

Country Report (Zambia) (Children)

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1. Educational Context in Zambia

- Medium of Instruction : English
(+ local language)
- Promotion System

Before Education Reform			
Primary School		Secondary School	
7 years		2 years	3 years
After Education Reform			
Basic School			High School
4 years	3 years	2 years	3 years

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Curriculum (G1~4)

Grade	Contents to teach
1	Sets, Number, Addition, Subtraction, Measurement, Arithmetic
2	Sets, Number, Addition, Subtraction, Multiplication, Division, Measurement, Arithmetic, Pattern
3	Sets, Number, Addition, Subtraction, Multiplication, Division, Measurement, Arithmetic, Pattern, Fractions
4	Sets, Number, Addition, Subtraction, Multiplication, Division, Measurement, Arithmetic, Pattern, Fractions

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Curriculum (G5~7)

Grade	Contents to teach
5	Sets, Number and Notation, Addition, Subtraction, Multiplication, Division, Measurement, Arithmetic, Pattern, Fractions, Decimal, Divisor, Figure and Graph
6	Sets, Number and Notation, Addition, Subtraction, Multiplication, Division, Measurement and Drawing Figure, Arithmetic and Diagram, Pattern, Fractions, Decimal, Divisor, Ratio, Average, Percentage, Equality
7	Sets, Number and Notation, Addition, Subtraction, Multiplication, Division, Measurement, Arithmetic, Fractions, Decimal, Divisor, Ratio, Average, Percentage, Equality, Graph, Base, Angle

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2. Field research and Findings 2-1 First-year Survey

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About Sample

Sample schools were selected as averaged-school considered the result of national exam and social and economical strata.

	Boys	Girls	Total
Urban	29	21	50
Rural	16	17	33
Total	45	38	83

The age distribution is 9 ~15

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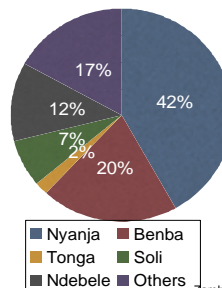
How often do pupils speak English or local language out side of school?

		Always	almost	sometimes	never
English	urban	0%	0%	76%	24%
	rural	3%	9.5%	50%	37.5%
Local language (Nyanja)	urban	44%	34%	20%	2%
	rural	40.5%	12.5%	47%	0%

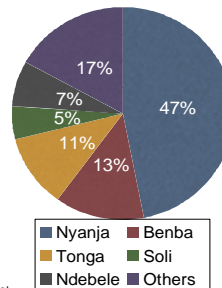
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Tribes in one class (in case of rural school)

Fathers' tribe



Mothers' tribe



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2-2 Second-year Survey

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Sample Size

	boys	girls	total
urban	34	35	69
rural A	19	20	39
rural B	37	12	49
total	90	67	157

The age distribution is 8 ~16

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Result of Fraction Test

Test was made in English.
One class, it was done with explanation in local language, and the other class, was without any explanation

	Average	boys	Girls	With explanation	Without explanation
Urban	11.2%	12.1%	10.4%	15.6%	8.2%
Rural	6.9%	5.8%	9.0%	8.7%	2.7%
Average	8.8%	8.2%	9.7%	12.3%	6.2%

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Q1. (1) $1/5 + 2/5 =$

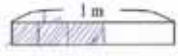
Answers	No. of Pupils
3/5	23
3/10	46
13	15
310	4
others	65
Blank	4

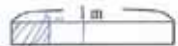
Q6. (1) When you add $2/5$ l of water to $1/5$ l of water in a container, how much water is in the container?

Answers	No. of Pupils
3/5	2
3/10	27
13	12
310	0
others	69
Blank	47

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Examples of Typical Mistakes

(1) $\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$ (1) $\frac{3}{4} m$ 

(2) $\frac{5}{7} - \frac{2}{7} = \frac{3}{7}$ (2) $\frac{1}{3} m$ 

(1) When you add $\frac{2}{5}$ t of water to $\frac{1}{5}$ t of water in a container, how much water is in the container?

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Result of Interview

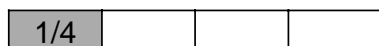
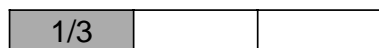
No.	No. of Pupils who failed at each level									No. of Pupils who answered correctly		
	(a) Reading			(b) Interpretation			(c) Process					
	High performer	Low performer	Total	H	L	T	H	L	T	H	L	T
	N=25	N=25	N=50									
Q5 (3)	19	25	44	4	0	4	2	0	2	0(2)	0	0(2)
Q6 (1)	18	25	43	4	0	4	0	0	0	3	0	3
Q8	19	25	44	6	0	6	0	0	0	0(2)	0	0(2)

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Which is bigger, $\frac{1}{3}$ or $\frac{1}{4}$?

$\frac{1}{3} < \frac{1}{4}$ because $3 < 4$

No Correspondence between them



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Typical Mistakes

Q6(1) $\frac{2}{5} + \frac{1}{5}$

$\frac{2}{5} + \frac{1}{5} = \frac{3}{10}$ (TB1)

$2 + 5 + 1 + 5 = 13$ ($2 + 5 + 1 + 5 = 13$)

Q2 Express the answers in a fraction

$3 \div 7 = 2$ or $2 r 1$
(the quotient of $7 \div 3$)

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3. Discussion on major Findings

About language problem

- Pupils do not use English outside of school
- Number of local language in a class is so many

There are no common language which every pupils can understand

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From Fraction Test

- A lot of pupils have not acquired basic operations of Fraction
- The percentage of correct answer of sentence question was quite low, due to lack of reading skill
- Many pupils just added numbers which appeared on questions because of not understanding the meaning of questions
- Pupils were not familiar with this kind of test so that some of them did not understand how to write answers

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TB1 スクリプトをスキャナーしてはどうか？
takuba, 2007/01/04

From interview

- Most pupils failed at reading level
- There were a few pupils who read English fluently but did not understand what it meant
- A lot of pupils did not write mathematical symbols such as =, +, -

Pupils were not ready to start to learn Fraction

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