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Extent of the Utilisation of Vocabulary Learning Opportunities from Classroom Print

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ABSTRACT This study interrogated the potential influence of classroom print to Grade 3 English second language (L2) learners' acquisition of core vocabulary for transitioning to Grade 4. Using systematic observation and a corpus software tool, the AntConc concordance, the study documented the quantity and quality of vocabulary exposure in ten Grade 3 classroom print in relation to High Frequency Words (HFWs) considered core vocabulary needs for the transition. Follow-up structured interviews were conducted with teachers whose classroom print was observed. Findings indicated underrepresentation of general English vocabulary and HFWs, and compromised quality of available print displays. Teacher indifference to the relationship between classroom print and learners' vocabulary acquisition largely explains the findings. The study recommend enhanced quantity and quality of HFWs' exposure in classroom displays to facilitate learners' acquisition of requisite vocabulary.

INTRODUCTION

In English second language (ESL) input impoverished environments where the target language infrastructure is lacking, the classroom assumes the role of sole provider of linguistic input requisite for learning. Such linguistic provision is largely through teacher talk, textbook use and classroom print. The value of developing a sound vocabulary repertoire is underscored by the observation that the lexical dimension of a language is "…the greatest tool we can give students" (Samir 2007: 45) which is "… predictive and reflective of reading achievement" (Pikulski and Templeton 2004: 1) more than grammar is (Carmen 2009). A sound vocabulary repertoire allows learners to comprehend input and encode output. This study investigated the extent of exposure to vocabulary requisite for reading to learn in Grade 4, the Grade 3 learners had from their classroom print. Sixty and 213 high frequency words (HFWs) representing learners' core vocabulary needs for reading to learn in Grade 4, taken from Sibanda and Baxen (2016), were used as a benchmark of requisite vocabulary exposure from classroom print. The HFWs were selected on the basis of their frequency of occurrence in Grade 4 content area textbooks the same learners used, as well as on the basis of their availability, coverage, learnability, and opportunism (Koprowski 2005), criteria which determine their lexical utility. Grade 3 to 4 transitional challenges, which are not exclusive to the South African context, provide the context for the present study.

Transitional Challenges from Grade 3 to 4

That, even within L1 speaking contexts there is a "…sudden drop-off between third and fourth grade in the reading scores…" (Hirsch 2003: 10) designated the fourth grade slump, attests to the crucial nature of the grade 3-4 transitional point. Lesnick et al. (2010) posited a shift in the focus of reading from learning to read to reading to learn with the latter demanding learners' possession of a substantial lexical repertoire to unlock textual content. Grade 4 in South Africa also marks shift in the Language of Learning and Teaching (LoLT) from a Home Language (HL) to a First Additional Language (FAL) and according to Howie, in Howie et al. (2008: 8) "…the LoLT…in Grade 4 results in more than 80 percent of learners being taught in a second language, mostly English, a language spoken by less than 10 percent of the population." The implication is that learners "…must reach a high level of competence in English by the end of Grade 3, and they need to be able to read and write well in English. For these reasons, their progress in literacy must be accelerated in Grades 2 and 3" (CAPS 2011: 11).

Wright (2012: 353) posited that, '[B]y fourth grade, students with limited vocabulary knowl-

edge are likely to slump in reading comprehension.' In its appraisal of key factors accounting for learners' poor performance, the Department of Basic Education's (DBE) Annual National Assessment (ANA) report (2011) identified inability to read and an acute lack of basic vocabulary as key deterrents to learner performance. Although much has been said about the role of extensive reading in vocabulary acquisition, the potential role of classroom print has received scant, if any, recognition. The question for this study then was the extent to which the Grade 3 classroom environment, through classroom print displays, contributed to vocabulary gains, albeit modest ones. The study was framed by three research questions namely;

1. What is the extent of HFWs exposure in Grade 3 classroom print?
2. What is the nature of the available classroom print?
3. What use is made of the available classroom print?

Both the research questions and the review of literature on the efficacy of print exposure to vocabulary acquisition and its effective employment, guided the study.

Literature Review

Role of Classroom Print in Vocabulary Development

The efficacy of print in children's literacy development is underscored by Fern and Jiar (2013: 146) who noted that "[T]he process of learning to read and write begins as early as children have contact with forms of written communication in the surrounding." Setati and Adler's (2001: 243) observation in the South African context that "[E]nglish as target language and LOLT is only heard, spoken and written in the formal school context" necessitates the deployment of all sources of classroom linguistic input to language development. The enormity of the vocabulary learners need necessitates both explicit and incidental acquisition of some words from mere exposure. Although the ten Grade 3 classrooms in which the study was conducted had adequate workbooks supplied by the DBE, they were impoverished in terms of other reading materials, which necessitated compensation of the lack with a print-rich classroom environment.

