

# Technical Test Battery (TTB2)

## Reliability: South Africans, Setswana Speakers, Updated 2016

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### Sample Composition

The sample consisted of respondents who had completed any of the subtests of the Technical Test Battery (TTB2) battery in the period up to June 2015, via GeneSys for Windows. Since not all the respondents completed all the subtests, biographical information is reported separately for the three tests.

### Mechanical Reasoning Test: Biographical Composition

Category	Frequency table: Sex			
	Count	Cumulative Count	Percent	Cumulative Percent
M	71	71	44,93671	44,9367
F	87	158	55,06329	100,0000
Missing	0	158	0,00000	100,0000

Category	Frequency table: Education			
	Count	Cumulative Count	Percent	Cumulative Percent
Tertiary	13	13	8,22785	8,2278
< Matric	109	122	68,98734	77,2152
Grade 12	19	141	12,02532	89,2405
Missing	17	158	10,75949	100,0000

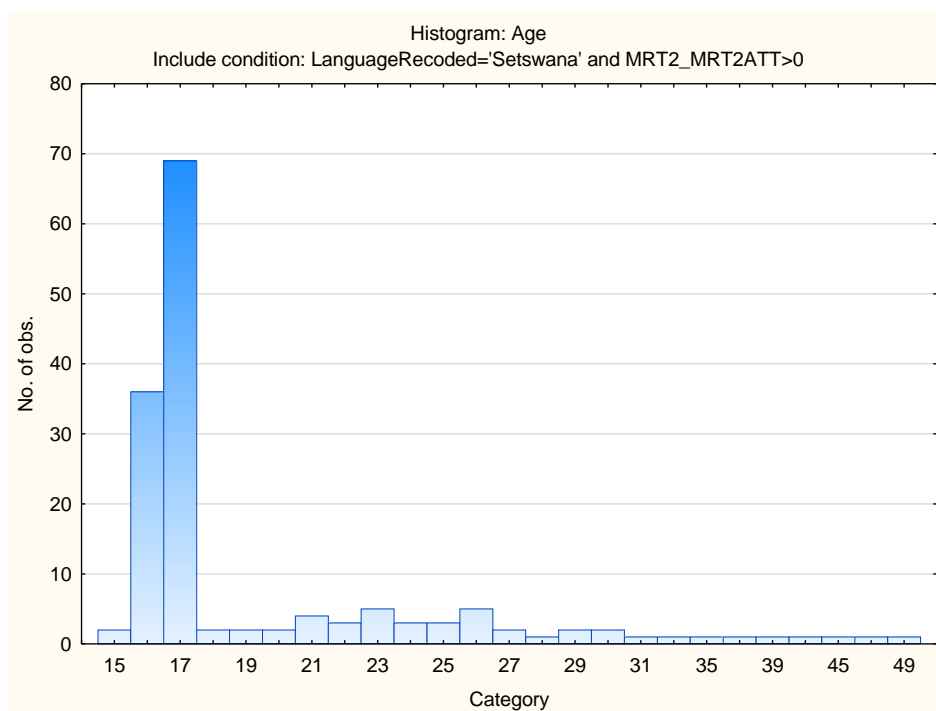
It should be noted that the majority of respondents had not completed matric.

Category	Frequency table: Language			
	Count	Cumulative Count	Percent	Cumulative Percent
Setswana	158	158	100,0000	100,0000
Missing	0	158	0,0000	100,0000

Category	Frequency table: Language Group			
	Count	Cumulative Count	Percent	Cumulative Percent
Indigenous	158	158	100,0000	100,0000
Missing	0	158	0,0000	100,0000

Category	Frequency table: Race			
	Count	Cumulative Count	Percent	Cumulative Percent
African	158	158	100,0000	100,0000
Missing	0	158	0,0000	100,0000

Variable	Descriptive Statistics: Age					
	Mean	Std.Dev	Minimum	Maximum	N	No.cases Missing
Age	19,69737	6,316214	15,00000	49,00000	152	6



### Spatial Reasoning Test: Biographical Composition

Category	Frequency table: Sex			
	Count	Cumulative Count	Percent	Cumulative Percent
M	35	35	81,39535	81,3953
F	8	43	18,60465	100,0000
Missing	0	43	0,00000	100,0000

