



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

**DIE ONTWIKKELING
VAN 'N AANLEGTOETS
VIR DIE LEERAREA
REKENAARSTUDIE
AS HULPMIDDEL
BY VOORLIGTING**

VOLUME II

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RIKA GROBBELAAR

DESEMBER 2001



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BYLAAG A

DIE REKENAARSTUDIE AANLEGTOETS (RSAT)



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Sentrum vir Kinder- en Volwasseneleiding

Desember 20001

DIE REKENAARSTUDIE AANLEGTOETS (RSAT)

Die RSAT is slegs op aanvraag en na skriftelike toestemming van die ondergenoemde persone, beskikbaar by die inligtingkundige, van die Fakulteit Opvoedkunde, Departement Opvoedkundige Voorligting en Berading.

Rig 'n skriftelike aansoek met rede en/of motivering tot die beskikbaarstelling van besigtiging van die RSAT, aan die volgende persone:

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Prof LJ Jacobs

Fakulteit Opvoedkunde
Departement Opvoedkundige Voorligting en Berading
of
Sentrum vir Kinder- en Volwasseneleiding
Universiteit van Pretoria
Pretoria
0002
Tel. No. (012) 420-3803

Die RSAT mag slegs besigtig word in die teenwoordigheid van die inligtingkundige.

Geen gedeelte van hierdie werk mag in enige vorm of op enige wyse gekopieer word sonder die skriftelike toestemming van die opsteller nie. Enige ongemagtigde weergawe van hierdie werk sal as 'n skending van kopiereg beskou word en die dader sal aanspreeklik gehou word onder siviele reg sowel as strafreg.

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Rika Grobbelaar



BYLAAG B

DIE RSAT ANTWOORDBLAD

**BIOGRAFIESE INLIGTING
NASIENAANWYSIGINGS**



RSAT Antwoordblad
2001-Uitgawe

CSAT Answer Sheet
2001 Edition

Naam : _____

Name : _____

Skool : _____

School : _____

Vraag Question	TOETS 1 TEST 1	TOETS 2 TEST 2	TOETS 3 TEST 3	TOETS 4 TEST 4	TOETS 5 TEST 5	TOETS 6 TEST 6	TOETS 7 TEST 7
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Rouput Raw score							
Stanege Stanine							



RSAT ANTWOORDBLAD		CSAT ANSWER SHEET	
Biografiese Inligting		Biographical Information	
Van / Surname	:	
Voorletters / Initials	:	
Geboortedatum / Date of birth	:	
Ouderdom / Age	:	
Geslag / Gender	:	
Skool / School	:	
Graad / Grade	:	
Taal / Language	:	
Datum / Date	:	

RSAT NASIENMASKER

2001-Uitgawe

Aanwysigings vir nasien

1. Plaas die nasienmasker op die antwoordblad en skuif dit in posisie met behulp van die asterisk op die antwoordblad.
2. Vergelyk die respondent se antwoorde met die korrekte antwoorde gegee op die nasienmasker. Ken **1** punt toe vir elke korrekte antwoord en **0** punte vir elke verkeerde antwoord.
3. Tel die punte vir elke subtoets bymekaar en skryf die totaal in die **roupuntblok** op die antwoordblad.
4. Verwyder die nasienmasker van die antwoordblad en voltooi die **stanegeblok** met behulp van die norms gegee. Voltooi die RSAT profiel op die profielblad.

CSAT SCORING STENCIL

2001 Edition

Instructions for scoring

1. Put the scoring stencil on the answer sheet, adjusting it by means of the asterisk on the answer sheet.
2. Compare the respondent's answer with the correct answers given on the scoring stencil. Each correct answer score **1** mark and each incorrect answer **0** marks.
3. Add up the scores for each subtest and write the total in the **raw score block** on the answer sheet.
4. Remove the scoring stencil from the answer sheet and complete the **stanine block** with aid of the norms given. Complete the CSAT profile on the profile sheet.



BYLAAG C

DIE RSAT NASIENMASKER



RSAT NASIENMASKER

2001-Uitgawe

CSAT SCORING STENCIL

2001 Edition

Aanwysings vir nasien op agterkant
van die antwoordblad

Instructions for scoring on the back
of the answer sheet

Vraag Question	TOETS 1 TEST 1	TOETS 2 TEST 2	TOETS 3 TEST 3	TOETS 4 TEST 4	TOETS 5 TEST 5	TOETS 6 TEST 6	TOETS 7 TEST 7
1	3	1	5	3	2	4	3
2	3	2	2	4	1	4	5
3	3	3	1	1	5	3	1
4	4	5	5	4	2	5	2
5	1	4	4	3	5	3	1
6	3	1	3	2	1	2	4
7	1	5	1	3	2	2	2
8	2	2	3	2	3	1	3
9	4	3	2	4	3	3	5
10	2	5	5	5	4	2	3
11	3	3	3	5	2	5	4
12	3	5	5	1	1	4	2
13	3	4	2	4	3	4	1
14	1	3	5	3	4	5	1
15	2	5	2	4	5	5	5
16	2	5	5	2	5	5	2
17	4	5	1	3	2	5	4
18	2	1	2	2	3	5	3
19	4	2	1	4	2	4	3
20	1	3	3	5	2	2	1
Rouput Raw score							
Stanege Stanine							



BYLAAG D

DIE RSAT PROFIELBLAD

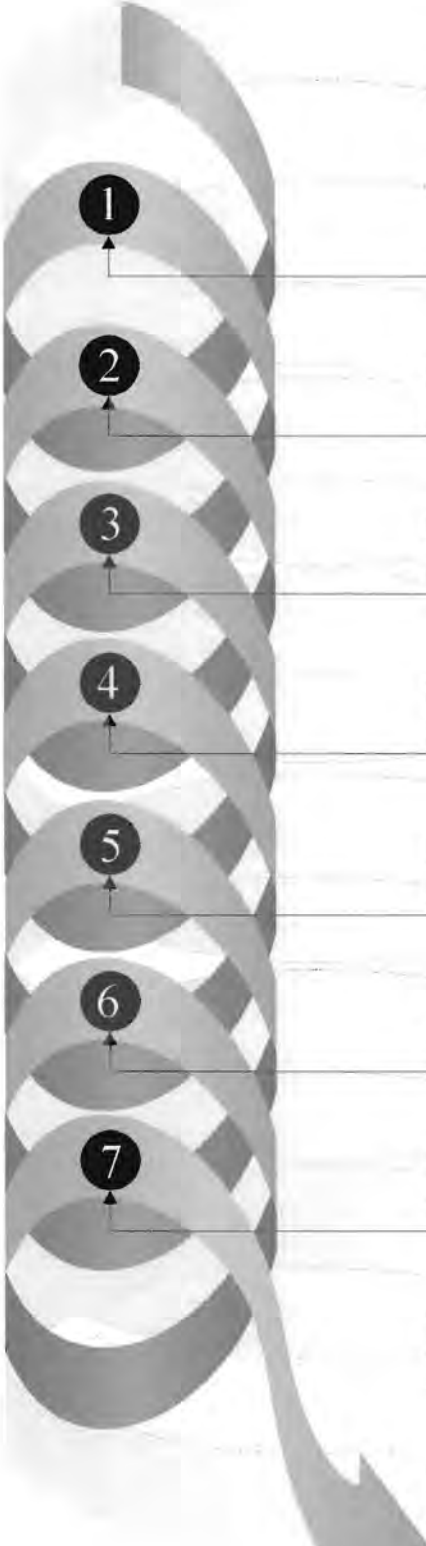


BYLAAG E

DIE RSAT TOETSTYE



TOETSTYD / TESTING TIMES



	TOETS / TEST	TYD / TIME
1	Verbale Tegniese Redenering Verbal Technical Reasoning	15 min
2	Syferreekse Number Series	10 min
3	Karaktervergelyking Character Comparison	3 min
4	Sintaksvergelyking Syntax Comparison	9 min
5	Patroonmatriks Pattern Matrix	18 min
6	Vloiediagramme Flow Charts	11 min
7	Dimensionele Redenering Spatial Reasoning	6 min
	Totale Toetstyd Total Testing Time	72 min
	Totale Toepassingstyd Total Time of Administration	120 min



BYLAAG F

DIE RSAT TYDBEPALINGSVORMS



RSAT TYDBEPALINGSVORM

Begintyd van elke subtoets is: 00:00

**Hoërskool Garsfontein
51 Leerders
Graad 9**

Toets 1: Verbale Tegniese Redenering

Eerste eindtyd: 9.25 min.
Laaste eindtyd: 21.54 min. Gemiddelde toetstyd: 15.39 min.

