# REPLY TO REVIEWERS: THE ROLE OF THE SPEECH-LANGUAGE THERAPIST IN SUPPORTING NUMERACY

Date: 12 July 2012

Dear Editor and Reviewers

Thank you for the review of this paper. I appreciate the feedback as it guided me in the revision thereof. I trust that all the comments have been addressed. I am concerned about the number of references remaining, but find it difficult to delete any more. I have made an attempt to delete the older references, but those remaining are considered as important to this article.

I look forward to hearing from you.

Kind regards

Anna-Marie Wium

1. **Reply to comments made by Reviewer A:**

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| **Review of:** | **Reviewer A’s comments** | **Authors’ reply** |
| Title, abstract & keywords | I was happy with the title, abstract and keywords | No need for reply |
| Introduction and literature review | Yes, a clear review of literature is provided   * On p. 3 the author has the heading: **Role of language in numeracy** but such role is not explained to a point where readers would have a clear picture of what that role is. | * Role of language in numeracy has been addressed in Section 1.4 (Language, numeracy and mathematics – p5 - 3nd paragraph). |
| * On p. 3 last line, what CPD stands for is not explained. The same with NCS on p. 6. | * CPD explained (now on P2) – continued professional development * NCS explained as National Curriculum Statement on p2 (last paragraph) |
| * In a number of instances in the paper there is a message: **Error! Reference source not found** (see pp. 3, 4, 5, 6, and 7). This could be as a result of my printing the paper, I am not sure. | * This Error message could have been the result of tables/figures that were linked and then moved to the back of the document. These ‘error’ messages are no longer present in the document |
| * Names of individuals are provided on p. 5. I think the author should indicate that they consented to this otherwise it may not be appropriate to have the names included in the paper. | * Individual’s names mentioned in personal communication have been removed – |
| * On p. 2 the author indicates where **Table 1** should be, which is fine. There is no need for another on p. 9. | Corrected – not present anymore |
| Methodology | `A number of issues are not explained in the methodology section (see my separate review)   * The second bullet on p. 10 indicates, “*To determine the value of the support provided to both the participants and the learners.”* How the value of the support will be measured should then be explained. | Research objectives are now stated in the introduction. Mention is made that the value of the continued professional development (CPD) programme was reported on by the participants, but conclusive inferences were made by the researchers by reflecting on the entire process of support provided (p14 –last par). |
| While it is fine to give the sample size, it would add value to indicate how the sample was selected too (pp. 12). While there is a description from cited authors (e.g., [McMillan & Schumacher, 2006](#_ENREF_24)), how the schools were selected for instance is not indicate. | This matter has been addressed. Both convenience sampling was used in the selection of the schools that was assigned by the GDE, and stratified sampling was used to select the participants – refer to P 13 in last par - |
| ``The sentence, below the heading: **Data collection methods** (pp. 12 – 13) should be revised. The next sentence refers to “... the research questions ...” there is no previous mention of these in the paper.   * it appears this reference relates to both the group and the interviews conducted with the group * On p. 15 the author wrote: “Th e coding of the transcripts was confirmed by inter-rater agreement of 80%. The focus groups were conducted in both contexts, which contributed to data saturation. An adapted version of member-checking was done ...” All this information is meaningless without explaining what it means. It would be better to indicate what was done for instance in order to reach the inter-rater agreement of 80%. * On p. 15 the author also wrote: “Credibility was increased by using thick descriptions and obtaining rich data within the context.” I do not know what this statement means? * On p. 22 the Revised National ... reference should be preceded by: Department of Education (2002). * On p. 22 the Onwuegbuzie & Collins reference does not seem to be complete. * On p. 22 this author is referred to as Pluddermann while on p. 24 there is Pliiddemann.   **General comments**  In some instances the author uses long sentences which unfortunately distort what she/he may be saying. For example: “The researcher made diary entries whenever the programme took a specific turn, or after a specific event took place and the researcher felt the need to reflect on specific issues” p. 14  I found the entire data collection process was not properly explained. For instance, the author wrote: “The participants completed the questionnaires prior to and directly after training. All completed questionnaires were collected by hand.” While there may be nothing wrong with the statement, it somehow just appears without context whatsoever.  I thought the author wrote this paper from a point of view of her/his understanding of most of the issues. In doing this, important information that would be useful to readers is then not presented. Example: I assume the author held workshops however, these are not clearly explained, so that readers know exactly what was done in these. I feel this is important because the study is about [I presume] the author’s role in supporting numeracy (from the Title of paper). If you read the excerpt below, I am sure my contention will be clear:  Focus groups (using a focus group guide) were used to determine how the participants experienced the support provided, as well as the implementation of strategies in the classroom at the end of a three-week implementation period. The focus group schedule/guide was designed to put the participants at ease and to elicit spontaneous discussion and the required responses on particular issues ([Krueger, 1998](#_ENREF_18)). The content and construct validity of these schedules were increased by having the questions reviewed by two experts in the field prior to use.  (p. 13)  In the paper the author provides her/his impressions as recorded in the journal – which is good. I feel though that it would have been better to include some of the participants’ views. In doing that, the internal and external validity (credibility) of the study would have been enhanced. In fact on p. 21 the opposite is the case - my question then is what the author’s journal entry was this time?  **Overall impression**  I think this paper raises good issues. Written differently it would add real value to the body of knowledge the author is focusing on. I would recommend therefore that the editor requests the author to re-look at the issues I have raised. | Revision of Section 2.2 – the phrase ‘research objectives’ replace the phrase ‘research questions’ (p14). This section has been revised and merged data collection methods with instruments.  Extensive editing was done to clarify and simplify this section.  References were corrected in Endnote |
| In describing the data collection instruments - it would have been better for instance to give an example or two of what was asked in the open--ended questionnaire. |  |
| The author refers to ‘focus groups’ on p. 13. To me it appears this reference relates to both the group and the interviews conducted with the group. | P14- 4th par. One focus group was conducted in each of the two contexts. The plural form has been replaced by singular form (“A focus group was conducted in each of the two contexts…”). |
| * On p. 15 the author wrote: “The coding of the transcripts was confirmed by inter-rater agreement of 80%. The focus groups were conducted in both contexts, which contributed to data saturation. An adapted version of member-checking was done ...” All this information is meaningless without explaining what it means. It would be better to indicate what was done for instance in order to reach the inter-rater agreement of 80%. * On p. 15 the author also wrote: “Credibility was increased by using thick descriptions and obtaining rich data within the context.” I do not know what this statement means? | * Revision of statement: (p 16) – see revised section: “ * “Credibility was determined by randomly selecting 10% of the primary documents in the larger study for coding by an external rater. A comparison to those coded by the researcher revealed that the two raters concurred in 80% of the codes assigned to the text. * Phrase deleted – see explanation in previous bullet. |
| Results and discussion and conclusion | These were handled fairly well. I feel though those limitations of the study could also have been included. | Refer to section 3.3 (p 25) – limitations and challenges included. |
