

Learning Gains through Play – English Acquisition

The aim of this study has been to explore learning through the use of play in twelve schools in two provinces in South Africa using innovative technologies. The D G Murray Trust is a benefactor of educational innovations, which has funded SchoolNet South Africa to provide professional development to teachers on the effective use of the Xbox Kinect and a bank of Intel tablets in Grades R and 1.

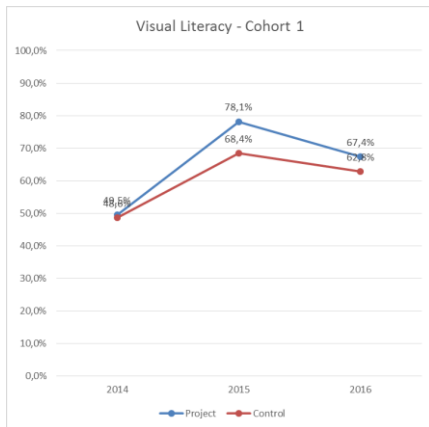
Language is a contentious issue in South African schools. In only one of the Learning Gains through Play (LGP) projects schools is English the language of learning and teaching (LoLT). That school has not been included in the oral English Acquisition testing even though none of the learners uses English as a first language at home. Seven of the ten project schools use mother tongue for instruction through Foundation Phase and then switch to English in Grade 4. We anticipated that the acquisition of English through the use of the tablet apps and Xbox games could meaningfully support this language transition in Grade 4.

Intel tablets loaded with carefully selected apps have been integrated in learning activities to stimulate and enhance visual literacy skills. These include visual recognition, discrimination and interpretation such as sequencing, and visual memory, fine-motor skills including 'new' skills such as pinching, dragging, stretching and pinpointing to improve traditional skills such as drawing and handwriting and early number sense and numeracy skills using specific target apps.

Xbox Kinect game consoles use data-projectors and TV screens to engage learning through play and provide further opportunities to develop, practice and consolidate these important 21st Century skills along with gross-motor skills of locomotor and non-locomotor movement and object-control skills. As the apps and games use the medium of English, there is the added benefit that learners will acquire oral English skills, so vital for the transition from Foundation Phase to Intermediate Phase. The attitudes of motivation to learn, enjoyment of learning and confidence in learning are sought through the focus of the project on the use of play.

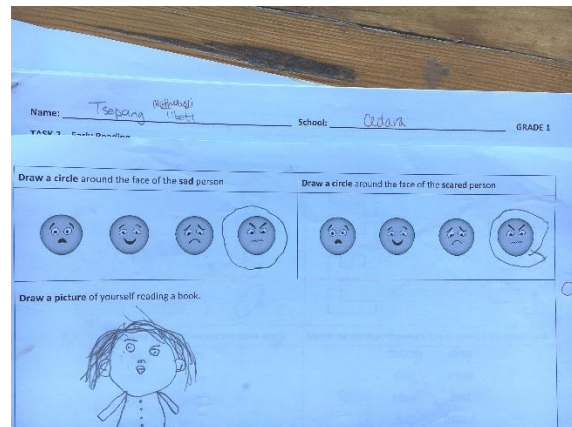
The heart of the study is how the development of these literacies is enhanced through play. Considerable emphasis was placed on teacher professional development as well as on change leadership of senior management teams in each school. Teachers have been excited to discover that the technology and games have been able to assist them to achieve the outcomes listed in the national curriculum. While teachers use these apps and games to identify teachable moments and stealth learning opportunities that target specific literacies, they will be recording and rating the effectiveness of each app and game, resulting in an anthology that will be of value to all Foundation Phase educators who integrate technology in their teaching.

The most valuable data has come from those learners who were Grade R learners in 2014, in Grade 1 in 2015 and who were tested in Grade 2 in 2016. A noticeable trend in the findings has been that more dramatic gains were made from Grade R to Grade 1 rather than from Grade 1 to Grade 2. This was particularly true of the Visual Literacy findings as well as of the Emotional Literacy findings:



Project group:
2014 = 49,5%
2015 = 78,1%
2016 = 67,4%

Control group:
2014 = 48,6%
2015 = 68,4%
2016 = 62,8%



While gains have been made overall in a range of literacies, the most substantial gains were made in the acquisition of English. The testing was conducted at the beginning of the project and at the same time of the academic year during the two subsequent years.

Name: _____ School: _____ GRADE __

TASK 3 – Listening & Speaking

Evaluator-facilitated Task Guide and Score-card

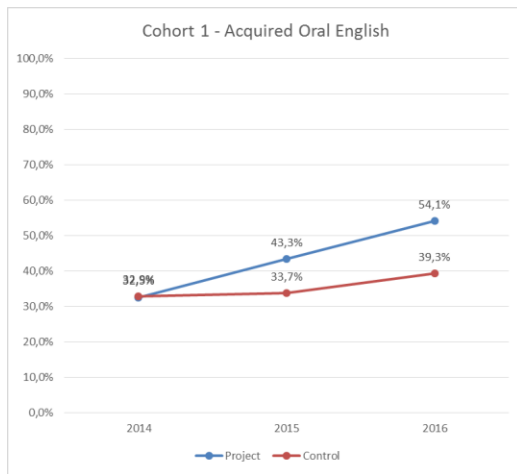
1. Introduction:		
Hello, I am _____. (Shake hands) What is your name? Response _____		
How old are you _____? (Prompt: how many years?) Response _____		
I'm going to talk in English. I would like you to talk in English too.		
What languages do you speak and understand? (Prompt: me English, you?) Response _____		
LISTENING skills – Engagement & Attentiveness	SPEAKING skills – Vocabulary & Language Use	
0 = no engagement	0 = no verbal response or single name only	
1 = sporadic engagement	1 = monosyllabic/simple verbal responses to more	
2 = simple engagement	2 = simple phrase responses (e.g. 'I'm...'; 'x years old')	
3 = full engagement (eye-contact, focus, connected)	3 = sentence responses/ volunteers more verbally	
2. Identification Card Questions:		
What is this a picture of?	What is this a picture of?	What is this a picture of?
Response? _____	Response? _____	Response? _____
SPEAKING skills – Vocabulary & Pronunciation		
0 = no responses verbally		
1 = most responses are in correct/ not recognisable/ not in English/ OR only 1 correct in English		
2 = most responses are recognisable in English but monosyllabic/ OR 2 correct in English		
3 = all responses correct in clear English - may even volunteer more verbally/ OR 3 correct in English		