Toets 2: Syferreekse

Eerste eindtyd: 5.45 min.
Laaste eindtyd: 18.02 min. Gemiddelde toetstyd: 11.73 min.

Toets 3: Karaktervergelyking

Eerste eindtyd: 1.54 min.
Laaste eindtyd: 5.06 min. Gemiddelde toetstyd: 3.30 min.

Toets 4: Sintaksvergelyking

Eerste eindtyd: 4.25 min.
Laaste eindtyd: 11.00 min. Gemiddelde toetstyd: 7.62 min.

Toets 5: Patroonmatriks

Eerste eindtyd: 9.30 min.
Laaste eindtyd: 22.13 min. Gemiddelde toetstyd: 16.71 min.

Toets 6: Vloedigramme

Eerste eindtyd: 6.30 min.
Laaste eindtyd: 16.58 min. Gemiddelde toetstyd: 11.44 min.

Toets 7: Dimensionele Redenering

Eerste eindtyd: 2.28 min.
Laaste eindtyd: 8.15 min. Gemiddelde toetstyd: 5.21 min.



RSAT TYDBEPALINGSVORM

Begin tyd van elke subtoets is: 00:00

**Hoërskool Centurion
51 Leerders
Graad 10**

Toets 1: Verbale Tegniese Redenering

Eerste eindtyd: 8.50 min.
Laaste eindtyd: 21.30 min. Gemiddelde toetstyd: **14.90 min.**

Toets 2: Syferreeks

Eerste eindtyd: 6.57 min.
Laaste eindtyd: 12.43 min. Gemiddelde toetstyd: **9.50 min.**

Toets 3: Karaktervergelyking

Eerste eindtyd: 1.25 min.
Laaste eindtyd: 5.14 min. Gemiddelde toetstyd: **3.19 min.**

Toets 4: Sintaksvergelyking

Eerste Eindtyd: 5.07 min.
Laaste Eindtyd: 15.24 min. Gemiddelde toetstyd: **10.15 min.**

Toets 5: Patroonmatriks

Eerste eindtyd: 10.53 min.
Laaste eindtyd: 25.50 min. Gemiddelde toetstyd: **18.01 min.**

Toets 6: Vloediagramme

Eerste eindtyd: 4.58 min.
Laaste eindtyd: 17.01 min. Gemiddelde toetstyd: **10.79 min.**

Toets 7: Dimensionele Redenering

Eerste eindtyd: 2.34 min.
Laaste eindtyd: 9.29 min. Gemiddelde toetstyd: **5.81 min.**



RSAT TYDBEPALINGSVORM

Begin tyd van elke subtoets is: 00:00

**Hoërskool Overkruin
47 Leerders
Graad 11**

Toets 1: Verbale Tegniese Redenering

Eerste eindtyd: 9.50 min.
Laaste eindtyd: 20.00 min. Gemiddelde toetstyd: 14.75 min.

Toets 2: Syferreekse

Eerste eindtyd: 5.22 min.
Laaste eindtyd: 12.15 min. Gemiddelde toetstyd: 8.68 min.

Toets 3: Karaktervergelyking

Eerste eindtyd: 1.48 min.
Laaste eindtyd: 4.29 min. Gemiddelde toetstyd: 2.88 min.

Toets 4: Sintaksvergelyking

Eerste eindtyd: 5.55 min.
Laaste eindtyd: 11.15 min. Gemiddelde toetstyd: 8.35 min.

Toets 5: Patroonmatriks

Eerste eindtyd: 14.00 min.
Laaste eindtyd: 22.00 min. Gemiddelde toetstyd: 18.00 min.

Toets 6: Vloeidiagramme

Eerste eindtyd: 7.48 min.
Laaste eindtyd: 15.19 min. Gemiddelde toetstyd: 11.32 min.

Toets 7: Dimensionele Redenering

Eerste eindtyd: 3.07 min.
Laaste eindtyd: 7.41 min. Gemiddelde toetstyd: 5.24 min.



RSAT TYDBEPALINGSVORM

Begintyd van elke subtoets is: 00:00

**Gemiddelde Toetstye
149 Leerders
Graad 9 - 11**

Toets 1: Verbale Tegniese Redenering

Gemiddelde toetstyd: **15.01 min.** Benaderde toetstyd: **15 min.**

Toets 2: Syferreekse

Gemiddelde toetstyd: **9.97 min.** Benaderde toetstyd: **10 min.**

Toets 3: Karaktervergelyking

Gemiddelde toetstyd: **3.12 min.** Benaderde toetstyd: **3 min.**

Toets 4: Sintaksvergelyking

Gemiddelde toetstyd: **8.70 min.** Benaderde toetstyd: **9 min.**

Toets 5: Patroonmatriks

Gemiddelde toetstyd: **17.24 min.** Benaderde toetstyd: **18 min.**

Toets 6: Vloediagramme

Gemiddelde toetstyd: **11.18 min.** Benaderde toetstyd: **11 min.**

Toets 7: Dimensionele Redenering

Gemiddelde toetstyd: **5.42 min.** Benaderde toetstyd: **6 min.**

Totale toetstyd (7 subtoetse) : 1 uur 12 min. **72 min.**

Toetsaanwysings : ongeveer **35 min.**

Uitdeel van materiaal ens. : ongeveer **13 min.**

Totale toepassingstyd : 2 ure **120 min.**



BYLAAG G

GEKODEERDE RSAT BIOGRAFIESE INLIGTINGSBLAD VIR STANDAARDISERING



(RSAT) BIOGRAFIESE INLIGTING		(CSAT) BIOGRAPHIC INFORMATION	
Van Surname	: _____	Grys vir kantoor-gebruik Grey for office use	
Voorletters & Naam Initials & Name	: _____		
Geboortedatum Date of birth	: 20 ____ / ____ / ____ (jaar / maand / dag) (year / month / day)		
Datum / Date	: 2001 / 05 / 25		
Ouderdom / Age	: _____	<input type="text"/>	1 - 3
		<input type="text"/>	4 - 5
Geslag / Gender	: Manlik / Male = 1 Vroulik / Female = 2	<input type="text"/>	6
Taal / Language	: Afrikaans = 1 English = 2	<input type="text"/>	7
Skool / School	: Hoërskool Oos-Moot = 1	<input type="text"/>	8
Graad / Grade	: 9, 10, 11	<input type="text"/>	9 - 10
Vak / Subject	: Wiskunde Ja / Yes = 1 Mathematics Nee / No = 2	<input type="text"/>	11
	Graad / Grade HG = 1 SG = 2	<input type="text"/>	12
Vak / Subject	: Rekenaarstudie Ja / Yes = 1 Computer Science Nee / No = 2	<input type="text"/>	13
	Graad / Grade HG = 1 SG = 2	<input type="text"/>	14
Punt / Mark (%)	: Wiskunde / Mathematics	<input type="text"/>	15 - 17
	Rekenaarstudie / Computer Science	<input type="text"/>	18 - 20
Rekenaar geletterd Computer literate	: Ja / Yes = 1 Nee / No = 2	<input type="text"/>	21
		<input type="text"/>	22 - 24



