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Supporting Individual Routes to Literacy:

Developing Concepts and Skills Before School by Using Print in Meaningful Contexts¹

- Draft, still work in progress -

The longlasting debate about isolated skill drill by structured schemes vs. accidental learning through holistic language experience should be outdated . The acquisition of literacy is a process of conceptual change based on participation in literate cultures (cf. Schneider et al. 1990/1995; McGee/ Purcell-Gates 1997). We will show in this overview² that children can acquire reading and writing concepts, strategies, and skills by using print in everyday situations – skilfully arranged at home and kindergarten. In the Piagetian tradition, following Ferreiro/ Teberosky (1982) in particular, the basic assumption of our approach is this idea: learning to read and to write are processs of cognitive (re-)construction of concepts of the social functions and the technical logic of print – which is much more than learning and remembering phoneme-grapheme correspondences. In the Vygotskian tradition we assume that the acquisition and use of print is always embedded in specific (sub-)cultures (cf. Mason/ Sinha 1992; Barton 1994) and fostered by mediated interactions with literate others (cf. Aram/ Levin 2011; Sénéchal 2011).

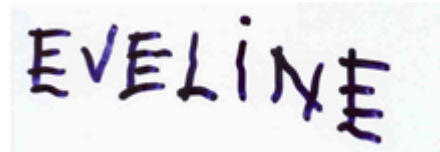
Reading, writing, arithmetic – for centuries introducing children into the world of the three R's has been the domain of schools. Over the last 30 years we have learned, however, that the first day at school is not the *zero hour* assumed by many traditional reading schemes (Hiebert 1978; Mason 1980; Teale/ Sulzby 1986; Sulzby 1988). Not only do average beginners know several letters and numbers, they also have experienced print by listening to parents reading from books to them, by recognizing logos on goods or advertisements, by playing with

¹. Paper for the 18th European Conference on Reading "New Challenges – New Literacies" in Jönköping, August 2013, based on an article for: Bildungsressort Südtirol: Abenteuer Sprache. Bozen (in Vorb.). Many thanks to Heide Niemann for checking our first draft for correct English and to Gerheid Scheerer-Neumann for helpful comments on content and form.

² This article summarizes our experiemce both from extensive research (Brügelmann 1983/2006; Brügelmann/ Brinkmann 1998/ 2005; Brügelmann/ Richter 1994/1996) and from practical work (Brinkmann et al. 2008ff.; Brinkmann/ Brügelmann 1993; 2010); the activities proposed have been tried out in many classrooms since the mid 1980s; cf. for English summaries: Brügelmann (1986; 1999); Brinkmann/ Brügelmann (2012).

letter stamps or on computer keyboards, tablets or smartphones, and by signing drawings with their name. Today's children grow up in rich - though quite different - worlds of print that shape their interest in books, their attitudes towards reading and writing and the development of individual concepts from these encounters of print (cf. the collection of relevant overviews in Neumann/ Dickinson 2001; 2010; Dickinson/ Neumann 2006).

Every morning five year old Eveline silently suffers from the painful combing of her blonde hair. Lots of time for thinking about the meaning of life and the unfair state of the world. One day her mother notices a sudden smile appearing on the face of her daughter followed by the comment „Now at last I know why I have three combs in my name...”



(Brügelmann/ Brinkmann 2005, 17)

On one hand Eveline's interpretation of the characters on paper can be traced back to an emotional need for belonging. Like Clara, who starts crying when Rob writes DAD on the chalkboard (as „name” of his father): „But that's *my* dad!”

Now, why does Eveline draw four horizontal slashes for the <E> - although she presumably never has seen such a similar letter form in her environment? We have found this version in different countries and we assume - after talking to several children -that this „international children's <E>” can be interpreted as their response to the cognitive need of clearly marking the difference to <F>.

Right or wrong - such concepts are influential: from their personal pre-school experience with print children develop strategies for coping with typical problems in the process of learning to read and write. In spite of many idiosyncracies in children's writing their naive attempts show a general logic we have to understand - otherwise our teaching will not be as successful as we hope.

In this article we focus on two questions that seem central to us when working with children at pre-school stage:

- What do we know about children's ways of becoming literate and the concepts they develop from their experience with print before the beginning of formal instruction?
- What can we do to stimulate their interest in the functions and structure of written language and to support them in discovering and understanding the basic principles of our alphabetic system?

First, what do we know about how children acquire literacy?

1. Referring to print the start of kindergarten and of school are no hour zero, i.e. four to six year olds are no "blank slade" when they enter formal education (Read 1971; Harste et al. 1984; Sulzby 1985; Brügelmann/ Brinkmann 1998/2005). Therefore the idea of "introducing" letters and words by controlled instruction becomes problematic. Teachers have to respond to experiences and concepts children have already acquired.

2. Pre-school children as well as first graders differ significantly in their knowledge and conceptualization of print - up to three or four years in terms of average development levels (Brügelmann 1983; McGill-Franzen/ Lanford 1994; Largo 2009; Justice-Piasta 2011). Therefore the idea that all children start from the same point and progress at the same pace through a graded scheme becomes problematic, too. No one-size-fits-all scheme can meet this broad range of different needs. An open learning environment - including challenging tasks - has to be offered to them (Brügelmann 1986; Brinkmann et al. 2008ff.; McGhee/ Richgels 2012).

3. Learning to read and to write demand more than the acquisition of knowledge and skills (several contributions to Henderson/ Beers 1980). It implies the individual development of concepts and strategies emerging from personal experience (Clay 1975; Downing 1979; Brügelmann 1989). There is a developmental logic³ inherent in children's constructions of the orthographic system and reading development (cf. Gentry 1978; Beers 1980, Frith 1986, Ehri 1999 as well as several contributions to Frith 1980). The concepts built so far filter what schools offer; short term behavioural changes do not represent cognitive progress. Nor is learning the direct outcome of teaching; mechanistic models of cause and effect do not match the nature of learning as an implicit ordering of experience (Mason 1981). Different children learn different things from the same activity or material (Richgels 1995). Therefore the idea of teaching the system step by step (practicing words or explaining rules) and - so to speak - storing these units in the heads of children as a basis for further learning is obsolete.

