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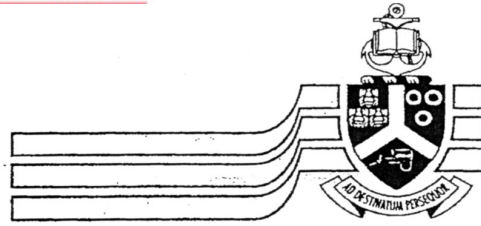


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**APPENDIX A**

**PERMISSION FROM THE RESEARCH PROPOSAL AND ETHICS  
COMMITTEE**



University of Pretoria  
Research Proposal and Ethics Committee  
Faculty of Humanities

**Members:**

**Research Proposal and Ethics Committee**

Dr P Chiroro; Dr L Davis; Prof C Delpont;  
Dr JEH Grobler; Prof KL Harris; Dr JdeC Hinch;  
Prof E Krüger; Prof B Louw (Chair); Prof D Prinsloo;  
Dr E Taljard; Prof J van Eeden; Prof A Wessels;  
Mr FG Wolmarans

9 November 2004

Dear Ms Avenant

**Project:** *Phonological awareness abilities of a group of multi-lingual grade 4-learners, with English as Language of Learning and Teaching (ELoLT)*

**Researcher:** CE Tait  
**Supervisor:** C Avenant  
**Department:** Communication Pathology  
**Reference Number:** 99010918

Thank you for the application you submitted to the Research Proposal and Ethics Committee of the Faculty of Humanities.

The application was approved *conditionally* on 28 October 2004 due to the following:

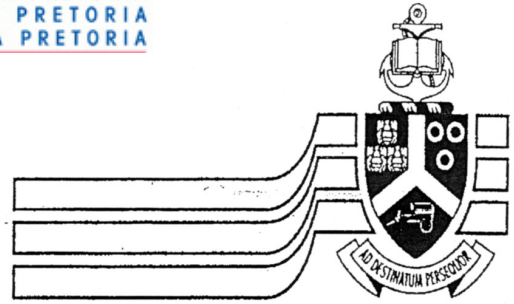
- the parent questionnaire needs to be submitted

Please submit the questionnaire at your earliest possible convenience to me directly to facilitate the administration process.

We wish you success with the project.

Sincerely

**Prof Brenda Louw**  
**Chair: Research Proposal and Ethics Committee**  
**Faculty of Humanities**  
**UNIVERSITY OF PRETORIA**



University of Pretoria

Research Proposal and Ethics Committee  
Faculty of Humanities

**Members:**

**Research Proposal and Ethics Committee**

Dr P Chiroro; Dr L Davis; Prof C Delport;  
Dr JEH Grobler; Prof KL Harris; Dr JdeC Hinch;  
Prof E Krüger; Prof B Louw (Chair); Prof D Prinsloo;  
Dr E Taljard; Prof J van Eeden; Prof A Wessels;  
Mr FG Wolmarans

23 November 2004

Dear Ms Avenant

**Project:** Phonological awareness abilities of a group of multi-lingual grade 4-learners, with English as Language of Learning and Teaching (ELoLT)

**Researcher:** CE Tait

**Supervisor:** C Avenant

**Department:** Communication Pathology

**Reference number:** 99010918

Thank you for your prompt response to the correspondence of the Research Proposal and Ethics Committee, Faculty of Humanities, dated 9 November 2004.

The parental questionnaire was judged to be acceptable.

I have pleasure in informing you that the Research Proposal and Ethics Committee formally approved the above study on 22 November 2004.

The committee requests you to convey this approval to Ms Tait.

We wish you success with the project.

Sincerely

**Prof Brenda Louw**  
**Chair: Research Proposal and Ethics Committee**  
**Faculty of Humanities**  
**UNIVERSITY OF PRETORIA**



**APPENDIX B**

**LETTER OF INFORMED CONSENT TO THE SELECTED  
EDUCATIONAL COLLEGE**



13 August 2004

The Management Body  
XXXX Educational College  
Iris Street  
**Karen Park**  
0082

Dear Mrs. X XXXXX

**Re: Permission to conduct Research for the Communication Pathology Master's Degree**

I am currently registered for M.Communication Pathology degree at the University of Pretoria. In order to complete the degree, I am required to conduct a research project.

The subject of my research is "PHONOLOGICAL AWARENESS ABILITIES OF A GROUP OF MULTI-LINGUAL, GRADE 4-LEARNERS, WITH ENGLISH AS LANGUAGE OF LEARNING AND TEACHING (ELoLT)".