(RSAT) BIOGRAFIESE INLIGTING		(CSAT) BIOGRAPHIC INFORMATION	
Van	:		Grys vir kantoor-gebruik
Surname	:	_____	
Voorletters & Naam	:		
Initials & Name	:	_____	
Geboortedatum	:		Grey for office use
Date of birth	:	20 ____ / ____ / ____ (jaar / maand / dag) (year / month / day)	
Datum / Date	:	2001 / 05 / 03	
		<input type="text"/>	1 - 3
Ouderdom / Age	:	_____ <input type="text"/>	4 - 5
Geslag / Gender	:	Manlik / Male = 1 Vroulik / Female = 2 <input type="text"/>	6
Taal / Language	:	Afrikaans = 1 English = 2 <input type="text"/>	7
Skool / School	:	Laudium Secondary School = 2 <input type="text"/>	8
Graad / Grade	:	9, 10, 11 <input type="text"/>	9 - 10
Vak / Subject	:	Wiskunde Ja / Yes = 1 Mathematics Nee / No = 2 <input type="text"/>	11
		Graad / Grade HG = 1 SG = 2 <input type="text"/>	12
Vak / Subject	:	Rekenaarstudie Ja / Yes = 1 Computer Science Nee / No = 2 <input type="text"/>	13
		Graad / Grade HG = 1 SG = 2 <input type="text"/>	14
Punt / Mark (%)	:	Wiskunde / Mathematics <input type="text"/>	15 - 17
		Rekenaarstudie / Computer Science <input type="text"/>	18 - 20
Rekenaar geletterd	:	Ja / Yes = 1 Nee / No = 2 <input type="text"/>	21
Computer literate	:		
		<input type="text"/>	22 - 24



(RSAT) BIOGRAFIESE INLIGTING		(CSAT) BIOGRAPHIC INFORMATION	
Van	:		Grys vir kantoor-gebruik
Surname	:	_____	
Voorletters & Naam	:		Grey for office use
Initials & Name	:	_____	
Geboortedatum	:	(jaar / maand / dag)	
Date of birth	:	20 ____ / ____ / ____ (year / month / day)	
Datum / Date	:	2001 / 05 / 04	
Ouderdom / Age	:	_____	1 - 3
			4 - 5
Geslag / Gender	:	Manlik / Male = 1 Vroulik / Female = 2	6
Taal / Language	:	Afrikaans = 1 English = 2	7
Skool / School	:	Hoërskool Voortrekkerhoogte = 3	8
Graad / Grade	:	9, 10, 11	9 - 10
Vak / Subject	:	Wiskunde Ja / Yes = 1 Mathematics Nee / No = 2	11
		Graad / Grade HG = 1 SG = 2	12
Vak / Subject	:	Rekenaarstudie Ja / Yes = 1 Computer Science Nee / No = 2	13
		Graad / Grade HG = 1 SG = 2	14
Punt / Mark (%)	:	Wiskunde / Mathematics	15 - 17
		Rekenaarstudie / Computer Science	18 - 20
Rekenaar geletterd	:	Ja / Yes = 1 Nee / No = 2	21
Computer literate	:		22 - 24

i 16093781
b 15442937



(RSAT) BIOGRAFIESE INLIGTING / (CSAT) BIOGRAPHICAL INFORMATION

Van Surname :	_____	Grys vir kantoor-gebruik Grey for office use
Voorletters & Naam Initials & Name :	_____	
Geboortedatum Date of birth :	19 ____ / ____ / ____ (jaar / maand / dag) (year / month / day)	
Datum / Date :	2001 / 05 / 7-9, 28	
Ouderdom / Age :	_____	<input type="text"/> <input type="text"/> <input type="text"/> 1 - 3 <input type="text"/> <input type="text"/> 4 - 5
Geslag / Gender :	Manlik / Male = 1 Vroulik / Female = 2	<input type="text"/> 6
Taal / Language :	Afrikaans = 1 English = 2	<input type="text"/> 7
Skool / School :	Hoërskool Waterkloof = 4	<input type="text"/> 8
Graad / Grade :	9, 10, 11	<input type="text"/> <input type="text"/> 9 - 10
Vak / Subject :	Wiskunde Ja / Yes = 1 Mathematics Nee / No = 2	<input type="text"/> 11
	Graad / Grade HG = 1 SG = 2	<input type="text"/> 12
Vak / Subject :	Rekenaarstudie Ja / Yes = 1 Computer Science Nee / No = 2	<input type="text"/> 13
	Graad / Grade HG = 1 SG = 2	<input type="text"/> 14
Punt / Mark (%) :	Wiskunde / Mathematics	<input type="text"/> <input type="text"/> <input type="text"/> 15 - 17
	Rekenaarstudie / Computer Science	<input type="text"/> <input type="text"/> <input type="text"/> 18 - 20
Rekenaargeletterd Computer literate :	Ja / Yes = 1 Nee / No = 2	<input type="text"/> 21
		<input type="text"/> <input type="text"/> <input type="text"/> 22 - 24



(RSAT) BIOGRAFIESE INLIGTING
(CSAT) BIOGRAPHIC INFORMATION

Van Surname	:	_____	Grys vir kantoor- gebruik
Voorletters & Naam Initials & Name	:	_____	
Geboortedatum Date of birth	:	20 ____ / ____ / ____	Grey for office use
		(jaar / maand / dag) (year / month / day)	
Datum / Date	:	2001 / 05 / 10	

				1 - 3
Ouderdom / Age	:	_____	<input type="text"/>	4 - 5
Geslag / Gender	:	Manlik / Male = 1 Vroulik / Female = 2	<input type="text"/>	6
Taal / Language	:	Afrikaans = 1 English = 2	<input type="text"/>	7
Skool / School	:	Hoërskool Wonderboom = 5	<input type="text"/>	8
Graad / Grade	:	9, 10, 11	<input type="text"/>	9 - 10
Vak / Subject	:	Wiskunde Ja / Yes = 1 Mathematics Nee / No = 2	<input type="text"/>	11
		Graad / Grade HG = 1 SG = 2	<input type="text"/>	12
Vak / Subject	:	Rekenaarstudie Ja / Yes = 1 Computer Science Nee / No = 2	<input type="text"/>	13
		Graad / Grade HG = 1 SG = 2	<input type="text"/>	14
Punt / Mark (%)	:	Wiskunde / Mathematics	<input type="text"/>	15 - 17
		Rekenaarstudie / Computer Science	<input type="text"/>	18 - 20
Rekenaar geletterd Computer literate	:	Ja / Yes = 1 Nee / No = 2	<input type="text"/>	21
			<input type="text"/>	22 - 24