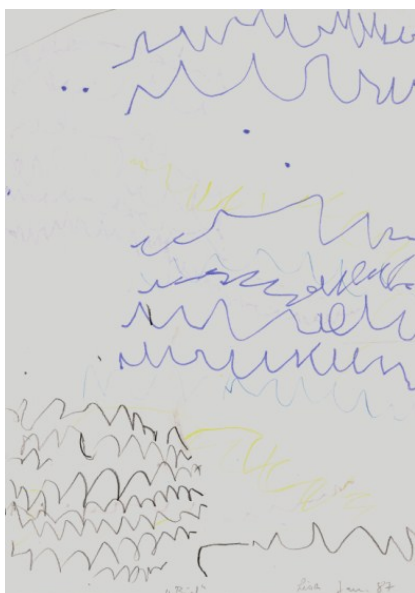
4. Learning includes making mistakes. This insight questions the idea of conveying units of knowledge intact into the heads of children by drill and practice. However insufficient a reading or writing attempt may appear to literate elders,

³ It should be noted, however, that this does not imply a strict separation of stages in the Piagetian sense. When new insights are gained, they may dominate, but children often use different strategies concomitantly so that a considerable overlap of approaches can be observed.

most of the time there is a logic underlying the errors (Ferreiro/ Teberosky 1979/1982; Gentry 1982; Temple et al. 1988; Richgels 1986; 1995). The cognitive patterns of early reading/ writing attempts are not „defective“ or just a „minus“ compared to our conventional forms. They follow from a rough, preliminary understanding of the complex features of print simplified by the children themselves to fit their current stage of development, but become increasingly differentiated through experience (Clarke 1988; McBride-Chang 1998). In this sense they are unavoidable and at the same time productive intermediates on the child's way to conventional literacy ("from invention to convention": Brügelmann 1999; Richgels 2001).

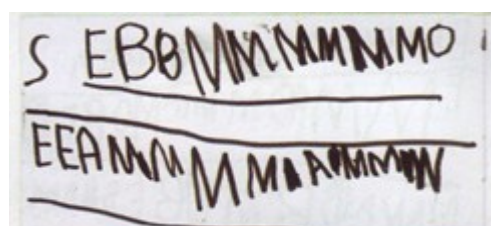
Our main assumption: even the most faulty reading or writing attempts represent important pre-concepts that are necessary simplifications helping children grasp the key concepts incorporated in our alphabetic system. This will become apparent when we follow them on their pathways exploring functions and structure of the written language.

When they first encounter print children do not recognize the special status of letters. Printed letters are seen as merely ornamental while the meaning is extracted from drawings or external cues of the context. „Writing“ is relevant, only, as a means of generating visible traces on paper. „Reading“ is limited to naming well-known words or retelling stories heard from others. Through observing „model readers“ this understanding is differentiated. Although still unable to read independently children behave „as if“ by imitating typical structures („once upon a time“) and the intonation of reading aloud - while also pointing to the text (rather than the accompanying pictures). Such actions are typical indications of the achievement of



concept (I): Reading is connected with print and different from narration linked to pictures

Children who have acquired this insight imitate writing movements („scribbling“) or they arbitrarily arrange letters they know in rows - asking literate partners curiously: „What have I written here?“



Leonie's writing of „rice“:

rrrrr

Lisa scribbles and reads aloud
"Dear Sara, best regards, Lisa"
- but "Dear Sara, come back
soon, Lisa" the next day.



Activity Cluster 1

We can help children to become acquainted with the particular linguistic patterns of written language and with the conventions of print by

- often telling stories - and asking the children to retell them;
- looking jointly at picture books and talking about the content;
- letting them choose books freely according to their personal interests;
- reading to them from books (modeling „academic language“) frequently;
- stimulating dialogue while reading - in dialect or the children's mother tongue if appropriate;
- inviting the children to continue a story with an open end;
- joint reading of books and referring to print explicitly (Justice/ Piasta 2011; Sénéchal 2011), e.g. pointing to selected words while reading slowly.





On one hand children at this stage increasingly attend to print, on the other hand they name words correctly only in context. Because of this focus we call them *context speculators*: „This word means ICECREAM" (because the sign is hanging in front of a kiosk).

To challenge this insufficient strategy, one can ask for the meaning of words in analogous contexts, e.g. by presenting similar objects (or pictures of them) with different labels or by posting word cards on samples of the furniture in the room and exchanging them over night; when the children are asked to name them, they will experience the limitations of the guessing strategy and the need to analyze the printed words more precisely.

Activity Cluster 2: „Hunting Words"

„Homework" for the kids: „Take paper and pencil and go around at home [later on: go out into the street] this afternoon and look out for print. When you find letters or words, write them down and bring them to kindergarten tomorrow!"

The next day the children show the group what they have found: labels from food packages, headlines from a newspaper, logos of trade marks, letters/ numbers on license plates, street-names, posters, shop signs, house numbers, traffic signs.

The group will discuss about what will count as print. Those specimens identified as „words" are analyzed in more detail:

- Are there multiple versions of the same word? What makes them "the same" - even when the typography differs?"
- Does anybody know the meaning of some of the words?
- How does s/he recognize the words? (length of word, first letter, characteristic letter groups, e.g. double consonants).