The results of the study will provide insight into the phonological awareness of multi-lingual, multi-cultural learners within the outcome-based educational system. The information obtained will also contribute to the knowledge of how to further the development of literacy skills of multi-lingual learners with English as Language of Learning and Teaching (ELoLT).

The study will involve fifteen Grade 4-learners. These learners will be evaluated by using a test battery including: a hearing screening, language and phonological



awareness tests, and reading and spelling evaluations. Results will then be analysed and conclusions drawn regarding the relationships between these various aspects, to determine the learners' phonological awareness in English.

It is estimated that testing will take approximately two hours per learner. Testing will take place over a two-week period within school hours (the only time available as the learners' main –and in most instances only- mode of transport is by bus). I would like to commence testing early in the fourth term.

Parents of the learners selected will be required to provide permission and to complete a short history information sheet.

Your permission to conduct this study at XXXXX College in school hours is hereby formally requested. Your co-operation in this regard is appreciated.

Yours sincerely

Coralié Tait  
**Researcher**

Tel: 012 420-5152  
Cell: 082 411 0166  
E-mail: [coralie@up.ac.za](mailto:coralie@up.ac.za)

Prof. B. Louw  
**Head: Department Communication Pathology &  
Research Supervisor  
University of Pretoria**

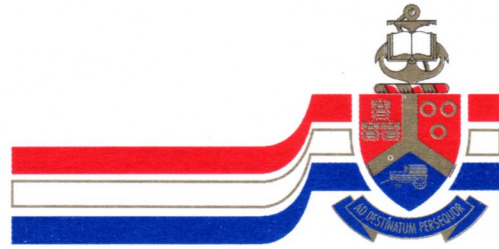
Miss C. Avenant  
**Research Supervisor  
Department Communication Pathology  
University of Pretoria**



## **APPENDIX C**

### **LETTER OF INFORMED CONSENT TO PARENTS**





University of Pretoria

Pretoria 0002 Republic of South Africa Tel 012-420-2357  
/ 012-420-2816 Fax 012-420-3517 <http://www.up.ac.za>

Department of Communication Pathology  
Speech, Voice and Hearing Clinic

19 August 2004

Dear Parent of .....

I am currently a speech-language therapist who is registered for a Masters degree at the Department of Communication Pathology, University of Pretoria. As part of the requirements of the degree, I am conducting a study in the Grade 4-classes of XXXXX Education College. The study involves the literacy skills of some of the children on a short test battery. These tests include aspects such as articulation, language, phonological awareness (alliteration and rhyming), hearing, spelling and reading.

The information obtained in this study will contribute to the knowledge of how to further the development of reading and spelling of multi-lingual learners in Grade 4.

The testing will be conducted on the school premises in a child-friendly manner, with the approval of the headmaster and the teacher. Your child's assent will be obtained as well. The children will not be aware of the reason for the evaluation or the scores obtained, but only that they are helping me with some important research that will help other children of their age. Testing is estimated to take approximately two-hours, spread over a two-week period and will be achieved with minimal disruption of class work. Please note that your child will neither benefit or be penalised by participating in the study.

Your child has been randomly selected from his / her group for this study. I will be very grateful if you will allow him / her to participate. If you are interested in the results of his / her test battery, I will gladly share it with you in confidence. For the purposes of the study, strict confidentiality will be observed throughout the research. A code



number will refer to each participant. The results of the study will be made available to the school, but they will be unaware of which subject is which. The data will be used for the purposes of this study and an academic article thereon, and will be kept for possible further research.

If you agree to allow your child to participate in this study, please take a few minutes to complete the attached questionnaire as completely as possible, and please remember to sign the informed consent form. Please return it in the sealed envelope provided by the class teacher by 1 September 2004.

Thank you for your cooperation in allowing me to test your child. Should you enquire any further information I can be contacted at the following numbers during working hours:

Tel: 012 420-5152 or Cell: 082 411 0166

Yours sincerely

Coralié Tait  
**Researcher**

Prof. B. Louw  
**Head: Department Communication Pathology &  
Research Supervisor  
University of Pretoria**

Miss C. Avenant  
**Research Supervisor  
Department Communication Pathology  
University of Pretoria**



## **APPENDIX D**

### **LETTER OF INFORMED CONSENT TO THE PARTICIPANTS**



University of Pretoria

Pretoria 0002 Republic of South Africa Tel 012-420-2357  
/ 012-420-2816 Fax 012-420-3517 <http://www.up.ac.za>

Department of Communication Pathology  
Speech, Voice and Hearing Clinic

**LETTER OF ASSENT: PARTICIPANTS**

- I understand that the tests will be used to help other learners to read and spell better.
- I understand that if I want to stop the tests I must tell Coralié and I don't have to carry on, and stopping will not upset my teacher or Coralié.
- I understand that my performance on these tests will not change my school marks.
- I understand that a number will be assigned to this information and Coralié will not use my name in the test results.