Engagement with environmental print precedes the more advanced reading of book print where incipient hypotheses made about print are tested. Even as children engage in formal print reading at school, exposure to, and engagement with, print is conditional to the development of the salient features of literacy namely; phonemic awareness, phonics, vocabulary, fluency, and comprehension. Cummins (2006) saw the use of environmental print as facilitative of the development of these key pillars of reading literacy. Apart from environmental print bridging the home-school chasm, it is inexpensive. Giles and Tunks (2010) identified both commercial and environmental print as allowing for the experimentation with print resources.

Partnership for 21st Century Skills (2002) envisions modern day classrooms as spaces for active, self-directed learning organised for autonomy and independence to support the learning process. A rich array of children-produced print materials as well as teacher and commercially produced wall displays which learners interact with daily should characterise the L2 classroom. Word walls, name charts, children's independent print, alphabet charts and other displays should constitute classroom print. The Language Experience Approach story charts dictated by learners and transposed by teachers on charts are ideal for L2 beginners' awareness of words in contexts meaningful to them. Learners' perfunctory spoken language knowledge would be greatly enhanced by seeing it in print, which would trigger word recognition in both the aural and print forms. Rebus charts depicting words alongside pictures facilitate word knowledge as learners associate words with their pictures to derive word meanings. Akhtar et al. (2001), in Justice (2004), intimated that incidental exposure to language suffices for language learning.

Stanovich and Cunningham (1992) posited that print exposure has a causal relationship with vocabulary acquisition even where intelligence is controlled. Immersion in an environment with meaningful, comprehensible messages in the target language would expedite learners' vocabulary acquisition. Thomlison (2012: 143) observed that:

Materials can be informative (informing the learner about the target language), instructional (guiding the learner in practicing the language), experiential (providing the learner with experience of the language in use), elic-

iting (encouraging the learner to use the language) and exploratory (helping the learner to make discoveries about the language).

Such multiplicity of functions can potentially be served by the print teachers display in their classrooms. Richard (2001) saw print material as indispensable to adequate language input and language practice in the classroom.

Effective Use of Classroom Print

Justice (2004) identified five key elements for the effective use of print namely; exposure, deliberateness, recurrence, high-quality input, and adult responsiveness. These frame the present study's focus on print use in the classroom. For the present study, exposure related to the amount of words that classroom print contained. Deliberateness for Justice (2004) is about the adults' intentionally choosing the language to expose to the learners. For this study, the vocabulary captured in classroom print was juxtaposed against what had been determined as learners' core vocabulary needs. Recurrence relates to the progressive repetition of key words in print to enhance the probability of their mastery from multiple exposures in diverse contextual applications. Long and Doughty (2009) posited that where lexical items recur frequently, it activates the reader's memory traces and ensures that the words are entrenched and elaborated which, Sripada (2008) noted, eases their retrieval. High-quality input denotes both to the words themselves, how they are organised and employed in functional contexts for particular purposes.

To Justice (2004), adult responsiveness is a measure of the extent to which the teacher is frequent and consistent in his or her response to learners' intentions and attempts at communication. In this study, all that the teacher did to draw learners' attention to words on classroom print and their communication of meaning denoted responsiveness. Justice (2004) conceptualised teacher responsiveness under eight strategies namely; waiting, pausing, confirming, imitating, extending, labelling, open questioning, and scripting.

Labelling classroom objects enhances print visibility in the classroom. Where the classroom objects and features are labelled (not overly labelled to the point of overwhelming the learners and being too visually stimulating) the act of manipulating those objects becomes a valuable vocabulary acquisition opportunity. Involving children in the labelling process, where labels are correctly spelt, neatly printed or typed and pasted on referent objects would constitute a vocabulary learning experience on its own. Importing environmental print learners already recognize into the classroom allows independent vocabulary acquisition of aspects of the print previously ignored and coincides with children's natural venture into reading through reading environmental print. Attaching questions or explanations to that print could direct learners to aspects of environmental print ordinarily ignored.

Print displayed should be at learners' level without being simplistic to extend their vocabulary development. Vygotsky's concept of zone of proximal development (ZPD) in Lantolf and Thorne (2007) and Krashen's (1985) i+1 are instructive in this regard. Print should be custom made to suit learners in diverse ways and, in this regard, teacher or learner produced print has an edge over commercially produced, generic, 'one-size-fits-all' print. The pedagogical rationale of classroom print should be evident and decisions about how long it should be displayed should be made consciously.

Jasmine and Schiesl (2009) underscore the need for word walls displaying high frequency or theme-related words which facilitate sight word reading and recognition and better establishes word connections. The word walls should be complemented with activities where the words embodied on the word walls are applied to establish them in the memory for easy retrieval. Giles and Tunks (2010) noted that print exposure needs to be complemented with engaging conversations about that print.

A related study by Tao and Robinson (2005) reported on pre-service teachers' observations related to the print richness of classrooms during their teaching experience. Only one teacher noted the existence of labels in the classroom and another observed learners actively taking part in the labelling of objects in the classroom.