Activities such as these offer good opportunities for observing how different children cope with the demands of print, what kind of experiences they already

bring to kindergarten or school, and what specific concepts and strategies they have developed from them:

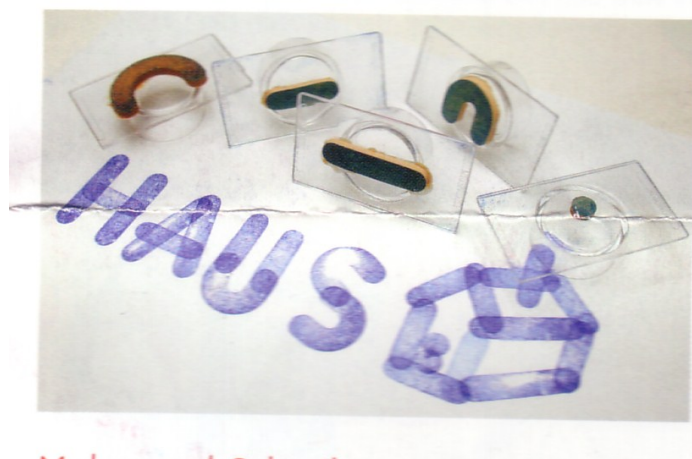
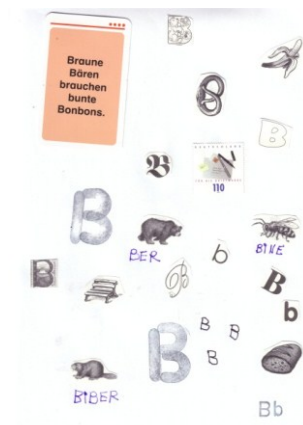
- Do they differentiate letters and numbers?
- Can they isolate single words in logos or sentences?
- Which words do they remember?
- By which cues do they recognize them?
- How well do they distinguish similar words?
- Can they copy words correctly?

Exchanging ideas and discussing hypotheses about the words they collected and their meaning can stimulate the children to reflect on their respective strategies and to further develop them. This can also be initiated by the teacher, e.g. by introducing another word with the same initial or the same spelling pattern, or by contrasting two words of the same length (cf. for the increasing differentiation of the reading strategy the stage model of Ehri 2005).

Children who - because of these activities - have grasped

concept (II): The meaning of a word is bound to its graphic form - and stable independent from the context it is used in

often become *graphic word hunters*. They identify familiar words even out of context attending to graphic features - which do often not relate to the logic of our alphabetical system such as the typographical form: „This is ‚Coca-Cola‘“ (because of the decorative loop of the <C>). This strategy can be challenged by games that demand the allocation of words in logos to standard print. Later on it is helpful to collect letters in different typographical forms for developing a sense of the defining features and their irrelevant variations (e.g. on a weekly changing poster „Letter of the Week“ where also their corresponding sounds are represented by different examples).



„Building“ letters from basic elements and constructing letters from similar ones (by changing selected features e.g. from <F> to <E>, or from <R> to <P>) will help children to extract patterns of central features.

On the basis of such experiences they can implicitly form

concept (III): Our print system consists of conventional symbols: the letters of our alphabet

This insight becomes apparent when children use letters only (or letter-like characters) in their writing.

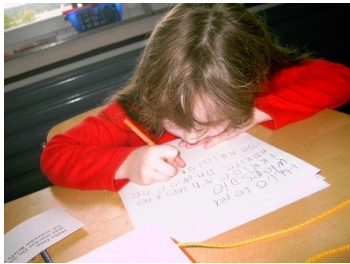


Activity Cluster 3: „Print in everyday situations“

- attendance sheets of/with increasing levels of difficulties
 - with names to be marked by the children who are present
 - with names to be copied into the column of the respective day
 - with empty spaces demanding writing from memory



- plans for the day with pictograms and written catch words - emerging from joint planning in the morning
- signs with children's names on the coat rack and personal spaces
- cards with children's names
 - that have to be collected from a mixed heap every morning
 - that have to be distributed by altering pairs of children
- labels and signs for rooms and objects in the languages spoken by children in the kindergarten.



- establishing a post office where letters can be deposited and collected.
- leaflets for remembering „homework“ or information for parents.

In their reading children at this stage do not focus on the outline of the word, but on single letters only.

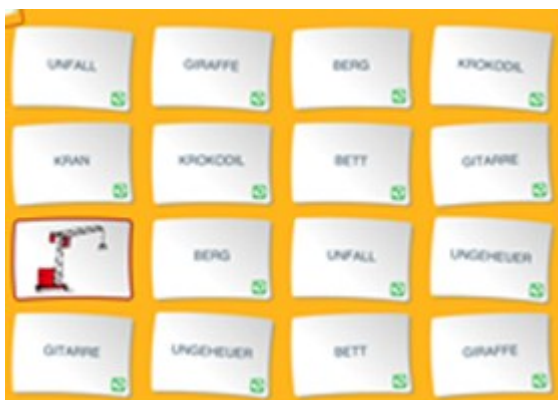
Some of the *graphic word hunters* are content with looking at the initial letter or obtrusive letter groups (such as double consonants) and therefore mistake <cat> for <car> or <letter> for <butter>

These confusions are productive mistakes that can be provoked, for example, by a game called „Marked Memory“ (see below) leading to

concept (IV): The identity of a word is not determined by single letters, but by the complete chain of letters in a specific order.

Activity Cluster 4: „Marked Memory Cards“

As in well-known memory games the pairs of pictures are mixed up and laid out with the pictures being covered. The visible opposite side is marked by the written name of the object. The trick: the objects are chosen according to the similarity of their names to provoke mistakes, e.g. in German: BROT BOOT BOOTE or HIRSCH KIRSCH KIRCH or STOP POST POSTER.



It is neither intended to test how good kindergarteners or first graders can read the words, nor is it important how fast a child has collected as many pairs as possible as this may just be due to good memory skills. The focus of observation is on the different strategies children use: Do they attend to print at

all? Do they use graphic cues such as first letters, length of words, or spelling patterns? Are they aware of the complete sequence - also observing the direction from left to right (e.g. DOG vs. GOD, STOP vs. POST)?

We are not that much interested in the success as such. Our focus is on the process, i.e. the strategies that are being used. Thus we can infer the concepts a child has developed from his experience with print.

Moreover, diagnosis and learning are integrated: by playing the game repeatedly, a child can further develop his/ her understanding of the structure of print - without explanations of adults or isolated training units. This game is not intended, however, as an exercise to *train* "logographic reading". At this stage it is sufficient for the child to gain the insight that all letters are important.

Children who know that print carries meaning and that the identity of words depends on the concordance of the complete sequences of letters have acquired central insights into the logic of our alphabetic system. There remains one question, however: how are the letters of a specific word (to be) selected?