-----  
My Name



## **APPENDIX E**

### **QUESTIONNAIRE DIRECTED AT PARENTS**



**CONFIDENTIAL QUESTIONNAIRE**

Dear Parent, please complete the questionnaire by filling in the relevant information and placing an X in the appropriate blocks.

1. Name of child: \_\_\_\_\_

2. Gender of child: Male  Female

3. Date of birth: \_\_\_\_\_

4. Home Language: \_\_\_\_\_

5. How long has your child attend XXX College? \_\_\_\_\_

6. Did he / she attend nursery school? Yes  No

If yes, for how long? \_\_\_\_\_

7. Has he / she had middle ear infections? Yes  No

If yes, approximately how many times? \_\_\_\_\_

When was the last ear infection? \_\_\_\_\_

8. Has your child had any therapeutic intervention e.g.

a) Speech Therapy Yes  No

b) Occupational Therapy Yes  No

c) Remedial Therapy Yes  No

d) Other Therapy Yes  No

If you have answered yes to any of the above interventions, please give details of type of therapy and areas treated if possible \_\_\_\_\_

9. Does your child use Ritalin or any other medication for an attention disorder?

Yes  No

10. Does your child enjoy reading? Yes  No  Sometimes

11. Does he / she read for pleasure? Yes  No  Sometimes

12. Is there anything you would like to add regarding your child? \_\_\_\_\_

**I, PARENT OF \_\_\_\_\_ HEREBY GIVE CONSENT TO HIS / HER INCLUSION IN THE RESEARCH STUDY. I UNDERSTAND THAT MY CHILD'S IDENTITY, THE CONTENTS OF THIS QUESTIONNAIRE AND THE RESULTS OF THE STUDY WILL REMAIN CONFIDENTIAL.**

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

*© Thank you for completing the questionnaire!*



## **APPENDIX F**

### **PERMISSION FROM THE SELECTED EDUCATIONAL COLLEGE TO CONDUCT RESEARCH AT THEIR INSTITUTION**



## College of Education



20 September 2004

Mrs. C. E. Tait  
P.O. Box 503  
Florida  
1710

Dear Miss Tait

**Re: Permission to conduct Research for the Communication Pathology Master's Degree at XXXXX Educational College**

We, as The Management Body of XXXXX Educational College **give permission** to conduct this study during school hours in the final term of 2004.

We understand that:

- The study will involve fifteen Grade 4-learners. These learners will be evaluated by using a test battery including: a hearing screening, language and phonological awareness tests, and reading and spelling evaluations.
- The results will then be analyzed and conclusions drawn regarding the relationships between these various aspects, to determine the learners' phonological awareness in English.
- It is estimated that testing will take approximately two hours per learner. Testing will take place over a two-week period within school hours (the only time available as the learners' main mode of transport is by bus).
- Parents of the learners selected will be required to provide permission and to complete a short history information sheet.
- Assent to participate will also be obtained from each learner.

Yours sincerely

**For The Management Body**  
**Head: XXXXX Educational College (Primary Phase)**





## **APPENDIX G**

### **SCORE SHEET FOR PHONOLOGICAL SKILLS**



**Goldman-Fristoe Test of Articulation** (Goldman & Fristoe, 1986)

**Code number allotted to participant:**.....

**Articulation mistakes present:**

**Phonological Processes present:**

- |        |                          |  |
|--------|--------------------------|--|
| Code 1 | <input type="checkbox"/> | (No articulation mistakes present)                         |
| Code 2 | <input type="checkbox"/> | (Articulation mistakes present)                            |
| Code 3 | <input type="checkbox"/> | (Phonological Processes present)                           |
| Code 4 | <input type="checkbox"/> | (Articulation mistakes and Phonological Processes present) |



## **APPENDIX H**

### **INFORMAL READING DECODING AND COMPREHENSION TEST DESIGNED BY THE RESEARCHER**



### **Informal Reading Decoding Test**

Instruction: Please read this short story very carefully. You will need to answer questions later.