(RSAT) BIOGRAFIESE INLIGTING		(CSAT) BIOGRAPHIC INFORMATION	
Van Surname	: :	_____	Grys vir kantoor- gebruik
Voorletters & Naam Initials & Name	: :	_____	
Geboortedatum Date of birth	: :	20 ____ / ____ / ____	Grey for office use
		(jaar / maand / dag) (year / month / day)	
Datum / Date	: :	2001 / 05 / 14	
Ouderdom / Age	: :	_____	<input type="text"/> <input type="text"/> <input type="text"/> 1 - 3
			<input type="text"/> <input type="text"/> 4 - 5
Geslag / Gender	: :	Manlik / Male = 1 Vroulik / Female = 2	<input type="text"/> 6
Taal / Language	: :	Afrikaans = 1 English = 2	<input type="text"/> 7
Skool / School	: :	Hoërskool Nylstroom = 6	<input type="text"/> 8
Graad / Grade	: :	9, 10, 11	<input type="text"/> <input type="text"/> 9 - 10
Vak / Subject	: :	Wiskunde Ja / Yes = 1 Mathematics Nee / No = 2	<input type="text"/> 11
		Graad / Grade HG = 1 SG = 2	<input type="text"/> 12
Vak / Subject	: :	Rekenaarstudie Ja / Yes = 1 Computer Science Nee / No = 2	<input type="text"/> 13
		Graad / Grade HG = 1 SG = 2	<input type="text"/> 14
Punt / Mark (%)	: :	Wiskunde / Mathematics	<input type="text"/> <input type="text"/> <input type="text"/> 15 - 17
		Rekenaarstudie / Computer Science	<input type="text"/> <input type="text"/> <input type="text"/> 18 - 20
Rekenaar geletterd Computer literate	: :	Ja / Yes = 1 Nee / No = 2	<input type="text"/> 21
			<input type="text"/> <input type="text"/> <input type="text"/> 22 - 24



BYLAAG H

GEKODEERDE RSAT ANTWOORDBLAD VIR STANDAARDISERING



RSAT Antwoordblad

CSAT Answer Sheet

2001-Uitgawe

2001 Edition

Vraag Question	TOETS 1 TEST 1	TOETS 2 TEST 2	TOETS 3 TEST 3	TOETS 4 TEST 4	TOETS 5 TEST 5	TOETS 6 TEST 6	TOETS 7 TEST 7
1	25	45	65	85	105	125	145
2	26	46	66	86	106	126	146
3	27	47	67	87	107	127	147
4	28	48	68	88	108	128	148
5	29	49	69	89	109	129	149
6	30	50	70	90	110	130	150
7	31	51	71	91	111	131	151
8	32	52	72	92	112	132	152
9	33	53	73	93	113	133	153
10	34	54	74	94	114	134	154
11	35	55	75	95	115	135	155
12	36	56	76	96	116	136	156
13	37	57	77	97	117	137	157
14	38	58	78	98	118	138	158
15	39	59	79	99	119	139	159
16	40	60	80	100	120	140	160
17	41	61	81	101	121	141	161
18	42	62	82	102	122	142	162
19	43	63	83	103	123	143	163
20	44	64	84	104	124	144	164

165 - 166	167 168	169 170	171 172	173 174	175 176	177 178	179 180



BYLAAG I

POSITIEWE KOMPONENTE VAN DIE RSAT ITEMS

POSITIEWE KOMPONENTE VAN DIE RSAT ITEMS

Item no.	Toets 1	Toets 2	Toets 3	Toets 4	Toets 5	Toets 6	Toets 7
1	3	1	5	3	2	4	3
2	3	2	2	4	1	4	5
3	3	3	1	1	5	3	1
4	4	5	5	4	2	5	2
5	1	4	4	3	5	3	1
6	3	1	3	2	1	2	4
7	1	5	1	3	2	2	2
8	2	2	3	2	3	1	3
9	4	3	2	4	3	3	5
10	2	5	5	5	4	2	3
11	3	3	3	5	2	5	4
12	3	5	5	1	1	4	2
13	3	4	2	4	3	4	1
14	1	3	5	3	4	5	1
15	2	5	2	4	5	5	5
16	2	5	5	2	5	5	2
17	4	5	1	3	2	5	4
18	2	1	2	2	3	5	3
19	4	2	1	4	2	4	3
20	1	3	3	5	2	2	1



BYLAAG J

SKOLE BETROKKE BY DIE ONDERSOEK

RSAT VOORAFTOETS VIR TYDBEPALING (149 Leerders)

Graad 9 51 leerders	Graad 10 51 leerders	Graad 11 51 leerders
Skool : H/S Garsfontein Datum : Di. 24 April 2001 Tyd : 08:00-10:00 O/w : Mev. Lewis	Skool : H/S Centurion Datum : Ma. 23 April 2001 Tyd : 08:00-10:00 O/w : Mnr. H van Huyssteen	Skool : H/S Overkruin Datum : Do. 29 Maart 2001 Tyd : 14:00-16:00 O/w : Mnr. D Malan
Die Hoof: Mnr. DD van Zyl Hoërskool Garsfontein Posbus 90001 GARSFONTEIN 0042 Tel. no. (012) 998-8200 Faks. no. (012) 998-6095	Die Hoof: Mnr. WCJ Burger Hoërskool Centurion Posbus 14054 CENTURION 0140 Tel. no. (012) 664-5803 Faks. no. (012) 644-7969	Die Hoof: Dr. JN Theunissen Hoërskool Overkruin Posbus 13709 SINOVILLE 0182 Tel. no. (012) 567-5115 Faks. no. (012) 543-1790

RSAT VOORAFTOETS VIR STANDAARDISERING (463 Leerders)

Graad 9 48 learners	Graad 10 53 leerders	Graad 11 47 leerders
School : Laudium S/S Date : Thu. 3 Mei 2001 Time : 08:00-10:00 Teacher : Mr. D Chetty	Skool : H/S Oos-Moot Datum : Wo. 25 April 2001 Tyd : 08:00-10:00 O/w : Mnr. N Kotzé	Skool : H/S Voortrekkerhoogte Datum : Vr. 4 Mei Tyd : 08:00-10:00 O/w : Mev. Van Schalkwyk
Deputy Principal: Mr. Chetty Laudium Secondary School Private Bag X5 LAUDIUM 0037 Tel. no. (012) 374-3807 Fax. no. (012) 374-6572	Die Hoof: Mnr. HPTL du Preez Hoërskool Oos-Moot Haarhoffstraat 1120 VILLERIA 0186 Tel. no. (012) 332-0602 Faks. no. (012) 332-2457	Die Hoof: Mnr. GP Prinsloo Hoërskool Voortrekkerhoogte Privaatsak X1005 VOORTREKKERHOOGTE 0143 Tel. no. (012) 651-4434 Faks. no. (012) 651-4434



Graad 9 57 leerders	Graad 10 50 leerders	Graad 11 67 leerders
Skool : H/S Waterkloof Datum: Ma. 7 Mei 2001 Tyd : 07:30-09:30 O/w : Mev. S Josling	Skool : H/S Waterkloof Datum : Di. 8 Mei 2001 Tyd : 07:30-09:30 O/w : Mev. S Josling	Skool : H/S Waterkloof Datum : Wo. 9 Mei 2001 Tyd : 07:30-09:30 O/w : Mev. S Josling
Die Hoof: Dr. LC Becker Hoërskool Waterkloof Posbus 25085 MONUMENTPARK 0105 Tel. no. (012) 347-0277 Faks. no. (012) 347-0279	Die Hoof: Dr. LC Becker Hoërskool Waterkloof Posbus 25085 MONUMENTPARK 0105 Tel. no. (012) 347-0277 Faks. no. (012) 347-0279	Die Hoof: Dr. LC Becker Hoërskool Waterkloof Posbus 25085 MONUMENTPARK 0105 Tel. no. (012) 347-0277 Faks. no. (012) 347-0279
Graad 9 55 leerders	Graad 10 35 leerders	Graad 11 51 leerders
Skool : H/S Nylstroom Datum: Ma. 14 Mei 2001 Tyd : 08:00-10:00 O/w : Mnr. J de Beer	Skool : H/S Waterkloof Datum : Ma. 28 Mei 2001 Tyd : 07:30-09:30 O/w : Mev. S Josling	Skool : H/S Wonderboom Datum : Do. 10 Mei 2001 Tyd : 08:00-10:00 O/w : Mnr. Botha
Die Hoof: Mnr. W van Coller Hoërskool Nylstroom Privaatsak X 1020 NYLSTROOM 0510 Tel. no. (014) 717-5216/7 Faks. no. (014) 717-5216/7	Die Hoof: Dr. LC Becker Hoërskool Waterkloof Posbus 25085 MONUMENTPARK 0105 Tel. no. (012) 347-0277 Faks. no. (012) 347-0279	Die Hoof: Dr. ST van Wyk Hoërskool Wonderboom Voortrekkersweg WONDERBOOM-SUID 0084 Tel. no. (012) 335-6806 Faks. no. (012) 335-6587