Activity Cluster 5: „Large words and small words“



Children who cannot read are shown two word cards simultaneously, one carrying a long word referring to a small object, the other one with a short word referring to a large object, e.g. MARIENKÄFER (ladybird) vs. MOND (moon) or LOCOMOTIVE vs. TRAIN. They will be asked: „What do you think - where is written LOCOMOTIVE and where TRAIN? And why do you think so?“

From the world of pictures and drawings children are used to the principle of anal-

ogous representation: big objects or many objects need more space/ graphic symbols than smaller ones or few. Ferreiro/ Teberosky (1982) and others have found that many pre-school children transfer this logic to the world of print: four letters representing four animals and six letters six of them; more letters for a big animal than for a smaller one.

The choices in the task „Large and small words“ indicate whether the children choose the cards arbitrarily, whether they follow the rules of drawings and pictures, or whether they refer to the duration of pronouncing the oral written word. A helpful feedback could be: „Yes, the train is longer than the locomotive. But sounding out the word LOCOMOTIVE takes longer than TRAIN: LO-CO-

MO-TIVE. And as our letters stand for the sounds of speech, writing LO-CO-MO-TIVE needs more letters than writing TRAIN."

Thus, this task stimulates phonemic awareness, especially when discussing the choice of specific letters. Some children may already know that LOCOMOTIVE starts with the letter <L> because of the sound /l/ at its beginning. This may lead others to sound out their names and to compare the respective initial letters.

Activities such as comparing the length of words allow children to show, but also to develop

concept (V): the graphic form of a word refers to its phonemic structure, which opens the avenue to its meaning

Activity Cluster 6: „Teacher as secretary“

When children dictate stories or a title for their drawings they experience how ideas turn into words and spoken words into written ones. We can support this process by slowly speaking while writing, by pointing out the words we have just written, and by re-reading the text that has already been written down.

By commenting our own reading and writing we demonstrate what happens in our minds during these activities. This can help them to correct mis-concepts they have developed from everyday experience, e.g. mistaking reading aloud for reading in general:

Anna's father comes home tired from work and sits back in his armchair. Four year old Anna wants to play with him. Her dad hides behind the newspaper. She complains. He addresses her grudgingly: „Leave me alone! I'm reading." Her outraged answer: „That's not true: I don't hear anything!"

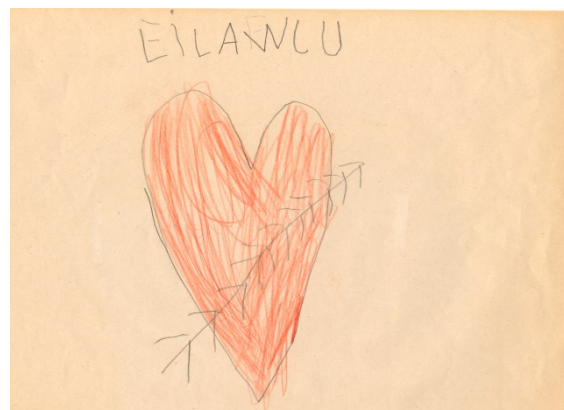
Therefore we should think aloud when writing a letter, taking notes, or preparing an activity plan for the day. If possible we should let the children participate, e.g. by asking: „What else should we buy?" and then write down what they mention. When going through the supermarket we should think aloud, again: „Half a pound of sugar, hm, there's salt, and there flour - but where does it say sugar?". Or in the nursery we look on the plan for the day together with the children and keep track of our activities: „Look, we have sung HAPPY BIRTHDAY to Marc, then we had handicraft, swimming is next, and then we have to clear up the room."

Basically our writing system follows the alphabetic principle: letters or letter groups represent phonemes. We have seen so far that it is a great challenge for children to look at words not only as carrying meaning, but as a sequence of sounds. Therefore programmes for phonology training have become popular (cf. several contributions to chap. II in Dickinson/ Neumann 2006). But systematic drill and practice become unnecessary if the kindergarten revives its tradition of songs, rhymes, and other language games and if analysing the sound structure of words is integral part of the initial reading and writing curriculum (Valtin 1984; 2010), e.g. by encouraging invented spelling (Treimann 1985; Mann et al. 1987; Richgels 1995; 2001; Torgesen/ Davis 1996; Adams 2000; Brinkmann u. a. 2006; Ehri/ Roberts 2006).

Activity Cluster 7: „Playing with the sounds of words“

- „ I spy with my little eyes something beginning with /m/...“ [note: do NOT use letter names, but just sounds!]
- Rhyming: „There was a small mouse sitting in a big“
- Speaking words in syllables slowly - step by step „like a robot“
- „The robot broke down. He can say words only sound by sound: M-OO-N. What does he mean?“

As soon as children understand that letters represent sounds they can write in a legible way (though perhaps not orthographically correct) - without the help of literate elders:



[transcription of "I love you" by a German speaking child]

However, this process gets started slowly. In general children first write down just the initial sound. Then they represent consonants. The sensation of articulating them is much stronger than of articulating vowels. Examples for such „skeletons“ are <BL> for „ball“ or <LKMTW> for „locomotive“. Some children, more often in the Roman speaking countries, use vowels only - representing speech syllables, e.g. <AA> for „mama“ in Italian or <OA> for „Opa“ in German.

Activity Cluster 8: „The speaking letter table“

In letter tables a picture is assigned to each letter. The picture represents a word the initial sound of which corresponds with the respective letter. With the help of these tables children can write any word by sounding it out, looking for the compatible picture and copying the corresponding letter.

However, there is a difficulty: pictures can have several meanings, the „same“ sound sounds somewhat different in different words, and a table with some 30 letters may look discouraging to beginners. Therefore flexible letter tables - programmed on computers - are helpful (cf. the CD „Buchstabenwerkstatt“ [“Letter Workshop”] in Brinkmann et al. 2008 and for a web-based programme using the first letter of the individual child's proper name : van der Kooy-Hofland et al. 2011).

