ETHICAL REFLECTIONS ON RESEARCHING PHONOLOGICAL AWARENESS USING THE EXAMPLE OF DEAF PUPILS

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Abstract

While there are numerous studies on phonological awareness, which are carried out particularly among pupils who are learning to read and write, there have been hardly any debates on the ethical aspects of these research designs. This is problematic because these studies influence children's reading and writing development in this context. Therefore, this contribution to researching phonological awareness focuses on related ethical aspects, to enable further debate and demonstrate possibilities for further research in this field. Using the example of researching Deaf pupils, research ethical aspects in connection with vulnerable groups are discussed.

Keywords: *research ethics, the process of learning to read and write, phonological awareness, conflict of research interest*

1. INTRODUCTION

1.1 Epistemological perspectives of research on Deaf pupils

There are numerous studies of Deaf[1] pupils (e.g. McQuarrie & Abbott 2013; Domínguez et al. 2019; Keck & Wolgemuth 2020) concerned with the development of phonological awareness and how, from the perspective of researchers, reading and writing develops in this group. In this regard, the following two epistemological perspectives – including the one just described – are of particular relevance.

MacGlaughlin (2018) explains that in the so-called *traditional epistemological perspective*, researchers who emphasize the importance of auditory phonological awareness as a predictor of reading achievement believe that Deaf pupils can learn to read in the same way as hearing pupils. This is called the qualitative similarity hypothesis (QSH). Techniques like the use of visual/tactile aids, such as lipreading, Cued Speech or visual phonics are used in conjunction with a phonics curriculum. These researchers believe this is necessary to develop literacy with Deaf pupils (e.g. Wang & Williams 2014; Alasim & Alqraini 2020). Based on this hypothesis, interventions are used that are designed for hearing pupils and adapt for Deaf pupils (Guardino et al. 2011; Wang et al. 2013). In reference to hearing children, in the traditional epistemological view, the term 'auditory phonological awareness' is used. This term subsumes skills such as rhyming, syllable formation, and the analysis of the sound structure of spoken language (Stanovich 1988; Shankweiler 2012). Research on early reading, which is done with hearing pupils, reveal that learning to read and developing phonological awareness is reciprocal (Shankweiler 2012).

By contrast, MacGlaughlin (2018) presents the so-called *Deaf epistemology perspective*. This is described as follows:

"From a Deaf epistemology perspective, Deaf students are not perceived as having a deficit, but rather as being a member of a socio-cultural group that will leverage alternative visual strategies during reading (Andrews et al. 2016). Other studies further indicate that from this Deaf epistemological view that signing Deaf children do not need access to auditory phonological information and thereby can become effective readers without auditory phonology (Andrews et al. 2016; Chamberlain & Mayberry 2008; Clark et al. 2011; Freel et al. 2011; Mayberry et al. 2011; Miller & Clark 2011; Padden & Ramsey 2000)." (MacGlaughlin, 2018, p. 27)

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[1] In this article, this spelling is deliberately chosen to describe people who identify as part of the "Deaf culture".

Early reading with Deaf pupils showed that they use morphology of language rather than basic phonology. Morphology is the study of morphemes, which are the smallest word parts that have a meaning. Some studies have examined this kind of awareness, but also orthographic knowledge (e.g. Van Hoogmoed et al. 2011; Necla et al. 2020). From that point of view, it is possible that successful Deaf readers use alternative strategies to develop their reading skills and to increase their own vocabulary knowledge and therefore, the qualitative similarity hypothesis does not seem tenable (Paul et al. 2009).

The profoundly different points of view of these studies demonstrate a methodological dispute that can be traced back to Deaf education in the 17th century and which seems to continue in the epistemological perspectives of researchers at the present day.

Around 1760, the first public school for Deaf children was established under the direction of Charles Michel Abbé de l'Epée (France). He considered sign language the natural way of communication. His method was challenged by Samuel Heinicke, who founded a school in Leipzig in 1778. His method was based on teaching Deaf pupils to speak. Heinicke's approach was founded on the belief that articulation and vowel language were important for abstract thinking. In connection with the written language, it can be stated that de l'Epée methodologically preferred a combination of artificial gestures, finger alphabet and writing, while Samuel Heinicke's method was based on the practice of refusal and articulation (Wolff 2011). The European founders of manualism (l'Epée) and oralism (Heinicke) documented their disagreements about the education of Deaf students in letters. This marks the beginning of the so-called method war between the supporters of the systematic use of sign language in the education of Deaf children and those who declare the use of speech and lipreading without signing as a comprehensive solution. This methodological dispute is also evident in the methodology for reading and writing, as well as in the above-mentioned way research designs are conceived (Marschark et al. 2002, p. 24f.).