METHODOLOGY

The study was part of a large PhD study involving ten teachers and ten classrooms purposively selected to represent the diversity in school size, resource, allocation, location (township and rural schools equally represented) and

representing four Districts of the Eastern Cape province of South Africa. In this study, print displays were video recorded and snapshots from the recordings taken and the print transcribed. Focus was on the quantitative representation of the 60 and 213 HFWs (derived from the Grade 4 textbook corpus) in the print. The antconc 3.2.1w software concordancer was used to generate word lists from the combined classroom print corpus for each teacher, to determine the quantity of word exposure generally, and that of the HFWs specifically. Also important was the determination of the relevance of the classroom print to Grade 3 ESL learners as commercially produced print did not identify the grade level for which it was produced. Two-week (10 day) consecutive English FAL classroom observations were made during the third of four school terms to identify the use made of print displays in teaching and learning. A 7-item semi-structured interview was conducted with 10 teachers as follow-up to the classroom print findings.

RESULTS

Classroom print data is presented thematically and its potential to lead to language and vocabulary acquisition discussed. Excerpts or snapshots from the print best illustrative of a particular category are used for exemplification. Teacher interview responses are infused into the presentation and discussion of categories where they are relevant. Table 1 summarises the nature and quantity of classroom print displays observed in the different teachers' classrooms. The (R) and (T) against the teachers' names represent an equal number of rural and township classrooms respectively.

Variation in Classroom Print

All the classroom print materials were charts with the exception of Henrietta's labelled classroom objects. The more varied the classroom displays were, the more they could potentially pique learners' curiosity and interest. Maps, customized flash cards, and authentic materials like menus, recipes, signs, printed directions, cereal boxes, wedding invitation cards were conspicuously absent in the classrooms which deprived learners of greater opportunities to interact with language of the real world in the classroom. This is despite Cummins' (2006) and Giles and Tunks' (2010) acknowledgment of the pivotal role of environmental print in vocabulary acquisition.

Labels were exclusive to Henrietta's classroom and Figure 1 exemplifies three of them. These allowed for a constant connection between written language and the objects it represented. The labels *table*, *chair* and *picture* were however, confined to objects whose names learners most likely knew orally at the expense of objects whose English labels were novel. An extension to the labelling could have been made by having accompanying statements as in having the label *refuse bin* followed by *'place your refuse here'*. Learners would potentially derive the meaning of 'refuse' from such contextual use. Also missing was the display of children's work.

Betty, whose classroom had no print displays, identified as an excuse, absence of window panes and peeling walls and made no attempt to make the best out of a constraining environment. Keeping print materials in pockets, or having mobile displays suspended from ceilings, displays hung on a string line attached

Table 1: Quantity and nature of the classroom print for each class

Teacher	*Number of print items*	*Print produced...*		*Language presented at the...*		
		By the teacher	*Commercially*	*Word level*	*Sentence level*	*Beyond sentence level*
Alice (T)	25	2	23	22	3	0
Betty (R)	0	0	0	0	0	0
Christine (R)	16	14	2	13	3	0
Dorothy (R)	1	0	1	1	0	0
Esther (R)	16	14	2	9	5	2
Florence (R)	13	0	13	12	1	0
Gladys (T)	4	0	4	4	0	0
Henrietta(T)	10	0	10	5	5	0
Jane (T)	7	1	6	5	1	0
Kate (T)	14	0	14	6	6	2

Fig. 1. Labelling of classroom objects in Henrietta's class

with pegs or clips for learners to interact with language, were possible options.

Quantity of Classroom Print Materials and Word Exposure

Reference to the quantity of classroom print is made in relation to the print that was in English and not that which was in isiXhosa (the teachers and learners' Home Language). From Table 1, the range of print displays in the classrooms was 0 to 25 items with 6 of the 10 classrooms having 10 or more charts in English and the remaining 4 classrooms having less than 10 chart displays in English. The 4 classrooms with less than 10 charts had very few charts in English to allow for much exposure of learners to English vocabulary. The 6 classrooms with many charts normally had very small charts with a few words on them which also severely limited the amount of the language exposure learners could benefit from. A case in point is some of Alice's charts which had as few as four words as shown in Figure 2 where the five charts had a total of 22 words, a number which could easily have been accommodated on a single chart. A word count, of print materials for each classroom, generated by the antconc software, was more the indicator of their potential to facilitate vocabulary acquisition than how much the print covered classroom walls. Table 2 shows the number of the 60 and 213 HFWs learners potentially stood to benefit from classroom print displays. The 213 HFWs list includes the 60 which effectively reduced the HFW beyond the 60 HFWs to 153.

'Tokens' denote the number of running words whereas 'types' count the number of different words. That 845 tokens in Henrietta's classroom represented the highest number of words in classroom print displays (where a word was counted as many times as it recurred) and that Kate's 374 word types represented the highest number of different words used (where a word was counted only once no matter how often it recurred), speaks to the paucity of English vocabulary exposure in classroom print displays. Figure 3, based on Table 2 data on the representation of the 60 and 213 HFWs, shows the extent to which these HFWs were manifest in classroom print displays.