BYLAAG K

AANSOEBRIEWE

**GAUTENG DEPARTEMENT VAN ONDERWYS
TSHWANE-NOORD EN TSHWANE-SUID DISTRIKTE**

RSAT INSKAKELING IN SKOLE



Universiteit van Pretoria

Pretoria 0002 Republiek van Suid-Afrika Tel (012) 420-3147
Tel (012) 362-6817 Rekening: Tel (012) 420-2366
Faks (012) 420-3112 <http://www.up.ac.za>

Sentrum vir Kinder- en Volwasseneleiding

FACULTY OF EDUCATION

Department of Educational
Guidance and Counselling

Mr. T Makofane
Gauteng Department of Education
Tshwane South District (D4)

27 March 2001

Private Bag 27825
SUNNYSIDE
0132

**REQUEST FOR PRE-TEST OF THE COMPUTER SCIENCE APTITUDE TEST (CSAT)
AT SECONDARY HIGH SCHOOLS IN THE TSHWANE SOUTH DISTRICT.**

Rika Grobbelaar (student number 8779015) is currently enrolled as a PhD student in Educational Psychology (Career Guidance Pedagogics) under the supervision of Professor LJ Jacobs, Department of Guidance and Counselling & Head: Centre for Educational Guidance and Counselling.

My PhD study focuses on career counselling for grades 9-11 with the aim of developing a new aptitude test (CSAT) for the learning area computer science.

Such a test will be in accordance with the demands of the fields of information technology (IT) which took the lead with regard to growth in professional employment over a five-year period. Rapid computerisation due to organisations increased dependency on computer technology as a means to remain competitive increases the need for IT professionals such as systems analysts, programmers, software systems engineers etc. Shortages in IT occupations mainly stem from organisations striving to remain competitive.

The **Computer Science Aptitude Test (CSAT)** is based on the key skills involved in IT jobs and is compiled for measuring a number of related aptitudes for the subject computer science of pupils in grades 9-11. This test measures logical reasoning or thinking performance, it is not a test of

general knowledge or an IQ (intelligence) test. The test is in the form of multiple choice questions. The questions have definite right and wrong answers, which must be selected from a range of alternatives. There is a certain time limit for each subtest. The battery consists of:

1. Verbal Technical Reasoning
2. Number Series
3. Character Comparison
4. Syntax Comparison
5. Pattern Matrix
6. Flow Charts
7. Spatial Reasoning

A short description of each of the subtests follows:

1. Verbal Technical Reasoning

measures the ability to interpret written information set in a technical context.

2. Number Series

measures high level numerical reasoning skills, in particular recognition of the relationship between numbers.

3. Character Comparison

assesses speed and accuracy in the checking of non-contextual material such as codes composed of numbers, letters and symbols.

4. Syntax Comparison

measures speed and accuracy in the checking of contextual information while following a set of rules.

5. Pattern Matrix

assesses the ability to follow a set of complex instructions. (Inductive reasoning ability - as part of abstract thinking).

6. Flow Charts

assesses the ability to infer rules from a symbolic system and to apply these rules to new situations. (Deductive reasoning ability - as part of abstract thinking).

7. Spatial Reasoning

measures the ability to visualise and manipulate shapes in three dimensions given a two-dimensional drawing.

To complete this study successfully I need to perform a pre-test which involves 50 pupils each from grades 9 -11. The test will take approximately 90 minutes. Pupils must be selected randomly, with equal numbers of boys and girls. The subject Computer Science is not compulsory for these selected pupils. No computers are required because the test is structured for pen and paper. Answering sheets, pencils and rubbers will be provided as well as test administrators - myself and three master degree students from the department of Educational Guidance and Counselling. The pupils can be tested together in one room or separately in their grades - whatever is suited to the school environment. The test must be administered early morning due to the mental alertness factor of the pupils.

The results will be used to standardise the test. Professor G. Bester of UNISA is contracted to help with the standardising and statistics. All results will be treated as confidential. After consulting with professors Jacobs and Bester results will be sent to the career guidance teacher by means of a profile sheet with a brief description of the tests and the aptitudes measured if the test is found to be valid.

The following secondary schools in the Tshwane South District (D4) will be involved:

- Hoërskool Wilgers
- Hoërskool Garsfontein
- Hoërskool Waterkloof
- Hoërskool Menlopark
- Hoërskool Staatspresident CR Swart
- Hoërskool Eldoraigne
- Hoërskool Elandspoort
- Laudium High School

For further enquiries please contact: **Mrs. Rika Grobbelaar**
Tel. no. (012) 346-7527
Cell. (082) 968-1944
E-mail address: barry.g@mweb.co.za

Prof. Dr. LJ Jacobs
Tel. no. (012) 420-3803
Head: Centre for Child and Adult Care &
Department of Guidance and Counselling
University of Pretoria

Your friendly co-operation in the above regard is appreciated.

Yours Faithfully



Rika Grobbelaar



Universiteit van Pretoria

Pretoria 0002 Republiek van Suid-Afrika Tel (012) 420-3147
Tel (012) 362-6817 Rekening: Tel (012) 420-2366
Faks (012) 420-3112 <http://www.up.ac.za>

Sentrum vir Kinder- en Volwasseneleiding

FACULTY OF EDUCATION

Department of Educational
Guidance and Counselling

Mr. T Makofane
Gauteng Education Department
Tshwane South District (D4)

28 March 2001

Private Bag 27825
SUNNYSIDE
0132

SECOND REQUEST

REQUEST FOR THE INVOLVEMENT OF FIVE OTHER SCHOOLS IN THE D4 AREA.

PRE-TEST OF THE COMPUTER SCIENCE APTITUDE TEST (CSAT) AT SECONDARY HIGH SCHOOLS IN THE TSHWANE SOUTH DISTRICT.

Rika Grobbelaar, under the supervision of Professor LJ Jacobs, Department of Guidance and Counselling & Head: Centre for Educational Guidance and Counselling forwarded a request to your office on the 27 March 2001 for authority to do a pre-test at high schools in the D4 area.

The following secondary schools in the Tshwane South District (D4) were identified to be involved in the first request :

1. Hoërskool Wilgers
2. Hoërskool Garsfontein
3. Hoërskool Waterkloof
4. Hoërskool Menlopark
5. Hoërskool Staatspresident CR Swart
6. Hoërskool Eldoraigue
7. Laudium High School

Note: Hoërskool Elandspoort is not included anymore.

Permission to also involve the following five schools is requested:

1. Hoërskool Overkruin
2. Hoërskool Wonderboom
3. Hoërskool Oos-Moot
4. Hoërskool Voortrekkerhoogte
5. Hoërskool Centurion

The reason for this request is the following:

Initially only three schools were needed - 150 pupils per school and 50 per grade. This seems to be a problem at the schools due to the time and logistics factor. To involve 12 schools (3 for time factor pre-test and 9 for the actual pre-test) (150 + 450 pupils) will imply only one grade of 50 pupils per school which seems to be less disturbing though more time consuming for the University of Pretoria. This seems to be the only option.