Although there is no scientific evidence that there is a causal relationship between phonological awareness and the ability to comprehend connected text (e.g. Miller & Clark 2011), there are numerous studies (e.g. Johnson & Goswami 2010; Park & Lombardino 2012; Aparicio et al. 2013; Webb & Lederberg 2014; Nittrouer et al. 2018) where phonological awareness is tested or trained, which can influence pupils' reading and writing development. In this context, reference can be made to Article 29 of the United Nations Convention on the Rights of the Child, which states that the development of the child's personality, talents, and mental and physical abilities should be directed to their fullest potential (UN General Assembly 1989). Howe and Moses (1999) pointed out that researchers should bear in mind that "educational research so often deals with vulnerable student populations, and research results often have a direct impact on students' schooling experiences and educational opportunities. [… Therefore] educational researchers must be prepared to defend what their research is for" (Howe & Moses 1999, p. 56).

1.2 Ethics in research with children

In international discourse, the topic of research with children is increasingly discussed. For example, Bourke's (2017) contribution collects ethical challenges of research with children faced by researchers from several countries. The following key topics are mentioned:

- "Using student voice [figuratively] does challenge status quo within schools and families. Dissonance might be created by student voice for families or teachers.

- Cultural issues and indigenous agency are inherently related to how we think about ethical practices with young children.

- Child voice and agency are socioculturally situated.

- Informed consent and consent is complex, socially and culturally situated and becomes an ongoing process. Reaching informed dissent is as important as consent.

- Research with children increasingly incorporates components that add complexity and richness to the research programme such as intergenerational, cultural diversity and the inclusion of all learners.

- Establishing trust with children is critical for research to be valid, and valued by the children." (Bourke 2017, p. 231f.)

From this perspective, the following questions arise in the context of research on phonological awareness in Deaf pupils:

- Do we know something about the circumstances under which the research was conducted? (ethical aspects, informed consent, …)

- What role do researchers attribute to the pupils?

While Bourke (2017) emphasizes the complexity of informed consent, this complexity is described in the contribution by Richards (2003) as the practitioners providing all the necessary information and sufficiently weighing the risks and benefits of participation. He further explains that the person who is making the decision must understand the information in a way that makes a reasoned choice possible, and this decision must be made without influence. Because children are not allowed to consent to treatment (consent is usually given by the parents), Richards (2003) describes that "one way to ensure that the interests of children are addressed is to include them in the decision-making process and to obtain assent, or agreement, to participate. As with consent, assent requires that children be provided with all pertinent information in a way they can understand. Because parents and other adult authorities consent for children, they often require the practitioner to provide information about treatment and research. This demand for information by third parties limits the level of confidentiality that can be provided to children. The practitioner should determine the level of confidentiality that can be given to the child before treatment and research begins and ensure that the child is informed about the limits to confidentiality as part of the assent process." (Richards 2003, p. 387) From this perspective, the question is raised of how informed consent is described among the different participants (teachers, parents, children).

Therefore, this article focuses on ethical considerations of the presented research designs and, in this regard, on the following fundamental questions:

- From which point of view do researchers describe what their research is for?

- Do we know something about the circumstances under which the research was conducted? (ethical aspects, informed consent, ...)

- What role do researchers attribute to the pupils?

- Which critical factors should be used in the course of future research in connection with the reading and writing process to enable further studies?

2. OVERVIEW OF RESEARCH DESIGNS

Due to the focus on researching phonological awareness, the answers to the questions presented above are explored from the traditional epistemological perspective. Studies applying this perspective are therefore discussed in the following.

2.1 Research from a traditional epistemological perspective

From this perspective, researchers believe that Deaf pupils can learn to read in the same way as hearing pupils (MacGlaughlin 2018). Therefore, such research designs often include comparisons between groups of hearing pupils and/or groups of Deaf pupils (e.g. Johnson & Goswami 2010; Park & Lombardino 2012; Aparicio et al. 2013; Webb & Lederberg 2014; Nittrouer et al. 2018). For example, in the study by Johnson and Goswami (2010), there is a group of so-called *deaf pupils with cochlear implants*. This group is in turn divided into smaller groups depending on the age at which the implant was inserted. Two other control groups are described. One group is called *deaf hearing aided group* and the other *typically developing group of hearing children*. In the study by Park and Lombardino (2012), there are three groups: one group with pupils with so-called *mild to moderate sensorineural hearing loss*, one group with pupils with so-called *dyslexia,* and one group with pupils who are *age-matched*. In