More words were represented in classroom print displays within the 60 HFWs list than beyond the 60 but within the 213 HFWs list for all classrooms' print except for Dorothy and Florence's. In terms of the 60 HFWs representation in classroom print, only Henrietta had 50 percent coverage of the 60 HFWs and the other eight had below 50 percent coverage. That classroom print hardly covered half of the core vocabulary needs of learners for reading to learn in

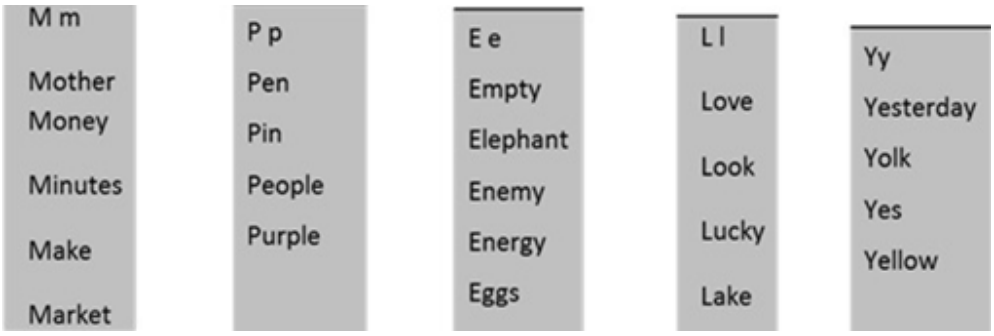

Fig. 2. Alice's short charts at the word level

Table 2: Classroom print vocabulary quantity and representation of the HFW

Teacher	*Tokens*	*Types*	*Words within the 60 HFW and frequency of each word's occurrence*	*Words beyond the 60 HFW but within the 213 HFW*
Alice	152	141	and, day (2), different, look, on, stop, together, understand, until (1)9/60=15%	make, to (2), east, no, now, of, sit, teacher, with, hand, any, so (1) 12/153=7.8%
Christine	373	277	is (9), and, it, on (3), look (2), stop, but, can, day, do, for, from, have, not, what, you16/60=27%	the (19), book (9), to (5), are, go (4), my, of, up (3), big, I, me, she, with, a, about, all, we, eat, get, when, old, will, then, in, so (1) 25/153=16.3%
Dorothy	99	80	stop (2)1/60=2%	no, road (3), of, one, the, way, left, house, keep (1) 9/153=5.9%
Esther	390	220	and, (7), is (6), you (4), can, day, for, that, time (2), but, it on (1)11/60=18%	the, a (12), in, I (7), to (6), my (4), are, from, make (3), around, help, put, them (2), all, big, teacher, hand, first, eat, under, new, old, wound, one, there (1) 25/153=16.3%
Florence	406	224	stop (2), more, you (1)3/60=5%	One (14), the (4), no, road (3), book, house, of, there, way (2), all, class, keep, left, long, read, teacher, they, their, think, this (1) 20/153=13.1%
Gladys	287	247	stop, like (2), after, because, before, day, is, on, that (1)9/60=15%	the (5), no, road (3), left, of, one, see, way (2), a, big, down, eat, good, in, much, long, new, old, small, up (1) 20/153=13.1%
Henrietta	845	319	is (27), have, and (12), like (9), can, each, from (8), it (7), you (6), look, same, what (5), do, for, only, or, other, some (3), different, if, more, school, on (2), after, again, every, most, together, out, time, (1)30/60=50%	of (36), a (29), the (23), are, this (23), in, one (9), we, group (7), be, these (6), all, has, there, to (5), they, up, with (4), by, at (3), how, no, any, so (2), say, see, way (2), few, house, new, than, which, over, study (2) around,(1) 34/153=22.2%
Jane	410	324	after (7), and, or, school, stop (3) is (2), always, colour, day, different, from, on, use (1)13/60=22%	the (7), of (6), road (4), no, one, with, way (3), down, eat, house, keep, left, this (1). 13/153=8.5%
Kate	699	374	and (16), is (10), have, not, you (6), on (5), can, for, if, or (4), do, school (3), both, but, it, like, look, more, same, that, time, what (2), day, from, most, once, only, out, work (1)29/60=48%	the (36), to (24), in (18), a (13), of (8), all, be (6), we, I, are (5), any, would (4), at, by, even, no, now, they, will (3), by, down, go, good, has, my, read, these, this (2), with, one, change, eat, get, keep, our, put, see, saw, teacher, than, us, want, which, when, well, write (1). 46/153=30.1%

Grade 4 casts doubt on its potential to prepare learners for the Grade 4 linguistic transitional challenges. The highest representation of the 213 HFWs among the 9 classrooms was Kate's 30.1 percent. This showed even a lower representation of the core vocabulary in classroom print displays. The 60 HFWs manifest in teachers' classroom print and the number of classrooms in whose print they were, provide a picture of the words that were likely to be acquired from classroom print across different classrooms as shown in Table 3.