Your help in the above is appreciated.

For further enquiries please contact: **Mrs. Rika Grobbelaar**
Tel. no. (012) 346-7527
Cell. (082) 968-1944
E-mail address: barry.g@mweb.co.za

Prof. Dr. LJ Jacobs
Tel. no. (012) 420-3803
Department of Guidance and Counselling &
Head: Centre for Child and Adult Care
University of Pretoria

Yours Faithfully



Rika Grobbelaar



Universiteit van Pretoria

Pretoria 0002 Republiek van Suid-Afrika Tel (012) 420-3147
Tel (012) 362-6817 Rekening: Tel (012) 420-2366
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Sentrum vir Kinder- en Volwasseneleiding

FACULTY OF EDUCATION

Department of Educational
Guidance and Counselling

19 April 2001

Mr. Moss Nkonyane
Gauteng Education Department
Tshwane North District (D3)

Private Bag X945
PRETORIA
0001

PhD-STUDY

REQUEST FOR PRE-TEST OF THE COMPUTER SCIENCE APTITUDE TEST (CSAT) AT SECONDARY HIGH SCHOOLS IN THE TSHWANE NORTH DISTRICT.

Rika Grobbelaar (student number 8779015) is currently enrolled as a PhD student in Educational Psychology (Career Guidance Pedagogics) under the supervision of Professor LJ Jacobs, Department of Guidance and Counselling & Head: Centre for Child and Adult Care.

My PhD study focuses on career counselling for grades 9-11 with the aim of developing a new aptitude test (CSAT) for the learning area computer science.

Such a test will be in accordance with the demands of the fields of information technology (IT) which took the lead with regard to growth in professional employment over a five-year period. Rapid computerisation due to organisations increased dependency on computer technology as a means to remain competitive increases the need for IT professionals such as systems analysts, programmers, software systems engineers etc. Shortages in IT occupations mainly stem from organisations striving to remain competitive.

The **Computer Science Aptitude Test (CSAT)** is based on the key skills involved in IT jobs and is compiled for measuring a number of related aptitudes for the subject computer science of pupils

in grades 9-11. This test measures logical reasoning or thinking performance, it is not a test of general knowledge or an IQ (intelligence) test. The test is in the form of multiple choice questions.

The questions have definite right and wrong answers, which must be selected from a range of alternatives. There is a certain time limit for each subtest. The battery consists of:

1. Verbal Technical Reasoning
2. Number Series
3. Character Comparison
4. Syntax Comparison
5. Pattern Matrix
6. Flow Charts
7. Spatial Reasoning

1. Verbal Technical Reasoning

measures the ability to interpret written information set in a technical context.

2. Number Series

measures high level numerical reasoning skills, in particular recognition of the relationship between numbers.

3. Character Comparison

assesses speed and accuracy in the checking of non-contextual material such as codes composed of numbers, letters and symbols.

4. Syntax Comparison

measures speed and accuracy in the checking of contextual information while following a set of rules.

5. Pattern Matrix

assesses the ability to follow a set of complex instructions. (Inductive reasoning ability - as part of abstract thinking).

6. Flow Charts

assesses the ability to infer rules from a symbolic system and to apply these rules to new situations. (Deductive reasoning ability - as part of abstract thinking).

7. Spatial Reasoning

measures the ability to visualise and manipulate shapes in three dimensions given a two-dimensional drawing.

To complete this study successfully I need to perform a pre-test which involves 50 pupils each from grades 9 -11. The test will take approximately 2 hours. Pupils must be selected randomly, with equal numbers of boys and girls. The subject Computer Science is not compulsory for these selected pupils. No computers are required because the test is structured for pen and paper. Answering sheets, pencils and rubbers will be provided as well as test administrators - myself and three master degree students from the department of Educational Guidance and Counselling. The pupils can be tested together in one room or separately in their grades - whatever is suited to the school environment. The test must be administered early morning due to the mental alertness factor of the pupils.

The results will be used to standardise the test. Professor G. Bester of UNISA is contracted to help with the standardising and statistics. All results will be treated as confidential. After consulting with professors Jacobs and Bester results will be sent to the career guidance teacher by means of a profile sheet with a brief description of the tests and the aptitudes measured if the test is found to be valid.

The following secondary schools in the Tshwane North District will be involved:

- Hoërskool Oos-Moot
- Hoërskool Overkruin
- Hoërskool Wonderboom

Permission has already been granted by the office of Mr. T Makofane of the Tshwane South District (D4), to involve seven secondary schools in the south area - permission letter attached.

For further enquiries please contact:

Mrs. Rika Grobbelaar
Tel. no. (012) 346-7527
Fax. no. (012)346-7527
Cell (082) 968-1944

Prof. Dr. LJ Jacobs
Centre for Child and Adult Guidance
Faculty of Education
University of Pretoria
Tel. no. (012) 420-3803
Fax. no. (012)420-3112

Your friendly co-operation in the above regard is appreciated. Yours Faithfully.



Rika Grobbelaar



BYLAAG L

TOESTEMMINGSBRIEWE

**GAUTENG DEPARTEMENT VAN ONDERWYS
TSHWANE-NOORD EN TSHWANE-SUID DISTRIKTE**

RSAT INSKAKELING IN SKOLE



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

(SOSHANGUVE / PRETORIA NORTH / PRETORIA CENTRAL / Oos-Moot)

NORTH (D3)

GPG BUILDING
CNR PRETORIUS & BOSMAN STR
PRETORIA
0002

PRIVATE BAG X925 OR
PRIVATE BAG X945
PRETORIA
0001

ENQUIRIES: MR SATCH MAKOBE

TEL No.: (012) 303-4054/4465

FAX No.: (012) 303 2200

E-MAIL: mossn@gpg.gov.za

REFERENCE:

2001-04-23

**MRS RIKA GROBELLAR/ PROF. L.J. JACOBS
UNIVERSITY OF PRETORIA**

Dear Mrs Grobbelaar/Prof. L.J. Jacobs

REQUEST FOR PRE-TEST OF CSAT IN SECONDARY

Permission is granted for you to conduct the PRE-TEST of CSAT in the following schools:

Hoërskool Oos-moot
Hoërskool Overkruin
Hoërskool Wonderboom

It is hoped that you will firstly make necessary arrangement with the respective school Principal and that your processes will not in any way disrupt the said school.

Best of luck.