reference to the fundamental questions raised above, the naming of the groups in these studies demonstrates that researchers who take a traditional epistemological perspective seem to assign to hearing children a certain level of development. In connection with the description of the control groups it emerges that the control group of Deaf pupils is measured based on Deafness, and thus, the deficit is emphasized and not awarded normal development. The names of the groups also refer to a deficit-oriented view that refers to the medical paradigm. In this context, reference can be made to the social model of disability, according to which people are not inherently disabled, but made disabled by others. The authors of this article advocate the view that the task of research is to deviate from the traditional starting point of supposedly medically diagnosed "problems" and instead focus on changes in society – with the aim of increasing the possibility of full inclusion in all areas of life for disabled people (Ladd et al. 2003; Walmsley & Johnson 2003; Kremsner & Proyer 2019).

In the studies discussed, homogeneity within the groups is attributed to the constructed groups, which enables comparability from the perspective of the researchers. In the course of the discussion, this notion of homogeneity is hardly questioned and possible other interpretations of the results are not mentioned. In this context, reference can be made to the Deaf studies, which also deal with the diversity within the deaf community (Kusters et al. 2017).

In their studies, Johnson and Goswami (2010), as well as Webb and Lederberg (2014), used a test battery that was originally created for hearing pupils. Although the challenges that arise due to the conceptualization for hearing children are presented, they are not critically questioned. These challenges are solved in such a way that the researcher, a speech and language therapist, who has specialized in working with Deaf children, and either the mother or the educational assistant are involved in the tests and they were responsible for the understanding of the tasks. From this perspective, researchers need to include people who make testing possible. Based on the description of the test settings and also the timeframe, it can be concluded that the participants were seen as subjects who were assigned specific roles. There are specialists, who are involved in the implementation. The participating child should do the test battery in a certain amount of time. The overview of examples of such comparative studies (e.g. Johnson & Goswami 2010; Park & Lombardino 2012; Aparicio et al. 2013; Webb & Lederberg 2014; Nittrouer et al. 2018) that carry out certain test procedures, leads to the conclusion that from the perspective of researchers, due to the very tight timeframe, they may think that they have no influence on the development of reading and writing.

After (quasi-) experimental studies were discussed previously, the focus should now be on intervention studies (e.g. Guardino et al. 2011; Wang et al. 2013), as these are carried out over a longer period of time and influence the development of reading and writing. In the study by Guardino et al. (2011), the authors describe the proposed design as a continuation based on the "successful" studies already carried out and this explanation gives the researchers the reason to do a similar study. Intervention studies go into more detail about the implementation of the intervention, but questions regarding consent remain open. From the description of the studies, the role of the people involved also appears to be limited to a relationship that focuses on the implementation of the intervention. In the study by Wang et al. (2013), it is mentioned that "all three participants demonstrated noncollaborative avoidance behaviours, particularly on the sound-based tasks. These behaviours were significantly reduced once the intervention began. Particularly with the assistance of Visual Phonics, they started to understand what the tasks required them to do," which substantiates the assumption that this role ascription occurs in the context of intervention studies. These studies also lack options for influencing individual development and ethical reasons.

In this context, reference can be made to inclusive research (Walmsley & Johnson 2003; Nind 2014), where different research approaches are brought together, which share the common feature of not subjecting the participants to the scientific process of knowledge, but rather placing them as subjects in the foreground. Inclusive research can be defined by the following five criteria, which have parallels and similarities to the criteria of participatory research, such as by von Unger (2014):

- "The research problem must be one that is owned (not necessarily initiated) by disabled people.

- It should further the interests of disabled people; non-disabled researchers should be on the side of people with learning disabilities.

- It should be collaborative – people with learning disabilities should be involved in the process of doing the research.

- People with learning disabilities should be able to exert some control over processes and outcomes.

- The research question, process and reports must be accessible to people with learning disabilities." (Walmsley & Johnson 2003, p. 64).

Associated with this research perspective is a high degree of responsibility and high research ethical requirements, which are discussed in the context of various inclusive research projects (Kremsner 2017; Kremsner & Proyer 2019) in German-speaking countries. Of central importance are considerations on the acquisition of co-researchers (Von Unger 2014), ensuring consistent informed consent (Bourke 2017), as well as the proven benefits for co-researchers (e.g. Hauser 2016). It is also important to reflect extensively on the assignment, negotiation, attribution, overlap, and conflicting occupation of roles and – if possible – to adapt them.