#### **Thank you Bapsi!** (Adapted from “Day-by-Day Reader-Grade 4”)

Everyone in Bapsi’s family is cross. The battery for the television is flat. Everyone is cross. No one wants to catch fish or play soccer, or make lunch – and all because of a stupid battery that got tired.

Just then Bapsi has an idea! Maybe he could go and get the battery charged! He puts the old, tired battery into his wire car. So he pulls his wire car and starts the journey to the big village.

At last he got to the shop. “Please can I change this old, tired battery with a new one?” He asks the shopkeeper. The shopkeeper takes the old battery and gives Bapsi a new one.

Bapsi drags the battery in the wire car and runs to his home. His family is very pleased when they see the new, fresh battery. Grandfather connects the television to the battery. Now everyone can watch television!

(148 words)



## **Informal Reading Comprehension Test**

**Instruction:** Please circle the correct answers to the following questions:

### **1) Why is the family cross?**

- a. Because they cannot catch fish.
- b. Because they cannot play soccer.
- c. Because there is no lunch.
- d. Because the battery is flat.
- e. Because the dog bit Bapsi.

### **2) What got tired?**

- a. Bapsi, while walking to the town.
- b. The stupid battery.
- c. Grandfather.
- d. The dog that bit Bapsi.

### **3) Who got the great idea?**

- a. Bapsi
- b. Nelson Mandela
- c. Grandfather
- d. The shopkeeper

### **4) With what did he take the battery to the shop?**

- a. A taxi
- b. A bus
- c. An airplane
- d. His wire car

### **5) What did Bapsi ask the shopkeeper?**

- a. To change the old battery with a new one.
- b. For some sweets.
- c. For milk and bread.
- d. For the way to his house.



**6) Who took the old battery from Bapsi?**

- a. Grandfather
- b. The shopkeeper
- c. Bapsi
- d. The hi-jacker
- e. The police man

**7) What did the shopkeeper give Bapsi?**

- a. Sweets
- b. Milk and bread
- c. A soccer ball
- d. A new battery

**8) What did grandfather do with the new battery?**

- a. Put it in his taxi.
- b. Put it in the kitchen window.
- c. Gave it away.
- d. Connected it to the television.

**9) What could everyone do at the end of the story?**

- a. Watch television.
- b. Go to school.
- c. Go to the shop.
- d. Go to the big village.

**10) Who is the hero of this story?**

- a. The television
- b. Bapsi
- c. The shopkeeper
- d. The dog



## **APPENDIX I**

### **INFORMAL READING DECODING TEST DESIGNED BY THE RESEARCHER**



**Informal Reading Decoding Test**

Code number allotted to participant:.....

<b>The child:</b>	<b>Yes</b>	<b>No</b>
Omits words		
Selects wrong words		
Guesses words		
Repeats certain words		
Ignores punctuation		
Reads each word separately		
Sounds the words		
Sounds, but can't pronounce the words		
Has poor word recognition		
Points with finger		
Doesn't recognize the sounds		
Total <b>Yes</b> (used to determine whether the participant is a ..... reader) ____		

The participant is a ..... reader

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Very Poor</b> 9, 10 or 11	<b>Poor</b> 6, 7 or 8	<b>Average</b> 3, 4 or 5	<b>Good</b> 1 or 2	<b>Excellent</b> 0





## **APPENDIX J**

### **INFORMAL SPELLING TEST DESIGNED BY THE RESEARCHER**



### **Informal Spelling Test**

Instruction: Please write the following words on the page provided.

1. Highway
2. Seashore
3. Tideless
4. Skilful
5. Ventured
6. Supported
7. Voyages
8. Improvements
9. Adventures
10. Introduced



## **APPENDIX K**

**INFORMAL SCORE SHEET OF RAW DATA DESIGNED BY THE  
RESEARCHER**



## Informal Score sheet of Raw Data

Name of Participant:.....

Code number allotted to participant:.....

### 1. Results of Hearing Screening Tests:

**Tympanometry:**

Ear	Pressure (-100 – +50daPa)	Compliance (0,3 – 1,75 ml)	Volume (1,0 – 1,5 cc/ml)	Type of Timpanogram
Right				
Left				

**Oaudiometry:**

Ear	500Hz	1 000Hz	2 000Hz	4000Hz
Right				
Left				

Based on the results on the Hearing Screening Tests, may this participant be part of the selected participants? Yes/ No

### 2. Results of Golman-Fristoe Test of Articulation:

Code 1  (No articulation mistakes present)

Code 2  (Articulation mistakes present: .....)