Only 42 out of the 60 HFWs were found in at least 1 classroom's print displays with the remaining 18 words not appearing in any of the classrooms. The majority of the 42 words were only found in one, two and three classrooms and only one was found in 7 classrooms, one in

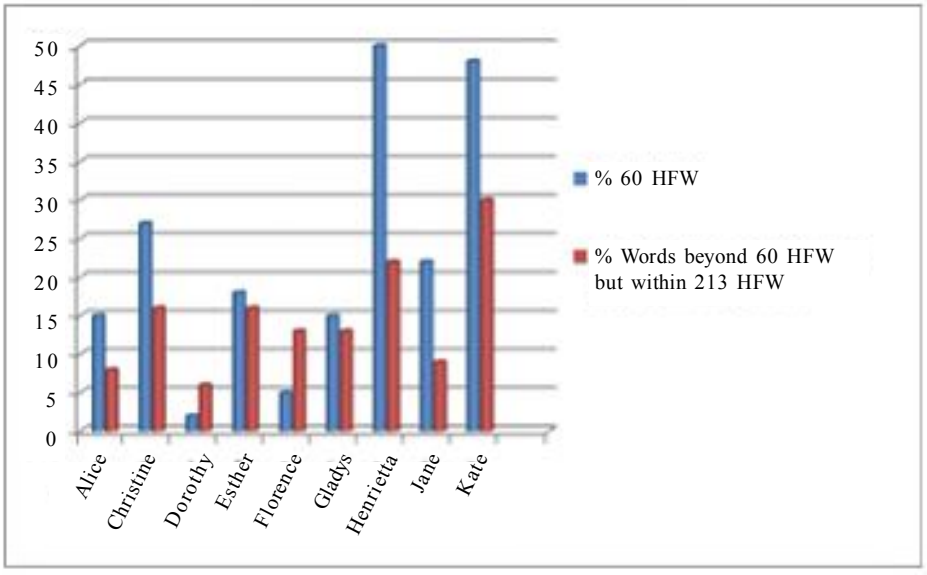

Fig. 3. Percentage words within the 60 HFW and 213 HFW in classroom print

Table 3: HFW in teachers' classroom print

Classrooms where word appeared in print displays	*Words from the 60 HFW list*
7 classrooms	On
6 classrooms	You
5 classrooms	and day stop is
4 classrooms	look it can for
3 classrooms	together do from have but what that time more like
2 classrooms	different not same only school after again most out once
1 classroom	understand until after because before each other some if every both work

6 classrooms with none being found across eight or all the nine classrooms (having excluded Betty's class which had no classroom print). Although the bulk of the 60 HFWs were function words which generally occur in text more frequently than content words, the 60 HFWs representation was still quite limited. There was a dearth in representation of both the English vocabulary in general and the HFW in particular. This was despite all the ten teachers acknowledging the role of classroom print displays in incidental vocabulary acquisition in their interview responses. Responses to the kind of print displays that engender vocabulary acquisition yielded three conditions for vocabulary acquisition namely; legibility (6 of the 10 teachers), understandability (4 teachers) and attractiveness (2 teachers). It was interesting to note that the quantity of print and its recycling and learner displays were not considered. The nature of the print displays was also of interest in the present study and is discussed in relation to the source of their production and the level of their language focus.

Material Production and Source

The source of materials, whether teacher-produced or commercially produced, had implications for their relevance to learners' level and linguistic needs. From Table 1, it is apparent that the bulk of the classroom charts were commercially produced with the exception of Christine and Esther who had more teacher-produced than commercially produced charts (see Appendix 1 for some of their print displays). They were even apologetic about the preponderance of teacher produced print which they explained as having been actuated by lack of access to commercially produced materials by virtue of being at impoverished rural schools. In the other classes, commercially produced materials outnumbered teacher produced charts with five of the 9 class-

rooms having commercially produced print displays only.

The manifest weakness of commercially produced materials was their lack of alignment with learners' level since they were not produced with ESL learners at a particular grade level in mind. Because they did not indicate the grade level for which they were designed, they were considered by teachers as generic, one-size-fits-all materials; an impression the producers had implicitly created by not identifying the target audience of the materials. What is more, some of the producers of the materials were not themselves in the field of education. An example is the chart 'The ABC of road safety' which originated from the Department of Transport and whose preoccupation was to illustrate road safety rules using the alphabet. Although the producers creatively sent the intended message, they were not well placed to make a determination of the specific target audience of the material in terms of the grade level. The chart apparently had received wide distribution as it was found in classrooms of different grade levels. Figure 4 shows the letters B and C and their illustrations where B stands for bicycle lane reservation and C for circle (mini-circle).

Fig. 4. Picture showing illustrations on the ABC of road safety

The language used on the chart like *'bicycle lane reservation, no entry, one way pedestrian crossing, jetty edge keep left, T-junction, uneven roadway, visibility reduced, yield sign'* was not part of the immediate core vocabulary needs of the learners. From the other commercially produced charts came words like '*jelly kite* and *rattle shoes, enterprise, scene, due, flings, illusion, social, electrical shock,'* among others. These infrequent words also did not meet the criterion of usefulness which is key for determining vocabulary to privilege in the classroom.