**TS MAKOBE
CHIEF EDUCATION SPECIALIST**



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

UTH (D4)

Private Bag X27825, SUNNYSIDE, 0132
Cnr Walker & Gerard Moerdyk Street, SUNNYSIDE, 0132

Enquiries: Johanna Human Telephone No.: (012) 341 6362/9 x 2317 Fax No.: (012) 341 6844
Cell: 082 672 0905 e-Mail: _____ Reference: _____

24 April 2001

ATTENTION: Mrs Rika Grobbelaar
Prof LJ Jacobs
Centre for Child and Adult Guidance
Faculty of Education
University of Pretoria

Dear Mrs Grobbelaar / Prof Jacobs

REQUEST FOR PRE-TEST OF CSAT IN SECONDARY SCHOOLS

We refer to your letters dated 27 and 28 March 2001 requesting the involvement of several secondary school in the pre-test of a Computer Science Aptitude Test

Permission is hereby granted to pre-test the CSAT in specific secondary schools in our District under the following conditions:

- The gaining of permission from each of the relevant School Governing Bodies for the CSAT pre-test
- The establishment of a suitable date and time with the principal of each school involved
- The pre-testing may not interrupt the daily time table nor the schooling time of the learners under any circumstances

The following schools in our District can be approached to gain permission for the CSAT pre-test:

Hoërskool Die Wilgers
Hoërskool Waterkloof
Hoërskool Eldoraïne
Hoërskool Centurion

Hoërskool Garsfontein
Hoërskool Menlopark
Hoërskool Voortrekkerhoogte
Laudium Secondary School

You have also included the names of several other schools in your request. Please note that Church Street form the boundary line between the two Tshwane Districts in Pretoria. This District Office have jurisdiction over the area south of Church Street but you will have to approach Mr Moss Nkonyane, District Manager of Tshwane North District (Fax 303 2200 / 2535) to gain permission for pre-testing of secondary schools within that District

With kind regards

pp. J. Human
TIMOTHY MAKOFANE
DISTRICT MANAGER



BYLAAG M

AANSOEBRIEWE AAN SKOOLHOOFDE (meesterkopieë)

RSAT INSKAKELING IN SKOLE



Universiteit van Pretoria

Pretoria 0002 Republiek van Suid-Afrika Tel (012) 420-3147
Tel (012) 362-6817 Rekening: Tel (012) 420-2366
Faks (012) 420-3112 <http://www.up.ac.za>

Sentrum vir Kinder- en Volwasseleiding

FAKULTEIT OPVOEDKUNDE

Departement Opvoedkundige
Voorligting en Berading

Die Hoof: Dr. LC Becker
Die Voorligter Onderwyser: Mev. S Josling
Hoërskool Waterkloof
Posbus 25085
MONUMENTPARK
0105

23 Maart 2001

PhD-STUDIE:

DIE ONTWERP VAN 'N AANLEGTOETS VIR DIE LEERAREA REKENAARSTUDIE AS HULPMIDDEL BY VOORLIGTING.

AANSOEK OM GOEDKEURING VIR DIE UITVOER VAN DIE VOORAF-TOETS VIR DIE REKENAARSTUDIE AANLEGTOETS (RSAT).

Rika Grobbelaar (studente nommer 8779015) is tans 'n ingeskrewe PhD-student in die Departement Opvoedkundige Voorligting en Berading onder die mentorskap van Professor LJ Jacobs, Departement Opvoedkundige Voorligting en Berading en Hoof van die Sentrum vir Kinder- en Volwasseleiding.

My PhD-studie fokus op beroepsvoorligting vir grade 9-11 met die doel om 'n aanlegtoets vir die leerarea rekenaarstudie te ontwerp.

Die **Rekenaarstudie Aanlegtoets (RSAT)** is gebaseer op vaardighede benodig vir beroepe in die Inligtingstechnologiese (IT) wêreld van werk. Hierdie toets meet aanlegte benodig vir die vak rekenaarwetenskap vir leerders in grade 9-11. Logiese redenering en abstrakte denk- vermoë word gemeet en nie algemene- of aangeleerde kennis nie, asook nie intelligensie (IK) nie. Die toets is in die vorm van 'n vraag met vyf alternatiewe antwoorde waarvan net een antwoord korrek is. Daar is ook 'n sekere tydsbeperking vir elke subtoets. Die battery bestaan uit sewe subtoetse, naamlik:

1. Verbale Tegniese Redenering
2. Syferreekse
3. Karaktervergelyking
4. Sintaksvergelyking
5. Patroonmatriks
6. Vloediagramme
7. Dimensionele Redenering

‘n Kort beskrywing van elk van die subtoetse volg:

1. Verbale Tegniese Redenering

meet die vermoë om tegniese verbale inligting te begryp.

2. Syferreekse

meet numeriese redeneringsvermoë - die vermoë om verhoudinge tussen syfers te kan identifiseer.

3. Karaktervergelyking

meet die spoed en akkuraatheid in die vergelyking van nie-kontekstuele materiaal soos byvoorbeeld kodes, syfers, simbole en letters.

4. Sintaksvergelyking

meet die spoed en akkuraatheid in die vergelyking van kontekstuele materiaal terwyl ‘n stel reëls nagekom moet word.

5. Patroonmatriks

meet die vermoë om ‘n komplekse stel reëls te kan uitvoer. (Induktiewe redeneervermoë - as deel van abstrakte redenering).

6. Vloediagramme

meet die vermoë om reëls vanuit ‘n simboliese sisteem te kan aflei en dan toe te pas. (Deduktiewe redeneervermoë - as deel van abstrakte redenering).

7. Dimensionele Redenering

meet die vermoë om die eindresultaat van drie dimensionele figure se rotasies of bewegings te kan visualiseer en te kan manipuleer.

Om hierdie studie suksesvol te kan voltooi is dit nodig om die aanlegtoets uit te toets wat dan 50 leerders elk van grade 9-11 benodig. Die toets gaan ongeveer twee en ‘n halwe ure tot drie neem om te implementeer. Enige 50 leerders uit elke graad kan deelneem hoewel 25 dogters en 25 seuns per graad benodig word. Akademiese prestasie van die leerders moet verkieslik wyd

verspreid wees. Die feit dat die leerder die vak rekenaarstudie gekies het of beplan om te kies is nie 'n voorvereiste nie. Geen rekenaars of kennis van die rekenaar word benodig nie. Die toets is gestruktureerd vir potlood en papier wat saam met uitveërs, rofwerkpapier en antwoordblaaië verskaf sal word. Toetsafnemers sal verskaf word. Die leerders kan saam in byvoorbeeld die saal getoets word of apart in drie lokale, slegs wat die beste opsie vir die skool sal wees. Die toets moet verkieslik in die oggend ingeskakel word vanweë die verstandelike helderheidsfaktor.

Die resultate sal gebruik word vir die standaardisering van die toets. Professor G Bester verbonde aan die Departement Opvoedkundige Studies aan die Universiteit van Suid-Afrika (UNISA) is gekontrakteer om die standaardisering en statistieke te hanteer. Alle resultate sal vertroulik hanteer word. Na konsultasie met professors Jacobs en Bester kan resultate aan die voorligter onderwyser bekend gemaak word bywyse van 'n profielblad met 'n kort beskrywing van elke van die subtoetse en die aanleg gemeer.

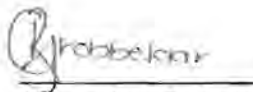
Vir enige verdere navrae kontak:

Mev. Rika Grobbelaar
Tel. no. (012) 346-7527
Faks. (012) 346-7527
Sel. (082) 968-1944

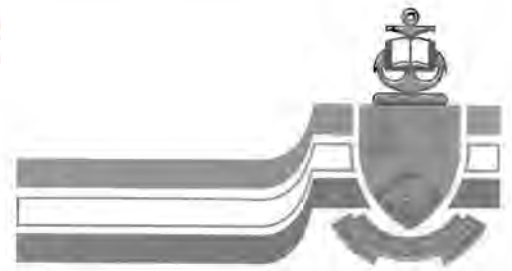
Prof. Dr. LJ Jacobs
Tel. no. (012) 420-3803
Departement Opvoedkundige Voorligting en Berading
Hoof: Sentrum vir Kinder en Volwasseneleiding

U gunstige oorweging in hierdie verband word hoog op prys gestel.

