

# The Relationship between Electronics and Language Development in Children

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## Introduction

- With the rise of electronics in the 21st Century, technology has become the new “normal.”
- With the use of electronics and its exposure to children becomes younger and younger as more products become available to the market. This exposure has been pushed to a habitual use for children while growing up, starting from at home with their parents, to school, and then morphed into an addicting use of electronics.
- How does the early exposure of electronics impact language development in children in today’s world?

## Thesis

- There is a relationship between electronics and language development in children.
- There is a negative relationship between the two.

## Today’s World and Electronics

- Currently, the world revolves around electronics.
- On average in America, people use their phones 7 hours and eleven minutes a day, and there are on average, 24 electronic devices owned per household.
- Everywhere you may go, you may see someone using electronics in public, at home. People’s homes are becoming “smart” and implementing gadgets to making daily living easier by a touch of a button your mobile device.
- Electronics include: iPhones, Tablets, Computers, Smart devices
- Parent-child interaction is extremely important.
- Digital media interrupts the chance of parent-child interaction which is critical to language development

## Parent-Child Interaction

- Parents give their children electronics as a distraction.
- Implementation of electronics into a child’s routine negatively impacts them.
- By handing a child a device, it takes away from a child interacting and talking with their parent.
- "[A] regression showed that significant variance of the children's grammar development (10%) and vocabulary development (9%) can be uniquely predicted by the time the child spent watching TV content" (Sundqvist et al., 2021).
- The only time there was a positive association between implementation of electronics to help children in their daily routine was when a parent was guiding their child of the proper usages of the device.
- Social gating- learning is enhanced with social interaction.

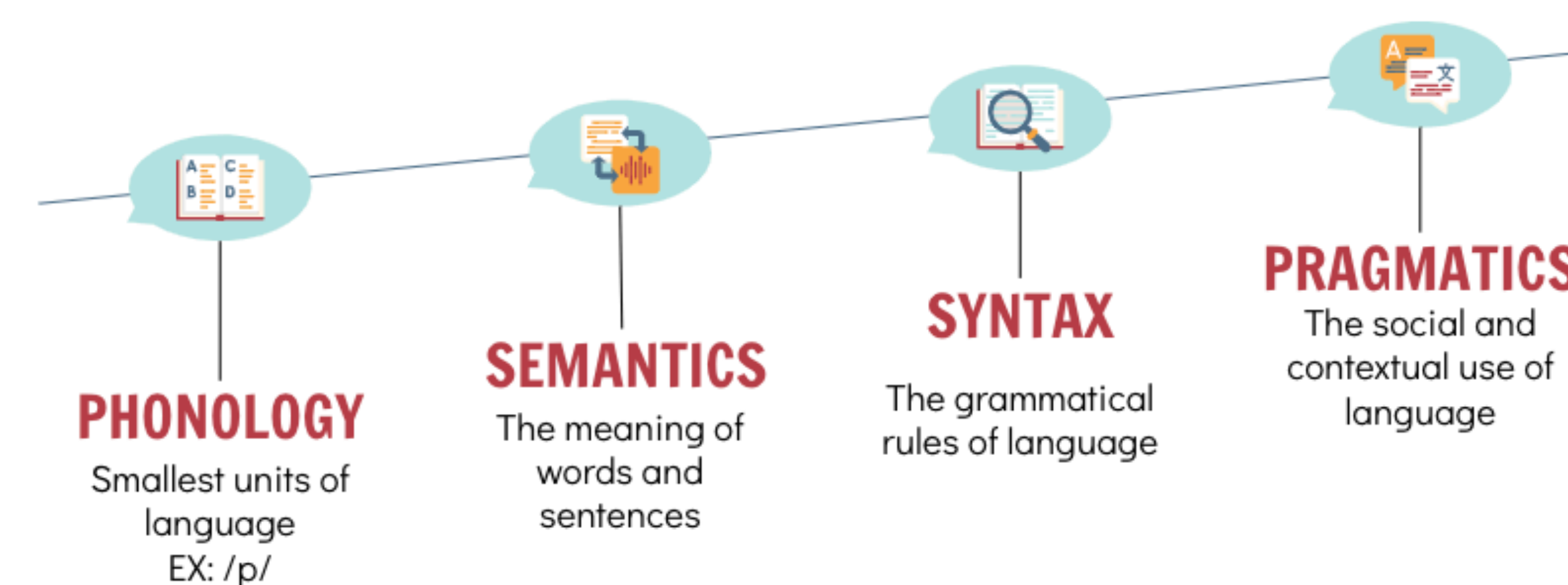
## Electronics in Education

- Besides the household, electronics are being moved into the classroom to be utilized, so children are always exposed to some form of digital media, at home or not.
- Tablets are the most commonly used device as they are easy for children to grab and access ebooks, and access audio recordings or supplemental videos, and are very interactive.
- Their use in the educational system are mostly positive, study showed that letters recognition, sorting and sound awareness, literacy, listening, and understanding of words and stories can be developed.
- The electronics in the class allowed for students to increase their vocabularies, structure their sentences to be syntactically correct, correct pronunciations, and increase with cognition.
- These then can be used to interact with students when using a device like a smart board to collaborate
- Negative aspects includes the concern of lacking socialization with a child solely looking at his or her tablet to engage in games would diminish the time of students talking to one another, which could, in turn, expand their language development.
- Teachers need to correctly implement the tech and use it sparingly to help language development.

## Effects of Tablets on Language Development

- **Positives effects:**
- Proper interaction: study shows the difference between paper and electronic mediums
- There was no change in language development or in some cases, increased, but noticeable in emotional and behavioral
- Without guidance, there is no self-regulation with the use of electronics, causing a larger issue in child development as a whole.
- Causes a lack of expression because there is no exchange of feelings between tablet and child.
  - The interactiveness of a tablet does help in learning to improve reading skills and print knowledge
- **Negative effects**
- Provides distractions for children.
- Another study showed: "When children have to use a mouse or finger to activate hotspots and turn pages, they have to allocate some of their limited cognitive resources to point, click, and swipe while still following the narrative, which may negatively affect meaning-making" (Furenes et al., 2021).
- Because children need to add cognitive function to read via an electronic like a tablet, it can take away from them fully comprehending the story they are reading and developing their language.
- If an eBook included this enhancement, it always performed worse than paper mediums. takes away from the main storyline if having to leave and find a singular term and then continue reading

## COMPONENTS OF LANGUAGE



(Drexel University, 2020)



(CNET, 2021)

## Effects of Television on Language Development

- **All around negative impact to lang development**
- Educational programs and habitual viewing are prolonged, as there are replays of the same episodes on TVs, or it is the same pattern of how the episode will pan out; meaning the same code just repeated over time, not dynamic to learning.
  - Babies are not talking to people so how will they learn, they are just staring at a screen
- It does not grab the attention of the babies.
  - A study of babies learning Mandarin sounds and words were played on a TV with audio and audiovisual vs. a live person speaking. Results showed the person speaking live trial showed positive results, where TV was no effect in phonemic perception.
  - Follows the idea of social gating, where learning is better with social interaction
  - Limited distractions when just focusing on a human, not just a TV screen

## Conclusion

- Tablet use:
  - The use of tablets can be beneficial if implemented correctly.
  - The correct balance can make tablets that use eBooks to be used a tool for assisting language development, but must have the correct features.
- Television use:
  - All around negative, and should not be used as a tool for language development.
- Take aways:
  - Parent and child interactions are the most critical in language development.
  - Through experience of communication with people can children best learn how to correctly use language.

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