An Oral English scripted interview test has been conducted one-on-one with each learner annually. All verbal responses and nonverbal actions are recorded on task scripts and scored according to rubrics. Results inform on listening and speaking skills. The interview tested the following skills: listening engagement, introductory speaking, English vocabulary, describing actions, and following instructions.

We adopted an additional measure to provide identification of the Oral Language Stage¹. These stages are: 1. The Silent stage; 2. The Early Production Stage; 3. The Speech Emergence Stage;

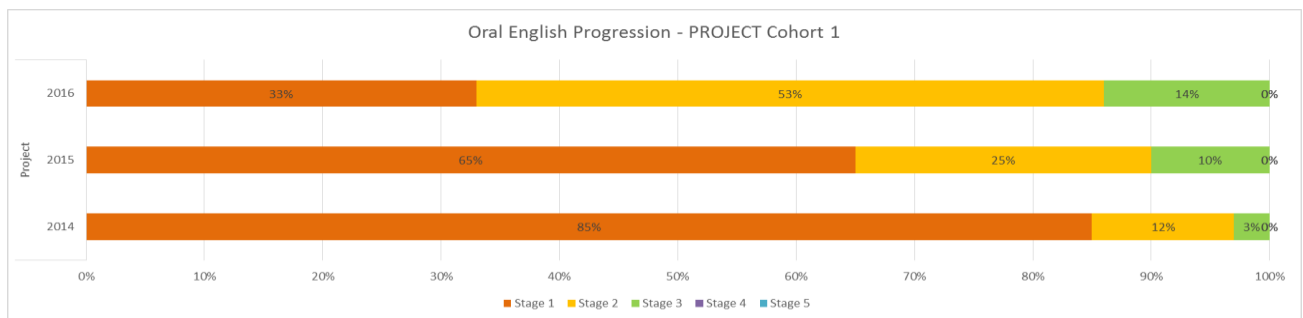
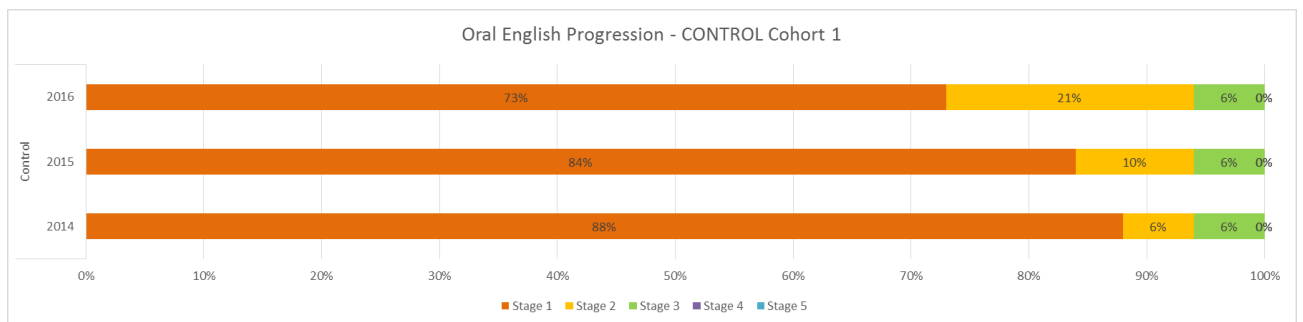
¹ Krashen, S, Second Language Acquisition and Second Language Learning. Prentice-Hall International, 1988 <http://sdkrashen.com/>

4. The Intermediate Language Proficiency Stage and 5. The Advanced Language Proficiency Stage – Advanced Language Fluency.



Control group improved by 0, 8% from Grade R to Grade 1
 Control group improved by 5, 6% from Grade 1 to Grade 2
 → Learning gain of 6, 4% over 2 years

Project group improved by 10, 8% from Grade R to Grade 1
 Project group improved by 10, 8% from Grade 1 to Grade 2
 → Learning gain of 21, 6% over 2 years



From careful study of the graphs above it can be seen that the number of children on the stage 1 silent stage reduced considerably in project schools by 2016 compared to the control schools. 67% of the project learners were able to escape the silent phase through the technology enhancing instruction compared to only 27% who were able to make this transition relying only on what was formally taught in additional language. OR more than two thirds of project learners escaped the silent stage while not even one third of the control learners could make this vital step. It was also evident that great gains were made in moving children from the non-verbal stage of English through the early production to emergent speech stages. Despite none of the learners reaching the intermediate or advanced stages, a distinct difference between the performance of learners in the control and the project schools has

emerged. At a time when national research is indicating that 58% of Grade 4 learners are not learning to read in any language, this data provides clear evidence that the effective use of learning technologies in Foundation Phase classrooms has lifted the language levels of learners to become functional in the language of learning and teaching before they enter Grade 4.

In conclusion, the main finding was that Oral English skills can be improved simply by engaging with the apps and games which use English as the medium of communication.