The „Buchstabenwerkstatt“ offers several pictures for each letter. And the child can hear the pronunciation of the words/initial sounds by clicking at the picture. For her/his personal letter table s/he can choose which picture s/he prefers. And when writing a word with the help of the speaking letter table s/he can ask the computer to pronounce the letters s/he has

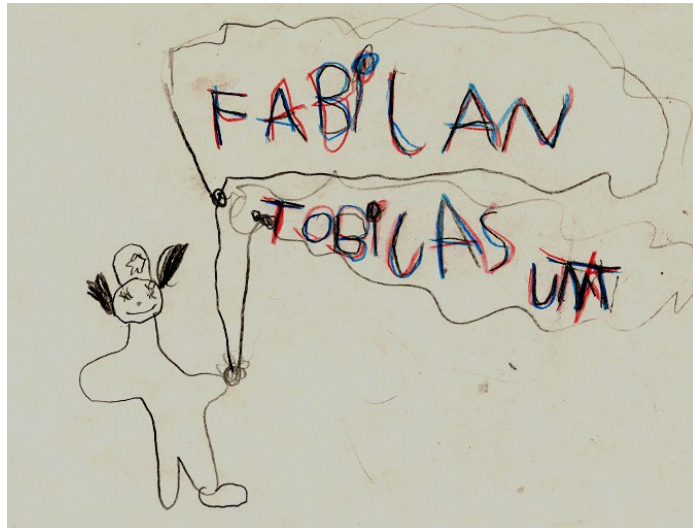


already written down. This helps the child to check if all the sounds of the word are represented on paper.

By constructing words for meaningful messages children develop competencies in several dimensions:

- letter knowledge
- phonological awareness
- understanding the alphabetic basis of our writing system
- confidence in using specific phonem-grapheme correspondences.

After an increasing use of this strategy children represent their articulation more precisely than our orthography does, e.g. in German "FABIJAN" and TOBIJAS" instead of <Fabian> and <Tobias> [or in English the affrication of <tr> and <dr> as in "CHRIE" for <try> and "JRAGON" for <dragon>, cf. Richgels 2011, 145-146]):



This writing strategy is based on the

concept (VIa): Any sequence of speech sounds can be translated into a chain of letters, that records the articulation of a word

Learning to read is a long and seemingly inconsistent process, too. When acquiring concept (V) children first fall back behind what they had achieved before (IV) and use selected letters only as references for sounding out a word. Looking for meaning they often risk „jumping to the word“ after having decoded the first letter or syllable, only, e.g. by „reading“ the well-known „lamb“ instead of <land> or replacing <light> by „lamp“ at the end of a sentence that finishes with *going to bed*. On the one hand, this strategy is more appropriate than *word hunting* by attending to print similarity only, as the child already uses and combines two essential strategies: grapheme-phoneme-correspondence and context cues. This difference to the graphic *word hunters* is an important step forward: letters are not seen as indicators of graphic similarity exclusively, but refer to the sound structure of the word. Thus, the strategy only superficially resembles the proceeding of a graphic word hunter. On the other hand, the new strategy is not exploited systematically.

To encourage its further development children can be given worksheets on which pictures have to be linked to one of three graphically similar words e.g. TIGER/TINTE/TISCH. Mastering these tasks depends on their awareness of the sequence of letters in the individual words.

From such activities emerges

concept (VIb): Any chain of letters can be translated into a sequence of sounds that indicates the pronunciation of the word.

In using this new insight beginners often neglect other approaches and limit their attention to the, so to speak, technical access of synthesizing phonemes linearly.

They become as we say „*honest letter collectors*“ sounding out /l o: t/ instead of reading /lot/. Reliance on this approach leads into difficulties

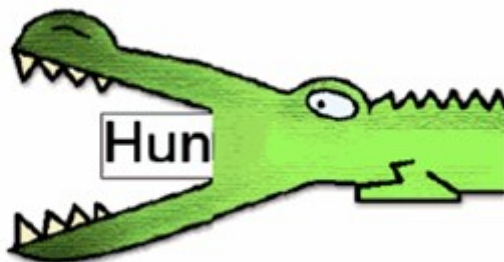
- because letters are ambiguous (e.g. the short vs. long version of vowels such as /a/ in <car> vs. <tan>)
- because letters change their sound values in different contexts or as part of different letter clusters (e.g. <gh> in <ghost> vs. <enough>),
- because even the same phoneme may be pronounced slightly different in co-articulation with neighbouring phonemes (e.g. /k/ in <car> and <core>).

These problems are especially prominent in “opaque” orthographies such as French and English - more than in “transparent ones” such as Italian and Spanish where the relationship between graphemes and phonemes is less polyvalent (Seymour et al. 2003).

To help children sorting out these difficulties one can offer them worksheets where words have to be matched to one of several pictures representing similarly sounding words such as „car“, „cat“ and „can“. Solving this task depends on decoding the meaning of the words. Thus, to avoid the letter collection trap from the beginning it is helpful to think of tasks that demand to pay attention to the complete row of letters as well as to activate the personal vocabulary for retrieving the meaning.

Activity Cluster 9: „The reading bag/ crocodile“

While unfolding a folded word card or uncovering it grapheme by grapheme (NOT: letter by letter) children are asked: „What word could this be?“.



Thus they realize that it is necessary to draw on one's knowledge of meaningful words and that it is not sufficient to just synthesize isolated phonemes:

1st step: <c> can become „cosy“ „car“, „cloud“, „cat“, „camel“ and so on;

2nd step: <co> can still become „cosy“, but new hypotheses are needed instead of the others such as „cold“ or „come“

3rd step: <cor> will demand reorientation of all: „correct“, „core“, ..

From the beginning children are stimulated to develop hypotheses and at the same time to narrow the range of possibilities by looking at the letters given.

Combining both approaches prevents them from becoming *context speculators* or wither as *letter collectors*.

To develop an appropriate segmentation strategy for reading it is particularly helpful to sometimes present words in syllables instead of unfolding them only grapheme-wise.

From these and similar activities children gain/ strengthen

concept (VII): The creative „leap to the word“ can be successful only, when careful attention to the arrangement of letters is linked to a focussed expectation of meaning

These eight insights form the basis of initial literacy, but there still remains a lot that has to be learnt in order to become a competent reader and writer. This is part of the primary school curriculum. In the field of writing it includes the mastery of spelling patterns and an understanding of the morphemic structure of our orthography.