| Format and Style | On p. 22 the Revised National ... reference should be preceded by: Department of Education (2002).    On p. 22 the Onwuegbuzie & Collins reference does not seem to be complete.  On p. 22 this author is referred to as Pluddermann while on p. 24 there is Pliiddemann. | P 28: Revision of references: - “Department of Education. (2002). *Revised National Curriculum Statement for Schools: Grades R-9*.”  Onwuegbuzie, A. J., & Collins, K. M. T. (2006). *Conducting a mixed methods research: a step-by-step guide.* Paper presented at the PhD support programme.  Pliiddemann, P., Mati, X., & Mahlalela-Thusi, B. (1998). Problems and possibilities in multilingual classrooms in the Eastern Cape. In N. Taylor & P. Vinjevold (Eds.), *Getting learning right: report of the president’s education initiative project* (pp. 317-319). Johannesburg: Joint Education Trust/Department of Education. |
| The language used is fairly good. What is missing in this paper are good explanations of different aspects handled by the author | I do not understand what this statement means? Please clarify if not addressed in this revised version of the article. |
| Overall evaluation | I think the author should revise the paper and include the missing information I have identified. It is my view that with the changes effected, readers will find the paper extremely good | Document has been revised extensively. |
|  | **General comments**  In some instances the author uses long sentences which unfortunately distort what she/he may be saying. For example: “The researcher made diary entries whenever the programme took a specific turn, or after a specific event took place and the researcher felt the need to reflect on specific issues” p. 14  I found the entire data collection process was not properly explained. For instance, the author wrote: “The participants completed the questionnaires prior to and directly after training. All completed questionnaires were collected by hand.” While there may be nothing wrong with the statement, it somehow just appears without context whatsoever.  I thought the author wrote this paper from a point of view of her/his understanding of most of the issues. In doing this, important information that would be useful to readers is then not presented.  Example: I assume the author held workshops however, these are not clearly explained, so that readers know exactly what was done in these. I feel this is important because the study is about [I presume] the author’s role in supporting numeracy (from the Title of paper). If you read the excerpt below, I am sure my contention will be clear:  Focus groups (using a focus group guide) were used to determine how the participants experienced the support provided, as well as the implementation of strategies in the classroom at the end of a three-week implementation period. The focus group schedule/guide was designed to put the participants at ease and to elicit spontaneous discussion and the required responses on particular issues ([Krueger, 1998](#_ENREF_18)). The content and construct validity of these schedules were increased by having the questions reviewed by two experts in the field prior to use.  (p. 13)  In the paper the author provides her/his impressions as recorded in the journal – which is good. I feel though that it would have been better to include some of the participants’ views. In doing that, the internal and external validity (credibility) of the study would have been enhanced. In fact on p. 21 the opposite is the case - my question then is what the author’s journal entry was this time? | Extensive revision and editing of document.  Data collection issue has been addressed – editing done.  Workshop procedure and outline presented in Appendix A. (p31)  Reference is made to the three-pronged approach used in supporting the participants (training component re. the workshop, a practical component, and a mentoring component (refer to Wium, Louw & Eloff, 2010). The study has been contextualized in the introduction, which explains this departure point.  Presentation of results is now structured differently, and several new quotes by participants have been included to emphasize points made. The researchers made use of a research diary, which, together with other qualitative data allowed them to make conclusive inferences re the value of the support provided. I am not sure what the reviewer is referring to on p 21 – not clear? Perhaps the question has been addressed in the revised document? |
| Overall impression | I think this paper raises good issues. Written differently it would add real value to the body of knowledge the author is focusing on. I would recommend therefore that the editor requests the author to re-look at the issues I have raised. | Extensive revision of the paper has been done. I believe the issues have been addressed? |