It was also not easy to justify the presence of some commercially produced charts in the classroom. A fading chart in Florence's classroom which I had to retype is a case in point and is represented below:

DUTYWA MEDICAL CENTRE
General Practitioner- Optometrist-Dental
Ugqirha wabagulayo- owamehlo-wamazinyo
Mon-Fri 08:00 -18:00 Tel: 047 489 2222
Sat 08:00 -13:00 Fax: 047 489 2222

The chart could have been exploited to serve a pedagogical purpose by giving some task to the learners. One chart particularly illustrative of the lack of consonance between vocabulary of commercially produced charts and ESL Grade 3 learners' competence levels is the 'girl and women rights' chart in Kate's classroom. Below the researcher typed part of the chart, underlined and italicised words I considered beyond learners' level.

Excerpt from the Chart

It is *important* that all people *believe* in *themselves*, *respect themselves* and *respect* the *rights* of others. *Disabled* people have the same *rights* as *everybody* else. They have the *right* to *career opportunities* and *employment*.Women do not have to *obey* men even if they are much older. Girls or women have the *right* to say no to *sex* or any *activities* which they do not want to *participate* in. When *couples freely engage* in *sexual activities both sexes* are *equally responsible* for the *prevention* of *unplanned pregnancies*, *sexually transmitted disease* and HIV / AIDS.All *careers* are now open to all *sexes* and *races*. *Certain careers* are *no longer solely* the *domain* of *either* men or women. Women can now even become *engineers*, *truck* drivers and *occupy* top *management positions*. The *constitution grants equal rights* to all *citizens irrespective* of *race*, *gender*, *creed* or any *disabilities*.The *inequalities* of the *past* can only be *rectified* if all people *accept* their *responsibilities* and are *prepared* to *accept* the *challenges* that go with these *rights*.From *childhood* we were *placed* in *certain ways* in *society*. Men had to be *strong* and had to play the *leading role* in *both* the home and in the *workplace*. Women *on the other hand* had to be *subservient* and had to *obey* men. These *stereotype roles* were *accepted* down the *centuries*.This *situation* has now *changed*. Any *form* of *violence*, is *unacceptable* and *illegal,*

If the researcher's intuitive sense of what learners would know and not know is correct, then, in the 235 word passage (the phrase '*on the other hand'* was considered as one word and underlined as such), ignorance of 90 words (90÷235×100) translated to 38 percent unknown words. This is a massive figure considering that the maximum acceptable amount of vocabulary which may be unknown without compromising comprehension is 2 percent according to Hu and Nation's (2000) vocabulary threshold estimates. The 38 percent unknown words assumes that the other words I did not highlight like '*else, people, same, even, any'* were known. It also assumes that even the potentially known words which are used in unusual ways like '*Men had to…play the role…*'*challenges that go with these rights,* 'and the word '*right*' itself would not interfere with comprehension.

A calculation of the readability of this part of the chart using the reading level calculator <http://www.readability-score.com/> yielded the following results:

Reading Ease	
A higher score indicates easier readability; scores usually range between 0 and 100.	
Readability Formula	*Score*
Flesch-Kincaid Reading Ease	57.5
Grade Levels	
A grade level is equivalent to the number of years of education a person has had. Scores over 22 denote graduate level text.	
Readability Formula	*Grade*
Flesch-Kincaid Grade Level	8.7
Gunning-Fog Score	11.7
Coleman-Liau Index	12.4
SMOG Index	8.5
Automated Readability Index	8.2
Average Grade Level	9.9

According to the grade average from the five readability formulae, Grade 3 ESL learners were expected to cope with material suitable for Grade 10 [9.9] English speakers. The chart is illustrative of the disjuncture between most commercially produced materials and learners' level of language proficiency and vocabulary needs. Notwithstanding this limitation on the part of commercially produced materials, 7 of the 10 teachers believed in the superiority of commercially produced print over the teacher produced on the basis of better quality design features which attract learners as well as material being produced by experts using expert technology; a veiled underestimation of their own capacity in material production.

Level at which Language is Used in the Materials

Three levels at which language in the charts was used were the word level, the sentence level and the beyond the sentence (discourse) level. From Table 1, it is apparent that an overwhelming majority of the charts were pegged at the word level except for Henrietta and Kate's classrooms where there was an equal number of charts at the word and sentence level. The beyond the sentence level had the lowest number of charts for the two teachers who had them and was not represented in all the other teachers' charts.

The word level charts could only potentially develop word recognition since learners could not derive word meanings from a mere look at a list of decontextualized words such as those in Figure 2. The exception was that of a few of the charts where words were matched with pictures of objects they represented. Absence of accompanying tasks challenging learners to do something with the words compromised the potential of word level charts to extend learners' vocabulary knowledge. Sentence and beyond sentence level charts were normally pegged beyond learners' comprehension level and so did not aid the acquisition of core vocabulary. In most of them, the context provided was insufficient to point to meanings of novel words. The few which did were exceptions and most of these were teacher-produced and tailor-made to learners' level (See Esther's classroom print in Appendix 1). The effectiveness of classroom print also rested on how it was used.