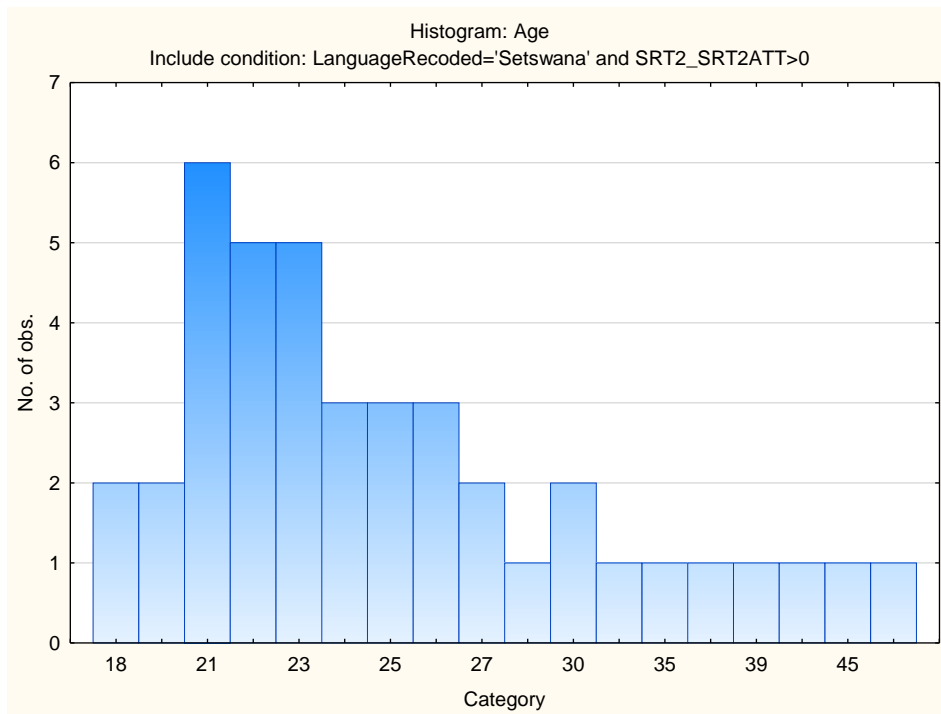
Category	Frequency table: Education			
	Count	Cumulative Count	Percent	Cumulative Percent
Tertiary	14	14	32,55814	32,5581
Grade 12	14	28	32,55814	65,1163
Missing	15	43	34,88372	100,0000

Category	Frequency table: Language			
	Count	Cumulative Count	Percent	Cumulative Percent
Setswana	43	43	100,0000	100,0000
Missing	0	43	0,0000	100,0000

Category	Frequency table: Language Group			
	Count	Cumulative Count	Percent	Cumulative Percent
Indigenous	43	43	100,0000	100,0000
Missing	0	43	0,0000	100,0000

Category	Frequency table: Race			
	Count	Cumulative Count	Percent	Cumulative Percent
African	42	42	97,67442	97,6744
Missing	1	43	2,32558	100,0000

Variable	Descriptive Statistics: Age					
	Mean	Std.Dev	Minimum	Maximum	N	No.cases Missing
Age	26,14634	7,268291	18,00000	49,00000	41	2



## Visual Acuity Test: Biographical Composition

One first language Setswana speaker completed the VAC.

## Cronbach Coefficient Alpha for Technical Test Battery Subtests:

<b>Subtest</b>	<b>Cronbach Coefficient Alpha</b>
Mechanical Reasoning Test	0,61

Results of lower than 0.75 are possibly related to respondents guessing the answers to items which they may not know, or a lack of exposure to the type of item content - which could be related to educational background. Results should therefore be interpreted with caution. Do not rely on these tests in isolation, but to consider the results as part of a holistic assessment, which incorporates additional sources of information. It should be remembered with the TTB2, that these tests have a knowledge component, they are not purely ability assessments. Therefore it is recommended that they should be used together with at least an Abstract Reasoning test. They do not substitute for general reasoning ability. School results should also be considered.

There was insufficient data to report on reliability for either the SRT2 or the VAC.

## Standard Error of Measurement

<b>Subtest</b>	<b>SEM</b>	<b>SD</b>	<b>Reliability</b>
Mechanical Reasoning Test	2,80322348	4,488750	0,61