Especially when we read long words we have to break them down into manageable units such as syllables or morphemes. And for understanding stories we have to move from recognizing words to re-constructing sentences and whole texts.

This presupposes an integration of the different approaches that have been acquired one after the other at the earlier stages.

Summary - and looking ahead

In German kindergarten mostly activities are chosen that foster insights (I) to (V) (cf. Lenel 2005; Zinke u. a. 2005; Ministerium für Kultus 2011). In addition to focused impulses as in the games and tasks mentioned above it is important that children experience print as a medium relevant in everyday life and for their personal goals. This becomes apparent when the opportunities for reading and writing are embedded in social activities and topic-orientated projects (cf. for

relevant examples and reports: Klein 2005; Lenel 2005; Franzkowiak 2008b; Krieg/ Krieg 2008): installation of a „post office“ for exchanging letters; jointly preparing a map of the village or town with a legend; exploring symbols of different kinds such as the notation of music, traffic signs, or the BLISS system for non-speaking people (Franzkowiak 2008a).

To ensure that the co-operation between family, kindergarten, and school will become productive a consensus has to be established about the following...

Key Ideas

It is easier for children to master the challenges of reading and writing, ...

- when they come into contact with books very early and when they are allowed to browse in books frequently;
- when stories are read to them often and when they are invited to share their thoughts about the content with the adult;
- when they understand that print carries meaning;
- when they realize that letters represent phonemes, and that other people can read out what has been written;
- when they experience that using print can help to achieve personal goals;
- when they are shown ways how to use print on their own.

Therefore still in first grade invented spelling is such a powerful means for fostering reading and writing development - when the following principles are observed:

- Invented spellings on the basis of a phonetic/ phonemic analysis of spoken words are the basis of literacy acquisition and of the orthographic development in particular. Accepting them at the beginning indicates for the children that they can write legibly.
- In addition the children are informed that there is an „adult“ way of writing which implies conventionalized spellings. Their correct use is not to be expected before the end of the primary school, but the children become increasingly oriented towards them.
- From the beginning school presents high frequency words and words of particular importance for the individual child in orthographically correct form to be practiced in *separate* phases of instruction. In kindergarten, however, copying such „model“ words should be the exception.

- Texts consisting of invented spellings are appreciated and not corrected. On the other hand it is helpful for readers when a translation into "book writing" is added and this translation put below or next to the original text. Moreover, for the writer the addition of the correct version offers impulses and models for his/her orthographic development - without demanding their (complete) takeover.

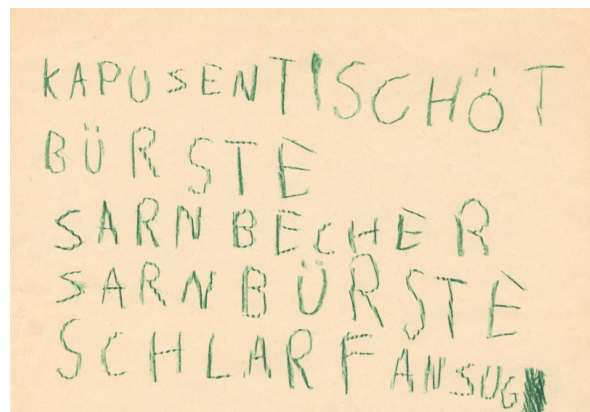


Starting with 2nd grade children are requested to revise their drafts „for publication“ with the help of others.

[Story of a child with translation below]

Thus, invented spelling allows children to independently explore how print „works“ - by using it for communicating their personal ideas and experiences. Kindergarten and school have to understand that the mistakes children make are windows into their developing cognitive worlds. When learning something new they intuitively generalize constructing implicit rules: They call cows or sheep „wau“ as they too e.g. have four legs like a dog. They „goed“ with „mans“ to the playground and observe the cake cooking in the „heatbox“.

When in a German dialect the <ar> in words such as „Garten“ and „Bart“ is pronounced /a:/ and therefore the <r> has to be remembered when writing children easily over-generalize this spelling of /a:/ to other words as in "SARN" (for /tsa:n/) and in "SCHLARF" (for <ʃla:f>) on this packing list for going on holidays.



In this respect learning to read and write is a variant only of language acquisition in general. Therefore the same principles apply to supporting this process: modelling, explicitly commenting on one's own activities, responding to content rather than form, and correcting mistakes only indirectly. The main idea is: what children themselves try to do is worth to be encouraged and supported because it carries a meaning for *them*.