Code 3  (Phonological Processes present .....)

### 3. Results of Spelling test:

Mark out of 10: ...../10



**4. Results of Reading Tests:**

**4.1 Results of Reading Comprehension Test**

Mark out of 10: ...../10

**4.2 Results of Reading Encoding Test**

The participant is a Good.....Average.....Poor reader

**5. Results of the Phonological Awareness Battery:**

PhAb Test	Raw Score	Standardized Score	Profile
Alliteration Test			
Rhyme Test			
Spoonerisms Test			
Non-Word Reading Test			
Naming Speed Test (Pictures)			
Naming Speed Test (Digits)			
Fluency Test (Alliteration)			
Fluency (Rhyme)			



## 6. Results of the Clinical Evaluation of Language

### 6.1 Receptive Language

CELF Test	Participant's Score	Possible Score	Percentage Correct
Processing Word and Sentence Structure		52	
Processing Word Classes		44	
Processing Linguistic Concepts		44	
Processing Relationships and Ambiguities		64	
Processing Oral Directions		50	
Processing Spoken Paragraphs		34	

### 6.2 Expressive Language

CELF Test	Participant's Score	Possible Score	Percentage Correct
Producing Word Series: Item 1 (10 seconds): Item 2 (20 seconds):		7 12	
Producing Word Associations	See Response Analysis	-	-
Producing Model Sentences		60	
Producing Formulated Sentences		96	



## **APPENDIX L**

### **COMPLETE PHONOLOGICAL PROFILES FOR THE PARTICIPANTS WITH PHONOLOGICAL VARIATIONS**

Phonological profiles for the participants with phonological variations

Participant	Elicited sound and abridged phonetic definition	Word Position	Word with test sound/s and phonetic form	Elicited phonetic form
2	<ul style="list-style-type: none"> <li>[ɫ]: Voiceless, midalveolar-bladelingual, lateral fricative</li> </ul>	Initial	rabbit - [ɹæbɪt] ring - [ɹɪŋ] tree - [ɹi:]	[ ɫæbɪt] [ ɫɪŋ] [t ɫi:]
		Final	scissors - [sɪzəz] car - [k <sup>h</sup> ɑ:]	[sɪzə ɫ] [kɑ: ɫ]
3	<ul style="list-style-type: none"> <li>[θ]: Voiceless, interdental-tiplingual, mid-oral fricative</li> <li>[ɫ]: Voiced, interdental-tiplingual, lateral liquid</li> </ul>	Initial (I)	sleeping - [sli:pɪŋ] finger - [fɪŋgə] stove - [stəʊv] scissors - [sɪzəz] (I+M)	[θli:pɪŋ] [θɪŋgəɾ] [θtə:v] [θɪθəz]
		Medial (M)	telephone - [teləfəʊn] matches - [mætʃəs] (M+F)	[teləθəʊn] [mæθtʃəθ]
		Final (F)	christmas - [krɪsməs] house - [haʊs] knife - [naɪf] pencils - [p <sup>h</sup> ensɪtʃs] this - [ðɪs] that - [ðæt <sup>h</sup> ] pajamas - [pədʒɑ:məs]	kɪθməθ] [haʊθ] [naɪθ] [pensɪtθ] [ðɪθ] [ðæθ] [pədʒɑ:məs]
		Initial	lamp - [læmp] plane - [pleɪn] blue - [blu:] flag - [flæ:g] sleeping - [sli:pɪŋ]	[ ɫæmp] [p ɫeɪn] [b ɫu:] [f ɫæ:g] [s ɫi:pɪŋ]
		Medial	telephone - [teləfəʊn] yellow - [jeləʊ]	[ teləθəʊn] [je ɫəʊ]
		Final	wheel - [wi:t] shovel - [ʃʌvəɫ] pencils - [p <sup>h</sup> ensɪtʃs]	[wi: ɫ] [ʃʌvə ɫ] [pensɪ ɫs]



Phonological profiles for the participants with phonological variations - cont.