**2. Reply to comments made by Reviewer B**

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|  | **Reviewer B’s comments** | **Authors’ reply** |
| Title, abstract & keywords | -The title is too vague and needs to convey a sense of the CPD programme that was undertaken;  - the abstract is poorly written and needs re-writing, e.g. the first 5 words are too vague and the first sentence uses poor grammar. The abstract needs to state upfront that the study describes a CPD programme that was undertaken to improve teachers use of language for numeracy; and should then detail why this was important in our context; how it was done and what the outcomes were.  -At the moment it is not clear how the programme was evaluated - was it only from the point of view of educators or learners as well? This is unclear in the abstract and throughout. | Title has been revised:  “Continued professional development of teachers to facilitate language used in numeracy and mathematics”  - Abstract was revised  - Mention is made that the value of the continued professional development (CPD) programme was reported on by the participants, but conclusive inferences were made by the researchers by reflecting on the entire process of support provided (p14 –last par). |
| Introduction and literature review | The study needs to be better contextualised against a similar paper (by the same authors?) that appeared in a previous edition of the SAJCD. How is this the same/ different? How does it build on that work? 2. The study must state upfront that it is about a CPD programme  - this is only mentioned on Page 3! Again, contextualise better by describing earlier study on CPD with  educators described in SAJCD.  3. There is a preponderance of older literature here - needs to be updated throughout!  - para 1, pg 1 - need to clarify the skills underpinning mathematics. not neccessarily 'auditory'? And what about reasoning and logic skills? Give a better sense of the complexity of the area.   pg 3; line 2 - delete 'where poverty is prevalent' (redundant) pg 3; line 5 - 'various activities' is too vague; supply examples Setati study sounds relevant - what grades were studied? Pg 6; line 2 - gives examples that lead to miscommunication    Pg 7 - para 1 - 'syntax is very important' - this is too vague; give details of how and supply examples. | 1 & 2: Study has been contextualized in the introduction (Section 1.2 on p.3). Reference is made to previous articles on which this study builds, as well as the comprehensive study.  3. More recent references have been included.  Difference between numeracy and mathematics are highlighted.  “The skills required for mathematics include problem solving (which relies on underlying auditory processing skills and language competencies), reasoning and proof, communication, connections, and representation ([National Council of Teachers of Mathematics, 2000 in Brennan, 2008](#_ENREF_8)).  Editing was done  Setati study has been clarified (gr 4 learners)  The matter of syntax has been addressed in Table 2 (p35) and examples provided.  “It is important that educators use clear syntax in order to allow learners to understand what is required of them in completing the computation. Brennan ([2008](#_ENREF_9)) suggests avoidance of long, dense noun and complex meanings should be unpacked. Numerical comparisons should be practiced (e.g. “write a sentence that gives the same information as the information in the diagramme”).  Educators need to match the sentence structures used for writing mathematical problems (e.g. in word sums) with the learners' levels of comprehension. Accordingly, learners’ written language needs to be practiced in the classroom”. |
| Methodology | Research objective number 2 needs clarification - is it about determining the value of the support provided to both the participants and learners - from the perspective of the educators? (or need to be clear whose perspective is sought?) Did you actually work with learners?  Study Design: Not all qualitative research uses content analyis therefore reword to: In this qualitative research content analysis was used... Delete sentence under participants and go straight into subheadings - selection criteria... | - Objective 2 has been clarified (refer to Section 1.2 (p3).  “The research objectives reported on in this article were firstly to determine how the participants implemented strategies that were learnt in a workshop to facilitate the language for numeracy in their classrooms, and secondly, to determine the value of the CPD programme to the participants. The value of the continued professional development (CPD) programme was reported on by the participants, but conclusive inferences were made by the researchers by reflecting on the entire process of support provided.”  Study design has been omitted (as in line with other articles published – not necessary in journal article)  Revision was done – sentence removed. |
| Results and discussion and conclusion | The results and discussion is poorly organised and I feel does not do justice to the study! There is a subheading on implementation' but does not appear to be one on value. The results should mirror the objectives as stated in the methodology. there appears to be little structure or logic in the way in which findings are presented - can these be presented in a more logical and coherent way? At the moment it feels like a random selection of quotes. It woudl be helpful to have a section that comments on the next steps; implications for theory and / or practice; and specifically reflects on SLPs role in going forward.   Pg 16 - clarify if 'five-bob' is the standard terminology (or not :)) | The results section has been revised. A new structure was implemented, and findings correspond with the research objectives.  Implications for SLPs have been included in Section 4. (p25). The problem with the slang term used (“five-bob”) has been clarified as follows:  “The participants reported that although the learners understood the language used in the classroom (e.g. when money was referred to as “five-bob”), they became confused when standard terminology was used (‘five rand’) on their worksheets, which was mostly in English.” |
| Format and Style | Please check the paper throughout for use of language as there are problems with grammar and concord in several places. E.g. pg 5; last line should be 'grass roots level have to..."; pg 6 line 1 , last para 'serve as a medium' pg 12; under data collection methods: the researcher wanted pg 12 - under sampling methods - the sample was selected by means of a.. pg 13; line 2 - delete full stop before open-ended references must be formatted according to APA standards, e.g. pg 1, last para - list first 6 authors then et al. A comma never preceeds et al, e.g. Torbeyns et al., 2002 (check throughout) Paper says: ' Error! reference source not found' at many places throughout??? Please amend. The length of the paper is fine but there are too many references and many are outdated. References must be reduced and updated to provide a more focused set of relevant literature. | Extensive editing was done. An APA standard (5th edition) was used in Endnote to compile the reference list. Should you feel there remains a problem I will gladly make the necessary changes.  Please note I need to include the page numbers of the following journal articles: (Kathard, Pascoe et al., 2011), (Wium, Louw & Eloff,2011), as well as (Wium & Louw, 2011.) as my journal (SAJCD, Vol 58(2) is in my office (not with me)  Output style (APA5th edition) was adjusted to list first 6 authors and then et al.,  Error messages no longer exist.  The reference list has been ‘pruned’ – but I still have 45 references! Do you want me to reduce more? |
| Overall evaluation |  | None |