3. GENERAL POSSIBLE PROBLEMS IN RESEARCH

To discuss the possible problems in research, reference can be made to Kansanen (2003), who sees two problems in connection with research results that are supposed to be relevant in practice. "The first refers to the researcher's awareness or knowledge of the state of the affairs at hand. From a technical point of view regarding the research approach, for example, what blameless implementation of experiments means, it may make no difference to know the circumstances under which the research work was done. From an interpretive point of view, it is no longer so simple. The researcher and the practitioner have to interpret the results. This often involves translating the strict language into everyday language. Quite often the researcher offers early recommendations in the discussion or, later recommendations in the summary. The moral dimension is unavoidable as the practical conclusions bring it to the centre of attention." (Kansanen 2003, p. 18) When asked what can be said about the research results, it would be better, according to Kansananen (2003), to say nothing because of a free moral attitude. The same question arises as to how science describes itself. Is it a psychological examination that lacks the pedagogical dimension? But exactly this pedagogical dimension would be important to discuss because as soon as experiments or interventions take place in schools, pedagogical aspects come to the fore. For Kansanen (2003), the second problem involves the right context for interpretation. If the most general context possible is preferred, then the right context would be daily life. That in turn would be nearly impossible because the research problem is a way of restricting the context. The connection with curriculum theory and educational psychology, from which most of these studies on phonological awareness come, would also make it possible for Kansanen (2003) to give pedagogical meaning to research. According to Kansanen (2003), this would offer the opportunity to create new research categories that address educational problems. This would also go hand in hand with other research methods that would be more in line with the "interpretative turn" and the topics in research would be closer to the real classrooms. Kansanen (2003) summarizes the changes associated with this as follows: "The subjective role of the researcher becomes greater, making the results more difficult and more complex to interpret. Instead, the research is closer to practice. The situation has meaning, either defined through the curriculum with its aims and goals, or some pedagogically relevant concepts and theoretical constructs." (Kansanen 2003, p. 19) In this context, reference can be made to the inclusive research perspective, which takes on this claim.

4. RISKS AND BENEFITS OF CHILDREN PARTICIPATING IN SUCH RESEARCH

From the research described above, possible risks in participating in such studies could arise if participants are seen as subjects on whom experiments and/or interventions are carried out and the previously explained pedagogical dimension is not considered. Taking this dimension into account, in

which also the benefits for the individual participants are explicitly considered (also in the context of publications), enables the possibility of asserting the right to individual development. From this point of view, the following critical factors can be described in connection with the examination of phonological awareness:

- The time of implementation: In this context, reference can be made to Trezek and Mayer (2019 p. 11): "It is recommended that future intervention research studies examine the implementation of phonological and phonemic awareness instruction, particularly among Deaf children at the prekindergarten level." This recommendation refers to a period of development that enables children to gain previous experience in reading and writing but does not influence the process itself, which is mostly initiated at school. Nevertheless, a more precise justification of participants' benefits would be important in this timeframe, as well as giving the participants a figurative voice if problems arise and incorporating this into the interpretation of the results.

- One of the most important lines of argument for research is that the research carried out leads to new knowledge. Within the scope of the countless investigations into phonological awareness, it seems that there are more and more specific questions, which, however, lose sight of the general context and thus offer little relation to practice.

- In this context, reference can be made to the different epistemological assumptions that differ from one another from the current perspective. It would be timely to break new ground to overcome this divergent paradigm and thus enable new insights and new research paths as already discussed in connection with Kansanen (2003). Inclusive research aims for such a paradigm shift, starting from a fundamental criticism of the traditional understanding of science and the academic knowledge production postulating hegemonic freedom from values, try to interweave academic knowledge production and concrete life-world-related experiences of marginalized people (groups) (Hauser 2016).

5. CONCLUSION

In the context of this contribution, research into phonological awareness was discussed. Studies (e.g. Clark et al. 2011; Aparicio et al. 2013; Keck & Wolgemuth 2020) that were carried out with Deaf participants were provided as examples. The traditional epistemological perspective, which assumes that Deaf pupils learn to read and write like hearing pupils, was discussed. Although there are opposing positions within the discourse, this article dealt with the Deaf epistemology perspective as an example, since innumerable studies (e.g. Narr 2008; Park & Lombardino 2012; Schick et al. 2016) want to prove the importance of phonological awareness for the reading and writing process and thus conceive such research designs that go with it can provide insights. It seems that the methodological dispute continues on the back of the Deaf. In connection with other vulnerable groups, connections can be made that relate above all to the context of research of phonological awareness (e.g. Gillon & Young 2002; Valliath 2003; Schmitz 2012; Romero et al. 2015). Because of a certain perspective on the participants, important ethical aspects are not sufficiently considered. In this sense: "The freedom to research alongside young people is only afforded if we continue to unmask the illusion that well-intentioned research is always ethical," (Bourke 2017, p. 233) – the authors hope to have contributed to this.

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