Participant	Elicited sound and abridged phonetic definition	Word Position	Word with test sound/s and phonetic form	Elicited phonetic form
4	<ul style="list-style-type: none"> <li>[ɫ]: Voiceless, midalveolar-bladelingual, lateral fricative</li> </ul>	Initial	rabbit - [ɹæbɪt] ring - [ɹɪŋ] tree - [tri:]	[ɫæbɪt] [ɫɪŋ] [t ɫi:]
		Final	scissors - [sɪzəz] car - [k <sup>h</sup> ɑ:]	[sɪzə ɫ] [kɑ: ɫ]
	Initial	thumb - [θʌm]	[fʌm]	
	Final	bath - [bɑ:θ]	[bɑ:f]	
	<ul style="list-style-type: none"> <li>[f]: Voiceless, labiodental, mid-oral fricative</li> </ul>			

Phonological profiles for the participants with phonological variations – cont.

Participant	Elicited sound and abridged phonetic definition	Word Position	Word with test sound/s and phonetic form	Elicited phonetic form		
9	<ul style="list-style-type: none"> <li>[θ]: Voiceless, interdental-tiplingual, mid-oral fricative</li> </ul>	Initial (I)	sleeping - [sli:pɪŋ] finger - [fɪŋgə] stove - [stəʊv] scissors - [sɪzəz] (I+M)	[θli:pɪŋ] [θɪŋgəɾ] [θtə:v] [θɪθəz]		
		Medial (M)	telephone - [tɛləfəʊn] matches - [mætʃəs] (M+F)	[tɛləθəʊn] [mæθtʃəθ]		
		Final (F)	christmas - [krɪsməs] house - [haʊs] knife - [naɪf] pencils - [p <sup>h</sup> ensɪs] this - [ðɪs] that - [ðæt <sup>h</sup> ]	krɪθməsθ [haʊθ] [naɪθ] [pensɪtθ] [ðɪθ] [ðætθ]		
			pajamas - [pədʒɑ:məs] telephone - [tɛləfəʊn] stove - [stəʊv]	[pədʒɑ:məs] [tɛləfəʊn] [stə:v]		
			Initial	rabbit - [ræbɪt] carrot - [k <sup>h</sup> ærət <sup>h</sup> ]	[ræbɪ t̚] [k <sup>h</sup> ærət̚ t̚]	
				Final	lamp - [læmp] plane - [pleɪn] blue - [blu:]	[læmp̚] [p̚leɪn] [b̚lu:]
					Initial	flag - [flæ:g] sleeping - [sli:pɪŋ]
			Medial			telephone - [tɛləfəʊn] yellow - [jeləʊ]
		Final		wheel - [wi:t̚] shovel - [ʃʌvət̚] pencils - [p <sup>h</sup> ensɪs]	[wi:t̚] [ʃʌvət̚] [pensɪs]	
	<ul style="list-style-type: none"> <li>[t̚]: Voiceless, interdental-tiplingual, mid-oral stop</li> </ul>	Initial	rabbit - [ræbɪt̚] carrot - [k <sup>h</sup> ærət̚ <sup>h</sup> ]	[ræbɪ t̚] [k <sup>h</sup> ærət̚ t̚]		
			Final	lamp - [læmp̚] plane - [pleɪn̚] blue - [blu:]	[læmp̚] [p̚leɪn̚] [b̚lu:]	
				Initial	flag - [flæ:g] sleeping - [sli:pɪŋ]	[f̚læ:g] [s̚li:pɪŋ]
		Medial			telephone - [tɛləfəʊn̚] yellow - [jeləʊ]	[tɛləfəʊn̚] [je̚ləʊ]
			Final	wheel - [wi:t̚] shovel - [ʃʌvət̚] pencils - [p <sup>h</sup> ensɪs]	[wi:t̚] [ʃʌvət̚] [pensɪs]	

Phonological profiles for the participants with phonological variations – cont.