In the follow-up teacher interviews, there was greater preference for print displays in form of word lists to sentence and paragraph level print displays which was consistent with the print displays observed. The reasons given were that word level print displays helped learners to focus on the actual words the teacher wanted them to learn and did not overwhelm the learners whom teachers considered not proficient enough to understand print material at the discourse level.

Utilisation of Charts in Teaching

From the observations of classroom teaching and learning, there was no reference to any

of the print displays in all the classrooms during teaching with the exception of Esther who used a teacher-produced chart to teach the present continuous tense. Two of Christine's lessons were based on opposites and although the words that she taught were different from the ones on the 'opposites chart', she never made reference to it. It was apparent that there was no correspondence between classroom charts and topics teachers were teaching. The charts seemed permanent features of the classroom and there was evidently no rotation of charts in line with content taught to make them relevant to aspects being taught, as well as expose learners to more, and new language.

There was also no attempt to draw learners' attention to charts by assigning time for learners' independent work on them, for example through impromptu testing of some aspects on the charts or encouraging fast learners to read the charts or any such ways. In the two-week observations per class, there was no moment when the researcher noticed a learner reading a chart. The charts had become a permanent feature of the classrooms to the extent that they ceased to draw learners' attention. Although the design features of the charts were generally sound on account of most of them being commercially produced, most had overstayed and outlived their usefulness. In a number of classes, the charts were so neglected that they were almost falling off as the section of charts in Christine's class shows in Figure 5.

Fig. 5. Section of Christine's charts showing neglect

For most teachers (7), the only effort they made to help learners acquire vocabulary from print displays was to provide the print materials in the classroom. Gladys said the first time she displayed print she made sure to read the print material to and with the children so that they would continue to read the material on their own. There was no mechanism built into the print materials to ensure they led to vocabulary acquisition. There was also no reference made to the print displays during actual teaching.

In follow-up interviews teachers acknowledged that most of the print displays they made were determined by what they could access, this, a reference to the commercially produced materials. The relevance of the print to the lessons being taught and the material of interest they find in some textbooks were also identified as determinants of print displays in their classrooms. This was not consistent with the earlier finding from observations that the print displays were not related to what was currently being taught. There was no deliberate consideration of the most useful vocabulary, like frequency lists, in the determination of classroom print displays.

DISCUSSION

Unaldi et al. (2013) saw contextualisation as enabling word meaning on multiple dimensions and Nelson and Stage (2007) also saw contextualisation as pivotal for the acquisition of words with multiple meanings. Most of the charts were at the word level and very few print materials were at sentential or discourse level. Such classroom print needed teacher mediation to be useful. Wasik and Iannone-Campbell (2012: 324) noted that 'children learn vocabulary best when words are presented in a meaningful context or theme…' They further argued that the observation is corroborated by memory research demonstrating that learning is expedited when words are contextualised than when they are isolated. Classroom print which was at the sentence level where sentences were not related one to the other also did not provide the context that was needed for learning word meaning and modeling word use. Classroom print at the discourse level, which had the potential to lead to word recognition, word meaning and word use, was minimally used and mostly beyond the learners' level. The language use in charts provided neither definitional nor contextual information which Nelson and Stage (2007) saw as leading to both word knowledge and text comprehension. Confinement of most charts to the word level may have been occasioned by an underestimation of learners' abilities to handle language at the discourse level when the official curriculum (CAPS 2011) identifies a Grade 3 learner as one who:

- [R]eads independently books read in Guided Reading sessions and simple caption books and picture story books in the First Additional Language from the classroom reading corner (p. 67).
- [U]nderstands and uses language structures in context, for example, past tense: I watered the seed; prepositions: I put the seed in a pot (p. 69).

The learners also should have contributed to the development of own print displays. The NEEDU Report (2012: 44) stipulates that:

At least once a week they [learners] should undertake extended writing. The latter should consist predominantly of sentences in Grade 1, paragraphs in Grade 2, and extended passages (2 or more linked paragraphs) in Grade 3. Learners should be asked to describe experiences, express their feelings, and analyse events. These are exercises that develop higher cognitive capacity. From the second half of Grade 1, learners should be led to write stories about themselves, their families and friends.

If so much could be expected in terms of learners' language productive capacities, even more could be expected in terms of their receptive capacities in the form of reading charts beyond the word level.

Input adequacy, which Krashen (1985) identified as pre-conditional to language acquisition was not met in the classroom print in classrooms observed and learners could not be expected to acquire language they did not encounter. The lack of teachers' resourcefulness and initiative saw them relying on commercially produced charts which were not tailor-made for the levels and needs of learners to the point that they were largely irrelevant. Charts were supposed to be at the learners' independent reading levels (where learners could read and understand them on their own) but most of them were not even at the instructional level (where learners could access them with the assistance of the teacher), but at the learners' frustration levels (where they were so beyond learners' levels that they could not access them despite the teacher's mediation). The same lack of initiative and resourcefulness accounted for the reliance on the same charts throughout the year, depriving learners of the language they could and would have interacted with had more charts been used through a change of charts. It also explains the lack of diversity characterising the classroom print and the lack of follow-up activities on the available charts.

