

Digital Audio Pens: Role and Use in the Family – Results from an Exploratory Study

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Since 2010, digital audio pens from various providers (Tiptoi by Ravensburger and TING) have been available on the German book market. The principle of these products is based on a digital pen which is able to read out optical information and convert it into audio signals (e.g. texts or sounds). In combination with books, games or other products, this results in a variety of uses which go beyond their traditional usage. So far, these forms of multimodal and interactive use of books by children have not been researched on the part of communication science and media education.

The exploratory study examined the supply of audio pens and their use by children. The main question was how children and their parents interact with the audio pens and to what extent these devices cause changes in the understanding of shared reading, the handling of books and the reading manners within the families.

From September 2015 to January 2016, six qualitative semi-structured interviews (incl. participant observation) were carried out with children in preschool and primary school age, as well as with one of their parents. Five of the surveyed families use Tiptoi; only one family uses TING. During the interviews, the children were preliminarily asked to use the pen they already knew and, afterwards, the other system. Additionally, the research included expert interviews with three pedagogues and one representative of the children's library. The participants were recruited by public calls and direct response.

In this paper, some key results of the exploratory study are presented that can be seen as an impulse or as a starting point for further projects:

► **Parents consider digital audio pens primarily as a playful addition to books.**

The surveyed parents consider the pen as an interactive extension of the associated books and as a way to allow children independent access to books. Overall, when working with the pen, playful usage patterns (games, songs, sounds) especially appear to be the center of usage.

► **In families where parents support their children in learning to read, as well as in handling books, digital audio pens offer only a small additional benefit therefor.**

During the interviews, the families presented themselves all as educational and book affined. Not only are the households well equipped with books, the families also use the supply of the Hamburg public libraries. Accordingly, the children have a largely barrier-free access to books and are encouraged by their parents to use them. On the one hand, the adults serve as a key to written texts; on the other hand, the social situation of evening reading is firmly anchored in all families. In these families, digital audio pens primarily function as a toy, as a kind of pastime (e.g. when traveling) or as a relief for the parents. Some of the respondents also consider them as a playful learning tool. The digital audio pen can be particularly suitable for children who cannot read themselves. However, as a tool for reading (or learning to read), they are only of little relevance among the surveyed families.

► **With increasing reading skills of children, the use of the audio pen decreases within the families.**

The surveyed children were between three and eight years old. At the time the pen was purchased, they were between three and five years old and were not yet able to read. With increasing age and reading literacy, the use of the pen by the children has decreased (to different degrees). According to the parents, a selective use of the pens for reading (or learning to read) has never happened and still doesn't happen.

► **As digital audio pens do not have a screen and therefore are not considered as media, parents see no need to regulate the contact with it.**

Since in all interviewed families the digital audio pens are primarily perceived as an auditory extension of books or as a toy, there are no rules of use or access restrictions for the children. Parents' perception and assessment of the pens is different compared to other, screen-based media devices which they – by trend – face more skeptically.

► **Digital audio pens can be a useful tool for specific literacy and language development.**

In the expert interviews the audio pens are seen as suitable for the reading and language development, especially for children who get less support from their parents (e.g. in families with a lower education or families in which German isn't the first language). Therefore, curricular and extracurricular learning contexts can be seen as possible areas of application, in which the pens can be a useful supplement for accompanied reading and language development.

The results of this exploratory study serve as an impulse for further projects in media education research and practice. Additional results from this project are available (in German) at www.hans-bredow-institut.de/de/forschung/digitale-audiostifte-rolle-nutzung-familie.

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Reference to the full findings (only available in German):

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