Participant	Elicited sound and abridged phonetic definition	Word Position	Word with test sound/s and phonetic form	Elicited phonetic form
10	<ul style="list-style-type: none"> <li>[ɹ]: Voiced, interdental-tiplingual, lateral liquid</li> <li>[ʃ]: Voiceless, midalveolar-bladelingual, lateral fricative</li> </ul>	<p>Initial</p> <p>Medial</p> <p>Final</p> <p>Initial</p> <p>Final</p>	<p>lamp - [læmp]</p> <p>plane - [pleɪn]</p> <p>blue - [blu:]</p> <p>flag - [flæ:g]</p> <p>sleeping - [sli:pɪŋ]</p> <p>telephone - [teləfəʊn]</p> <p>yellow - [jeləʊ]</p> <p>wheel - [wi:l]</p> <p>shovel - [ʃʌvəl]</p> <p>pencils - [p<sup>h</sup>ensɪs]</p> <p>rabbit - [ræbɪt]</p> <p>ring - [rɪŋ]</p> <p>tree – [tri:]</p> <p>scissors - [sɪzəz]</p> <p>car - [k<sup>h</sup>ɑ:]</p>	<p>[læmp]</p> <p>[pleɪn]</p> <p>[blu:]</p> <p>[flæ:g]</p> <p>[sli:pɪŋ]</p> <p>[teləfəʊn]</p> <p>[jeləʊ]</p> <p>[wi:l]</p> <p>[ʃʌvəl]</p> <p>[p<sup>h</sup>ensɪs]</p> <p>[ræbɪt]</p> <p>[rɪŋ]</p> <p>[tri:]</p> <p>[sɪzə ʃ]</p> <p>[kɑ: ʃ]</p>

Phonological profiles for the participants with phonological variations – cont.

Participant	Elicited sound and abridged phonetic definition	Word Position	Word with test sound/s and phonetic form	Elicited phonetic form
11	<ul style="list-style-type: none"> <li>[ɹ]: Voiced, interdental-tiplingual, lateral liquid</li> <li>[ʒ]: Voiced midalveolar-bladelingual, lateral fricative</li> <li>[tʃ]: Voiceless, frontpalatal-frontlingual, mid-oral affricate</li> </ul>	<p>Initial</p> <p>Medial</p> <p>Final</p> <p>Medial</p> <p>Final</p> <p>Medial</p> <p>Final</p>	<p>lamp - [læmp]</p> <p>plane - [pleɪn]</p> <p>blue - [blu:]</p> <p>flag - [flæ:g]</p> <p>sleeping - [sli:pɪŋ]</p> <p>telephone - [teləfəʊn]</p> <p>yellow - [jeləʊ]</p> <p>wheel - [wi:l]</p> <p>shovel - [ʃʌvəl]</p> <p>pencils - [p<sup>h</sup>ensɪs]</p> <p>brush - [brʌʃ]</p> <p>drum - [drʌm]</p> <p>carrot - [k<sup>h</sup>æɹət<sup>h</sup>]</p> <p>orange - [ɒrɪŋʒ]</p> <p>fishing - [fɪʃɪŋ]</p> <p>brush - [brʌʃ]</p>	<p>[læmp]</p> <p>[pleɪn]</p> <p>[blu:]</p> <p>[flæ:g]</p> <p>[sli:pɪŋ]</p> <p>[teləfəʊn]</p> <p>[jeləʊ]</p> <p>[wi:l]</p> <p>[ʃʌvəl]</p> <p>[p<sup>h</sup>ensɪs]</p> <p>[brʌʃ]</p> <p>[drʌm]</p> <p>[k<sup>h</sup>æʒət<sup>h</sup>]</p> <p>[ɒʒɪŋʒ]</p> <p>[fɪʃɪŋ]</p> <p>[brʌʃ]</p>



Phonological profiles for the participants with phonological variations – cont.

Participant	Elicited sound and abridged phonetic definition	Word Position	Word with test sound/s and phonetic form	Elicited phonetic form
12	<ul style="list-style-type: none"> <li>[ɬ]: Voiceless, midalveolar-bladelingual, lateral fricative</li> <li>[ɮ]: Voiced midalveolar-bladelingual, lateral fricative</li> </ul>	<p>Final</p> <p>Medial</p> <p>Final</p>	<p>scissors - [sɪzəz] car - [k<sup>h</sup>ɑ:]</p> <p>brush - [bɾʌʃ] drum - [dɾʌm]</p> <p>carrot - [k<sup>h</sup>æɾət<sup>h</sup>] orange - [ɒɾɪŋz]</p>	<p>[sɪzə ɬ] [kɑ: ɬ]</p> <p>[bɾʌʃ] [dɾʌm]</p> <p>[k<sup>h</sup>æɾət<sup>h</sup>] [ɒɾɪŋz]</p>



## **APPENDIX M**

### **READING DECODING LEVELS OF PARTICIPANTS**



**Table 2: Reading decoding level of each participant ( $n=15$ ).**

Participant	Decoding	
	Performance	Number of decoding errors
1.	Average	4
2.	Very poor	10
3.	Average	5
4.	Average	3
5.	Good	2
6.	Good	2
7.	Good	2
8.	Average	3
9.	Average	4
10.	Average	5
11.	Poor	6
12.	Poor	6
13.	Good	2
14.	Average	4
15.	Good	2