Although the manifestation of function words was greater in the classroom print on account of most of the 60 HFW appearing in only one or two teachers' print displays being content words, the restriction of print displays to the word level account for the low manifestation of function words across all teachers' print displays. Function words, by virtue of serving syntactic purposes, would be more manifest in full sentence or paragraph print displays.

Teachers' preference for commercially produced materials, for print displays at the word level, their disregard for follow-up activities on the print displays, and their disregard of frequency lists as manifest in their interview responses all explain both the low visibility of HFW in the print displays and the low quality of the representation of those words that appear in the print displays.

CONCLUSION

None of the five key elements for the effective use of print discussed earlier, was adequately met by the nature of print displays in the classrooms. There was little exposure to both English vocabulary generally and HFWs specifically, there was no teacher deliberateness and responsiveness to vocabulary acquisition from the little print that was seen, the few words that featured in classroom print had very little recurrence, and failure to represent HFWs rendered the little print of low quality.

From the foregoing, it is apparent that classroom print could hardly facilitate the acquisition of the core vocabulary requisite for Grade 3 learners' transition to Grade 4 in the observed classes. This was due to the very low representation of words in the charts as indicated by the few word tokens and word types in the classroom print of each of the teachers and in the even lower representation of the 60 and 213 HFW in that print. The inadequate language exposure was itself a result of not changing the charts in line with aspects being taught and the restriction of charts to the word level.

The quality of the classroom print was hardly facilitative of vocabulary acquisition where most charts presented decontextualized words which were not followed up on through tasks

that could draw learners' attention to particular aspects of word knowledge. The disjuncture between the print and learners' level and needs militated against learners' acquisition of the language. The lack of relevance and recency of charts potentially discouraged learners from engaging with them to the extent that they ended up serving a merely decorative function in those classrooms (where their aesthetic qualities were sound).

RECOMMENDATIONS

On the basis of the findings and conclusions above, the study proffers some recommendations. To ensure quantity of input, teachers should use a variety of print displays in the classroom, align the classroom print with what they teach, change classroom print regularly to ensure the presence of novel print displays regularly. They need to have lists of HFW which they systematically teach to learners over time captured in their classroom print.

In terms of the quality of print, teachers should desist from importing print displays incongruent to learners' needs and abilities but rather use more teacher-produced materials customized to the needs and capabilities of learners. They should ensure print materials are self-contained allowing learners to benefit from them independent of the teacher by giving tasks and directions rather than just a collection of words, as well as follow up activities like the assessment of aspects on a chart.

Producers of print materials for distribution to schools should indicate the target audience of the material to ensure a fit between the material and the learners. These recommendations would transform the role of print materials from a decorative function to an important source of classroom input for language acquisition in general, and vocabulary development in particular.

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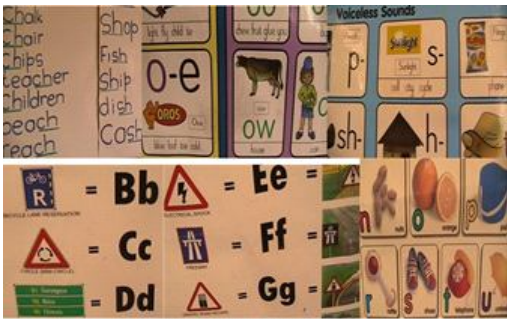
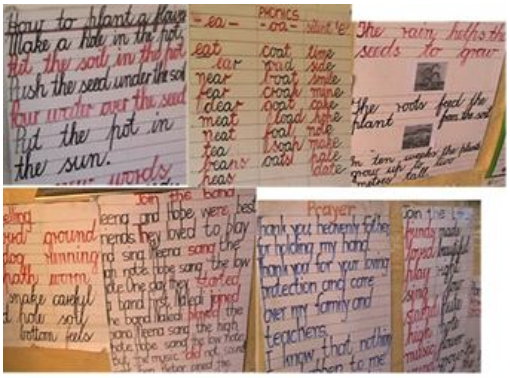
APPENDICES

Appendix 1: Some of the classroom print in classrooms

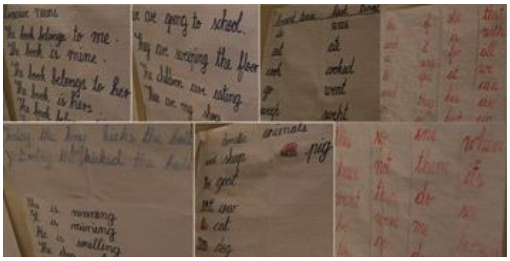
Florence's classroom print



Esther's classroom print



Kate's classroom print



Kate's classroom print

Henrietta's classroom print