Die uwe



Rika Grobbelaar



Universiteit van Pretoria

Pretoria 0002 Republiek van Suid-Afrika Tel (012) 420-3147
Tel (012) 362-6817 Rekeninge: Tel (012) 420-2366
Faks (012) 420-3112 <http://www.up.ac.za>

Sentrum vir Kinder- en Volwasseneleiding

FAKULTEIT OPVOEDKUNDE

Departement Opvoedkundige
Voorligting en Berading

Die Hoof: Dr. LC Becker
Die Voorligter Onderwyser: Mev. S Josling
Hoërskool Waterkloof
Posbus 25085
MONUMENTPARK
0105

29 Maart 2001

Geagte Mevrouw Josling

I/S: VOORAF-TOETS VIR DIE REKENAARSTUDIE AANLEGTOETS (RSAT).

Ek verwys na ons telefoniese gesprek op Donderdag oggend 29 Maart en die daaropvolgende faks aan u.

Hoewel op kort kennisgewing sal dit hoog op prys gestel word indien u die moontlikheid, al dan nie, van die uittoetsing van die RSAT op die volgende datums kan oorweeg tydens die skool se kwartaal beplanning. Soos in die eerste brief uiteengesit, word 25 seuns en 25 dogters (50 leerders in totaal) uit 'n graad benodig. Siende u reeds aangedui het dat u skool meer as 50 leerders kan voorsien, word die volgende datums en grade voorgestel:

Maandag	:	7 Mei 2001	:	50 leerders - graad 9
Dinsdag	:	8 Mei 2001	:	50 leerders - graad 10
Woensdag	:	9 Mei 2001	:	50 leerders - graad 11
Maandag	:	28 Mei 2001	:	50 leerders - graad 10

Ingesluit vind 'n lys van skole betrokke op verskeie datums en tye. Vanweë die feit dat 600 leerders in totaal betrek moet word was dit nodig om terwille van koördinering 'n tydskedule saam te stel.



Indien die beplande tyd nie in orde is nie, sal u so gaaf wees om alternatiewe datums te identifiseer en so spoedig moontlik aan ons bekend te maak. Die studie is beplan rondom datums wat alreeds deur van die skole bekend gemaak is. Vanweë toets betroubaarheid en geldigheid kan daar ongelukkig nie te veel tyd verloop tussen die inskakeling van die toets by die verskillende skole nie en blyk die mees aanvaarbare datums die te wees vroeg in die kwartaal - April, Mei 2001.

Dit is belangrik om onder u aandag te bring dat daar skriftelik aansoek gedoen is om toestemming vir die uittoetsing van die Rekenaarstudie aanlegtoets, by die streeks bestuurders van die onderskeie streke van die Gauteng Onderwys Departement, te wete mnr. Moss Nkonyane vir die Tshwane-Noord Distrik (D3) en mnr. Timothy Makofane vir die Tshwane-Suid Distrik (D4).

Ons verneem graag van u.



Mev. Rika Grobbelaar
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Sel. (082) 968-1944

Prof. LJ Jacobs
Tel. no. (012) 420-3803
Department Opvoedkundige Voorligting en Berading
Hoof: Sentrum vir Kinder- en Volwasseneleiding



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FACULTY OF EDUCATION

Department of Educational
Guidance and Counselling

The Principal and Mrs. Moosa
Laudium Secondary School
Private Bag X5
Laudium
0037

7 March 2001

PhD-STUDY:

REQUEST FOR PRE-TEST OF THE COMPUTER SCIENCE APTITUDE TEST (CSAT).

Rika Grobbelaar (student number 8779015) is currently enrolled as a PhD student in Educational Psychology (Career Guidance Pedagogics) under the supervision of Professor LJ Jacobs, Department of Guidance and Counselling & Head: Centre for Child and Adult Care.

My PhD study focuses on career counselling for grades 9-11 with the aim of developing a new aptitude test for the learning area computer science.

Such a test will be in accordance with the demands of the fields of information technology (IT) which took the lead with regard to growth in professional employment over a five-year period. Rapid computerisation due to organisations increased dependency on computer technology as a means to remain competitive increases the need for IT professionals such as systems analysts, programmers, software systems engineers etc. Shortages in IT occupations mainly stem from organisations striving to remain competitive.

The **Computer Science Aptitude Test (CS-AT)** is based on the key skills involved in IT jobs and is compiled for measuring a number of related aptitudes for the subject computer science of pupils in grades 9-11. This test measures logical reasoning or thinking performance, it is not a test of general knowledge or an IQ (intelligence) test. The test is in the form of multiple choice questions. The questions have definite right and wrong answers, which must be selected from a

range of alternatives. There is a certain time limit for each subtest. The battery consists of:

1. Verbal Technical Reasoning
2. Number Series
3. Character Comparison
4. Syntax Comparison
5. Pattern Matrix
6. Flow Charts
7. Spatial Reasoning

A short description of each of the subtests follows:

1. Verbal Technical Reasoning

measures the ability to interpret written information set in a technical context.

2. Number Series

measures high level numerical reasoning skills, in particular recognition of the relationship between numbers.

3. Character Comparison

assesses speed and accuracy in the checking of non-contextual material such as codes composed of numbers, letters and symbols.

4. Syntax Comparison

measures speed and accuracy in the checking of contextual information while following a set of rules.

5. Pattern Matrix

assesses the ability to follow a set of complex instructions. (Inductive reasoning ability - as part of abstract thinking).

6. Flow Charts

assesses the ability to infer rules from a symbolic system and to apply these rules to new situations. (Deductive reasoning ability - as part of abstract thinking).

7. Spatial Reasoning

measures the ability to visualise and manipulate shapes in three dimensions given a two-dimensional drawing.

To complete this study successfully I need to perform a pre-test which involves 50 pupils each from grades 9 -11. The test will take approximately 2 hours. Pupils must be selected randomly, with equal numbers of boys and girls. The subject Computer Science is not compulsory for these selected pupils. No computers are required because the test is structured for pen and paper. Answering sheets, pencils and rubbers will be provided as well as test administrators - myself and three master degree students from the department of Educational Guidance and Counselling. The pupils can be tested together in one room or separately in their grades - whatever is suited to the school environment. The test can be administered early morning or after lunch.

The results will be used to standardise the test. Professor G. Bester of UNISA is contracted to help with the standardising and statistics. All results will be treated as confidential. After consulting with professors Jacobs and Bester results will be send to the career guidance teacher by means of a profile sheet with a brief description of the tests and the aptitudes measured.


For further enquiries please contact:

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Cell. (082) 968-1944

Prof. Dr. LJ Jacobs
Tel. no. (012) 420-3803
Department of Educational Guidance and Counselling
Head: Centre for Child and Adult Care

Your friendly co-operation in the above regard is appreciated.

Yours Faithfully



Rika Grobbelaar



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Sentrum vir Kinder- en Volwasseneleiding

FACULTY OF EDUCATION

Department of Educational
Guidance and Counselling

24 April 2001

Mr. Daya Chetty
Laudium Secondary School
Private Bag X5
Laudium
0037

SECOND REQUEST: PRE-TEST OF THE COMPUTER SCIENCE APTITUDE TEST.

To complete this PhD study successfully 600 pupils need to be tested (12 schools are involved - 50 pupils from a school, from grades 9-11).

I need to perform a pre-test which will involve 50 pupils from grade 9 (standard 7) from your school. The test will take approximately 2 hours and 30 min, from 08h00-10h30. I would like to implement the test on:

Date: Wednesday 3 May 2001 - grade 9

Please be so kind and let me know if the pre-test and date are in order.

Pupils must be selected randomly, with (if possible) equal numbers of boys and girls. The subject Computer Science is not compulsory for these selected pupils. No computers are required because the test is structured for pen and paper. Answering sheets and administrators will be provided. If possible the pupils need to be tested all together in one room.

A list of schools involved is included.

For further enquiries please contact me.



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Your friendly co-operation in the above regard is appreciated.

Handwritten signature of Rika Grobbelaar in black ink.

Rika Grobbelaar