## **APPENDIX N**

### **ERRORS MADE BY THE PARTICIPANTS IN THE SPELLING TEST**



**Table 3: Errors made by the participants in the spelling test.**

Participant	Target word/s	“Errors”
1.	Supported	suported
2.	supported, adventures, introduced, voyages, improvements	suppontend, adventureds, in, voyeges, im
3.	Skilful supported introduced ventured adventures	skulful, sepoted, intiduted, venched, adveches
4.	-	-
5.	Introduced	inroduced
6.	Voyages	voyeges
7.	-	-
8.	Introduced	introduecd
9.	Introduced	introduct
10.	Highway tideless ventured supported voyages adventures introduced	highwy, tidelese, ventude, sappoted, vayeges, adventsas, idradust
11.	seashore voyages tideless adventures introduced	seeshore, veggas, teddeless, adventured, intredes
12.	introduced skilful ventured voyages improvements adventures	introguse, skulful, venched, vogyse, improufmenst, adveacurs



Participant	Target word/s	"Errors"
13.	Highway tideless seashore supported voyages improvements introduced	hogway, tiddles, seashore, saported, voyagas, improvements, inroduced
14.	seashore improvements	seashor, improvements
15.	-	-



## **APPENDIX O**

### **CORRELATIONS OF THE RESULTS OF THE VARIOUS TESTS USED**

**Table 4: Correlations drawn between articulation and PhAB-subtests, by using the Mann-Whitney Test ( $n=15$ ).**

PHAB-subtests	Correlated with articulation
Alliteration	0,4638
Rhyme	0,2006
Spoonerisms	0,0551
Non-word reading	0,1447
Picture naming	0,1348
Digit Naming	0,1176
Alliteration Fluency	0,1314
Rhyme Fluency	0,1276
Semantic Fluency	0,6398
PHAB	0,0279

**Table 5: Correlations drawn between Receptive Language and the PHAB-subtests by using Spearman Correlation Coefficients ( $n=15$ ).**

PHAB-subtests	Correlated with Receptive Language
Alliteration	0,4258
Rhyme	0,5872
Spoonerisms	0,0119
Non-word reading	0,4433
Picture naming	0,1045
Digit Naming	0,1103
Alliteration Fluency	0,4038
Rhyme Fluency	0,2508
Semantic Fluency	0,2779
PHAB	0,0284

**Table 6: Correlations drawn between Expressive Language and the PhAB-subtests by using Spearman Correlation Coefficients ( $n=15$ ).**

PHAB-subtests	Correlated with Expressive Language
Alliteration	0,4926
Rhyme	0,5391
Spoonerisms	0,0314
Non-word reading	0,2070
Picture naming	0,0219
Digit Naming	0,0205
Alliteration Fluency	0,0131
Rhyme Fluency	0,2032
Semantic Fluency	0,3223
PHAB	0,0103

**Table 7: Correlations drawn between reading encoding and PhAB-subtests by using the Mann-Whitney Rank sum Test ( $n=15$ ).**

PHAB-subtests	Correlated with Reading Encoding
Alliteration	0,1705
Rhyme	0,2174
Spoonerisms	0,0204
Non-word reading	0,0495
Picture naming	0,3706
Digit Naming	0,0509
Alliteration Fluency	0,3110
Rhyme Fluency	0,1951
Semantic Fluency	0,8268
PHAB	0,0304

**Table 8: Correlations drawn between Reading Comprehension and the PhAB-subtests by using Spearman Correlation Coefficients ( $n=15$ ).**

PHAB-subtests	Correlated with Reading Comprehension
Alliteration	0,9092
Rhyme	0,8023
Spoonerisms	0,5400
Non-word reading	0,8443
Picture naming	0,8785
Digit Naming	0,4297
Alliteration Fluency	0,4141
Rhyme Fluency	0,5518
Semantic Fluency	0,9913
PHAB	0,9598

**Table 9: Correlations drawn between Spelling and the PhAB-subtests by using Spearman Correlation Coefficients ( $n=15$ ).**

PHAB-subtests	Correlated with Spelling
Alliteration	0,516
Rhyme	0,0803
Spoonerisms	0,0051
Non-word reading	0,6939
Picture naming	0,1566
Digit Naming	0,0542
Alliteration Fluency	0,9456
Rhyme Fluency	0,0157
Semantic Fluency	0,7827
PHAB	0,0358