Universal

- Depending on the local area, we know up to 40% of children will be living in disadvantaged communities.
- There is strong and consistent evidence showing that evidence-based early years interventions can prevent income-related learning gaps when they are offered selectively to families on the basis of income.
- A primary aim of these interventions is to help parents understand the learning needs of their young child and scaffold their learning needs appropriately.
- These interventions place a strong emphasis on parent-child interaction. For example, by increasing parents' awareness of their child's ZPD and providing them with strategies for scaffolding within it.

FEATURES OF EFFECTIVE HLE INTERVENTIONS



FEATURES OF EFFECTIVE HLE INTERVENTIONS



- Sufficiently **intensive** (at least once or twice a month, for between 1 and 2 hours).
- Offered **early** (before the age of 3 and ideally in the first year).
- Delivered for **a year or more**.
- Offered through **home-visiting** to individual families.
- Practitioners are **qualified teachers**.



- Support is **tailored** and includes coaching, homework assignments and feedback.
- Advice provided is within the **parents' ZPD** and appropriate for the **child's ZPD**.
- Parents are encouraged to see the world from the **child's perspective**.
- Advice is **developmentally sequenced**.

BIBLIOGRAPHY



- Asmussen, K., Law, J., Charlton, J., Acquah, D., Brims, L., Pote, I. & McBride, T. (2018). Key competencies in early child development: Things, People, Numbers and Words. *The Early Intervention Foundation*.
- Bradley, R. (2002). Environment and Parenting. In M. Bornstein (Ed.) *Handbook of parenting*, 2nd Ed. Hillsdale, N. J.: Lawrence Erlbaum Associates
- Department for Education. (2018). Improving the home learning environment. *UK Government*. Retrieved from: https://assets.publishing.service.gov.uk/media/5f6753d1d3bf7f72361877f6/Improving_the_home_learning_environment.pdf
- Hillman, J., & Williams, T. (2015). Early years education and childcare: lessons from evidence and future priorities. London: Nuffield Foundation.
- Kucirkova, N., Dale, P. S., & Sylva, K. (2018). Parents reading with their 10-month-old babies: key predictors for high-quality reading styles. *Early Child Development and Care*, 188(2), 195-207.
- Little, S. (2020). Whose heritage? What inheritance?: Conceptualising family language identities. *International Journal of Bilingual Education and Bilingualism*, 23(2), 198-212.
- Melhuish, E., et al. (2008) Effects of the Home Learning Environment and Preschool Center Experience upon Literacy and Numeracy Development in Early Primary School. *Journal of Social Issues*, Vol. 64, No. 1, 2008, pp. 95--114
- Ofcom. (2025). Children and Parents: Media Use and Attitudes Report. Retrieved from: <https://www.ofcom.org.uk/siteassets/resources/documents/research-and-data/media-literacy-research/children/childrens-media-use-and-attitudes-report-2025/childrens-media-literacy-report-2025.pdf?v=396621>
- Prior, M. Bavin, E., and Ong, B. (2011). Predictors of school readiness in five- to six-year-old children from an Australian longitudinal community sample, *Educational Psychology*, 31, 3–16
- Taggart, B., Sylva, K., Melhuish, E., Sammons, P., & Siraj, I. (2015). Effective pre-school, primary and secondary education project (EPPSE 3-16+), 50. Retrieved from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/455670/RB455_Effective_pre-school_primary_and_secondary_education_project.pdf
- Tamis-LeMonda, C. S., Luo, R., McFadden, K. E., Bandel, E. T., & Vallotton, C. (2017). Early home learning environment predicts children's 5th grade academic skills. *Applied Developmental Science*, 23(2), 153–169. <https://doi.org/10.1080/10888691.2017.1345634>
- Snow, C. E. (1972). Mothers' speech to children learning language. *Child development*, 43, 549–565
- Sullivan, A., Moulton, V. & Fitzsimons, E. (2017). The intergenerational transmission of vocabulary. *Centre for Longitudinal Studies*. Working paper 2017/14.