References

- Adams, M.J. (1990): *Beginning to read. Thinking and learning about print*. MIT Press: Cambridge, MA.
- Aram, D./ Levin, I. (2011): Home support of children in the writing process: Contributions to early literacy. In: Neuman/ Dickinson (2011, 189-199).
- Augst, G. (ed.) (1986): *New trends in graphemics and orthography*. De Gruyter: Berlin/ New York.
- Balhorn, H./ Brügelmann, H. (ed.) (1995): *Rätsel des Schriftspracherwerbs. Neue Sichtweisen der Forschung*. [Riddles of literacy acquisition - new perspectives in research. IRA-D volume „Theory“ of selected readings from the DGLS yearbooks 1-5]. Libelle: CH Lengwil.
- Barton, D. (1994): *Literacy. An introduction to the ecology of written language*. Blackwell: Oxford.
- Beers, J.W. (1980): Developmental strategies of spelling competence in primary school children. In: Henderson/ Beers (1980, 36-45).
- Beers, J. W./ Henderson, E. H. (1977): A study of developing orthographic concepts among first grade children. In: *Research in the Teaching of English*, Vol. 11, 133-148.
- Brinkmann, E., u. a. (2006): Freies Schreiben fördert die Rechtschreibentwicklung: Effekte einer Kurzförderung nach dem Spracherfahrungsansatz. In: Hofmann/ Sasse (2006, 150-163).
- Brinkmann, E., et al. (2008ff.): *ABC-Lernlandschaft [ABC learning landscape grades 1 to 4]*. Verlag für pädagogische Medien/ Klett: Stuttgart.
- Brinkmann, E./ Brügelmann, H. (2010): *Ideen-Kiste Schriftsprache 1 (mit didaktischer Einführung "Offenheit mit Sicherheit") [Literacy - box of ideas with the didactic introduction „Open and safe“]*. Verlag für pädagogische Medien/ Klett: Stuttgart (8. completely rev. ed.; 1. ed. 1993).
- Brügelmann, H. (1986): Discovering print - a process approach to initial reading and writing in West Germany. In: *The Reading Teacher*, Vol. 40, No. 3, 294-298.
- Brügelmann, H. (1989): Particle vs. wave theories of learning to read and write. Towards a field model of success and failure in literacy acquisition. In: Bambring, M., et al. (eds.) (1989a): *Children at risk: Assessment and longitudinal research*. De Gruyter: Berlin/ New York (428-439).
- Brügelmann, H. (1993): Orthographic knowledge in West and East German classrooms. In: *International Journal of Educational Research*, Special Issue, Vol. 19, No. 7, 625-630.
- Brügelmann, H. (1999): From invention to convention. Children's different routes to literacy. How to teach reading and writing by construction vs. instruction. In: Nunes, T. (ed.) (1999): *Learning to read: An integrated view from research and practice*. Kluwer: Dordrecht et al. (315-342).
- Brügelmann, H. (2006): *Kinder auf dem Weg zur Schrift - eine Fibel für Lehrer und Laien [Children's routes to literacy - a primer for teachers and others]*. Libelle: CH-Lengwil (8th ed.; 1st ed. 1983).
- Brügelmann, H./ Brinkmann, E. (2005): *Die Schrift erfinden - Beobachtungshilfen und methodische Ideen für einen offenen Anfangsunterricht im Lesen und Schreiben [Inventing print - observation aids and classroom ideas for an open curriculum in initial literacy]*. Libelle: CH-Lengwil (2nd ed.; 1st ed. 1998).
- Brügelmann, H./ Brinkmann, E. (2011): Combining openness and structure in the initial literacy curriculum. A language experience approach for beginning teachers. Download: http://www2.agprim.uni-siegen.de/printbrue/brue.bri.language_experience.engl.111124.pdf
- Brügelmann, H./ Richter, S. (eds.) (1994): *Wie wir recht schreiben lernen. Zehn Jahre Kinder auf dem Weg zur Schrift [Acquiring orthography - ten years „Children's routes to literacy“]*. Libelle Verlag: CH-Lengwil (2. Aufl. 1996).
- Carr, T. H. (ed.), *New directions for child development: The development of readings skills*. Jossey-Bass: San Francisco.
- Clarke, L.K. (1988): Invented vs. traditional spelling in first graders' writings: Effects on learning to spell and read. In: *Research in the Teaching of English*, Vol. 22, No. 3 (October), 281-309.
- Clay, M.M. (1982): *What did I write ?* Heinemann: London et al. (2nd ed.; 1st ed. 1975).
- Dickinson, D. K./ Neumann, S. B. (eds.) (2006): *Handbook of early literacy research*. Vol. 2. Guilford: New York/ London.
- Downing, J. (1979): *Reading and Reasoning*. Chambers: Edinburgh.
- Downing, J./ Valtin, R. (ed.) (1984): *Language awareness and learning to read*. Springer: New York et al.
- Ehri, L. C. (1999): Phases of development in learning to read words. In: Oakhill/ Beard (1999, 79-108).
- Ehri, L. C. (2005): Learning to read words: Theory, findings, and issues. In: *Scientific Studies of Reading*, Vol. 9, No. 2, 167-188.

- Ehri, L. C./ Roberts, T. (2006): The roots of learning to read and write: Acquisition of letter and phonemic awareness. In: Dickinson/ Neumann (2006, 113-131).
- Farr, M. (ed.) (1985): Advances in writing research, Vol. 1: Children's early writing development. Ablex: Norwood, NJ.
- Ferreiro, E./ Teberosky, A. (1982): Literacy before schooling. Heinemann: Portsmouth/ London (span. 1979).
- Franzkowiak, T. (2008a): BLISS-Symbole - Eine Brücke zu Buchstaben und zur alphabetischen Schrift [BLISS symbols - a bridge to letters and the alphabetical code]. In: Grundschulunterricht Deutsch, H. 2/2008, 10-15 und 38-40.
- Franzkowiak, T. (2008b): Vom BLISS-Symbol zur alphabetischen Schrift. Entwicklung und Erprobung eines vorschulischen Förderansatzes zur Prävention von Lernschwierigkeiten beim Schriftspracherwerb [From BLISS to the alphabet. A pre-school curriculum for preventing problems in learning to read and write]. Dissertation FB 2. Universität: Siegen. Download: <http://dokumentix.ub.uni-siegen.de/opus/volltexte/2008/351/index.html>
- Frith, U. (ed.) (1980): Cognitive processes in spelling. Academic Press: London.
- Frith, U. (1986): Psychologische Aspekte des orthographischen Wissens: Entwicklung und Entwicklungsstörung. In: Augst (1986, 218-233).
- Gentry, J. R. (1978): Early spelling strategies. In: Elementary School Journal, Vol. 79, 88-92.
- Gentry, J.R. (1982): An analysis of developmental spelling in GNYS AT WRK. In: The Reading Teacher, Vol. 36, 192-200.
- Harste, J., et al. (1984): Language stories and literacy lessons. Heinemann: Portsmouth, NH.
- Henderson, E. H./ Beers, J. W. (eds.) (1980): Developmental and cognitive aspects of learning to spell: A reflection of word knowledge. International Reading Association: Newark, Del.
- Hiebert, F. (1978): Preschool children's understanding of written language. In: Child Development, Vol. 49, 1232-1234.
- Hofmann, B./ Sasse, A. (Hrsg.) (2006): Legasthenie. Lese-Rechtschreibstörungen oder Lese-Rechtschreibschwierigkeiten? Theoretische Konzepte und praktische Erfahrungen mit Förderprogrammen. [Dyslexia. Reading-spelling-disorders oder -difficulties? Theoretical concepts and experiences with interventions in practice]. Beiträge 5. Deutsche Gesellschaft für Lesen und Schreiben: Berlin.
- Justice, L. M./ Piasta, S. (2011): Developing children's print knowledge through adult-child storybook reading interactions: Print referencing as an instructional practice. In: Neuman/ Dickinson (2011, 200-213).
- Klein, H. (2005): Kinder schreiben. Erste Erfahrungen mit Schrift im Kindergarten [Children write - early experiences with print in kindergarten]. Kallmeyer: Seelze-Velber.
- Krieg, E./ Krieg, H. (2008): Bilden, fördern und gestalten in der Kita. Ergebnisse des STEP-Projekts [Educating, fostering and being creative in kindergarten - results from the STEP project]. Lit-Verlag: Münster.
- Largo, R. (2009): Schülerjahre [Years at school]. Piper: München.
- Lenel, A. (2005): Schrifterwerb vor der Schule. Eine entwicklungspsychologische Längsschnittstudie [Literacy acquisition before school - a longitudinal study in developmental psychology]. Beltz PVU: Weinheim/ Basel.
- Mann, V., et al. (1987): Measuring phonological awareness through the invented spellings of kindergarten children. In: Merrill-Palmer Quarterly, Vol. 33, 365-397.
- Mason, J. M. (1980): When do children begin to read: An exploration of four year old children's letter and word reading competencies. In: Reading Research Quarterly, Vol. 15, 203-227.
- Mason, J. M. (1981): Prereading: A developmental perspective. Technical Report No. 198. Center for the Study of Reading/ University: Urbana-Champaign, Ill.
- Mason, J. M./ Sinha, S. (1992): Emerging literacy in the early childhood years: Applying a Vygotskian model of learning and development. Technical Report No. 561. Center for the Study of Reading/ University of Illinois: Urbana-Champaign.
- McBride-Chang, C. (1998): The development of invented spelling. In: Early Education & Development, Vol. 9, No. 2, 147-160.
- McGee, L. M./ Purcell-Gates, V. (1997): So what's going on in research on emergent literacy? In: Reading Research Quarterly, Vol. 32, No. 3, 310-318.
- McGee, L.M., & Richgels, D. J. (2012): Literacy's beginnings: Supporting young readers and writers. Pearson/ Allyn and Bacon: Boston et al. (6th ed.).

- McGill-Franzen, A./Lanford, C. (1994). Exposing the edge of the preschool curriculum: Teachers' talk about text and children's literacy understandings. In: *Language Arts*, Vol. 71, 264-273.
- Ministerium für Kultus (ed.) (2006): Orientierungsplan für Bildung und Erziehung für die baden-württembergischen Kindergärten. Pilotphase. Beltz: Weinheim/ Basel.
- Neuman, S. B./ Dickinson (eds.) (2001): *Handbook of early literacy research*. Guilford Press: New York/ London: Guilford Press.
- Neuman, S. B./ Dickinson (eds.) (2010): *Handbook of early literacy research*. Vol. 3. Guilford Press: New York/ London.
- Oakhill, J./ Beard, R. (eds.) (1999): *Reading development and the teaching of reading: A psychological perspective*. Blackwell Publishers: Oxford, U.K.
- Read, C. (1971). Preschool children's knowledge of English phonology. In: *Harvard Educational Review*, Vol. 41, 1-34.
- Richgels, D.J (1986). Beginning first graders' "invented spelling" ability and their performance in functional classroom writing activities. In: *Early Childhood Research Quarterly*, Vol. 1, 85-97.
- Richgels, D. J. (1995). Invented spelling ability and printed word learning in kindergarten. *Reading Research Quarterly*, Vol. 30, 96-109.
- Richgels, D.J. (2001). Invented spelling, phonemic awareness, and reading and writing instruction. In: Neuman/ Dickinson, (2001, 142-155).
- Schneider, W., et al. (1995): Lesen- und Schreibenlernen in neuer Sicht: Vier Perspektiven auf den Stand der Forschung [Learning to read and write: four new perspectives on the state of the art in research]. In: Balhorn/ Brügelmann (1995, 14-28). Reprint from: Brügelmann/ Balhorn (1990, 220-34).
- Sénéchal, M. (2011): A model of the concurrent and longitudinal relations between home literacy and child outcomes, In: Neuman/ Dickinson (2011, 175-188).
- Seymour, P., et al. (2003): Foundation literacy acquisition in European orthographies. In: *British Journal of Psychology*, Vol. 94, 143-174.
- Sulzby, E. (1985): Kindergarteners as writers and readers. In: Farr (1985, 127-200).
- Sulzby, E. (1988): *Emergent writing and reading in 5-6 years olds*. Ablex: Hove.
- Teale, W. H./ Sulzby, E. (eds.) (1986): *Emerging literacy: Writing and reading*. Ablex: Norwood, NJ.
- Temple, C. A., et al. (1988): *The beginnings of writing*. Allyn and Bacon: London et al. (2nd rev. ed.; 1st ed. 1982).
- Torgesen, J, K./ Davis, C. (1996): Individual difference variables that predict response to training in phonological awareness. In: *Journal of Experimental Child Psychology*, Vol. 63, 1-21.
- Treiman, R. (1985). Phonemic analysis, spelling, and reading. In: Carr (1985, 5-18).
- Valtin, R. (1984): The development of metalinguistic abilities in children learning to read and write. In: Downing/ Valtin (1984, 207-226).
- Valtin, R. (2010). Phonologische Bewusstheit – eine notwendige Voraussetzung beim Lesen- und Schreibenlernen? [Phonological awareness – a necessary precursor of learning to read and write?]. Download: www.leseforum.ch/sysModules/objLeseforum/Artikel/426/2010_2_Valtin_PDF.pdf
- Van der Kooy-Hofland, V., et al. (2011): Evidence-based computer interventions targeting phonological awareness to prevent reading problems in at-risk young students. In: Neuman/ Dickinson (2011, 214-227).
- Zinke, O., et al. (eds.) (2005): *Vom Zeichen zur Schrift. Begegnungen mit Schreiben und Lesen im Kindergarten* [From symbols to print – encounters with reading and writing in kindergarten], Beltz: Weinheim/ Basel.