

York Adult Assessment Battery-Revised (YAA-R)

Meesha Warmington^a

Susan E Stothard^b

Margaret J Snowling^c

University of York^a

Centre for Evaluation and Monitoring, University of

Durham^b

University of Oxford^c

Description of the YAA-R

The YAA-R is an assessment battery consisting of tests of reading, spelling, writing and phonological skills that provides a screening tool for adults with dyslexia. The battery aims to assess the abilities and competencies that are required by students who wish to pursue a course in further or higher education and thereby to assist in the identification of additional needs. The battery provides a learning profile against which to plan support and will be useful for students who wish to apply for examination arrangements and/or a DSA. The YAA-R has been standardised with 106 university students with no history of reading difficulty. The YAA-R is administered individually and takes approximately 60 minutes to complete. Additionally, the YAA-R may be administered in long or short form.

List of tests

1. Reading (reading comprehension, reading accuracy, reading time, reading rate) - *Reading Comprehension test - The History of Chocolate*
2. Summarisation skills (the ability to summarize a passage; writing under time pressure) - *Written Précis test*
3. *Spelling* - spelling rate score on the *Written Précis test*
4. Phonological processing (phoneme awareness, phonological retrieval and processing) – *Spoonerisms; RAN digits and objects*
5. Writing speed (handwriting and typing speed) - *Handwriting Speed test, Typing Speed test*

Reference

Warmington, M., Stothard, S. E., & Snowling, M. J. (2012). Assessing Dyslexia in Higher Education: The York Adult Assessment Battery-Revised. *Journal of Research in Special Educational Needs*. doi: 10.1111/j.1471-3802.2012.01264.x

YAA-R Record Form

Name: _____	Year	Month	Day
Academic Department: _____	Date of Testing		
	Date of Birth		
	Age		

Examiner: _____

Student Status: Undergraduate/Postgraduate

Gender: Male/Female

Family history of language impairment (e.g., Dyslexia): Yes/No

Summary of Scores

Tests	Long Form		Short Form	
	Raw Score	Centile Score	Raw Score	Centile Score
<i>Reading Comprehension</i>				
Comprehension (max = 15)				
Reading Accuracy (max = 492)				
Reading Time (sec)				
Reading Rate (word/min)				
<i>Written Précis</i>				
Content (max = 20)				
Précis Time (sec)				
Précis Rate (words/min)				
Spelling Error Rate				
<i>Writing Speed - Rate (word/min)</i>				
Handwriting				
Typing				
<i>Spoonerisms</i>				
Accuracy (max=24)				
Total Time (sec)				
Rate (sec/item)				
<i>RAN Rate (word/sec)</i>				
Digits				
Objects				

Reading Comprehension - The History of Chocolate

Materials: Stop watch, YAA-R record form; passage, questions and answers.

Instructions to be read aloud to individual: Please read the following passage aloud. I will be timing how long you take to read the passage, but please read at a normal rate. Following this, you will be asked some questions about the passage; you are allowed to look back at the passage to answer the questions.

Note to examiner: Individual is not allowed to go back to a question and change his/her answer once it has passed. Record answers below questions. Record time in seconds and note reading errors: mispronunciation, omission, substitution and additions.

Chocolate is now enjoyed all over the world but until the late sixteenth century it was only found in Central and South America. For years the indigenous people of Central and South America, the Aztecs and the Mayans, had been making chocolate from cacao beans and consuming it as a drink. Cacao beans carried great importance for both cultures: the Mayans considered them to be a gift from the gods and the Aztecs associated them with fertility. Both societies even used them as currency. Cacao beans were made into a chocolate drink by roasting them and adding water and chilli spice. The mixture also had medicinal purposes and was an important part of many traditional ceremonies.

Christopher Columbus was introduced to cacao and chocolate on his last journey to the Americas in 1502. He took some beans back to Spain to show the king and queen, however, they were viewed with apathy. Chocolate didn't truly arrive in Europe until 1585, when a shipment of beans came from Mexico to Spain. At this stage chocolate was still served as a drink but the Spaniards replaced the chilli with milk and sugar to sweeten the bitter taste. Cacao beans were in short supply and Spain guarded the secret of chocolate jealously. However, the luxury began to spread across the rest of Europe during the 17th century. Italy was next to appreciate chocolate and it finally arrived in England in 1650. Chocolate was only available to the wealthiest, who consumed it in fashionable 'chocolate houses', much like today's coffee shops. The first chocolate house opened in London in 1657.

Chocolate remained a beverage for almost two hundred more years. It wasn't until 1847 that Joseph Fry created the first solid chocolate bar for eating. Others followed soon after, with John Cadbury adding a chocolate bar to his range. The solid chocolate bar was based on cocoa butter, extracted from cacao beans in a method developed by the Dutch chocolate maker, Casparus van Houten in 1828. Chocolate was still dark at this point and there was not quite the selection that we have today. In 1875 Daniel Peter produced the first milk chocolate bar using powdered milk; he was assisted in his work by Henri Nestle, a name still affiliated with chocolate today.

The world continues to be obsessed with chocolate. We still love to eat chocolate, and Switzerland currently consumes the most at 10kg per person each year. Contemporary chefs not only produce chocolate based deserts and puddings but also combine sweet and savoury by adding chocolate to main course dishes, to stews, meat pies and even brussel sprouts. Modern society has also found other uses for chocolate. Chocolate face masks and chocolate massages are just some of the inventive ways in which chocolate has been used in health spas and beauty salons! It seems that chocolate, though now far removed from that known to the Aztecs, is as relished now as it was then.

(492 words)

Reading Time = _____ seconds

Errors: Mispronunciations = _____ Omissions = _____ Additions = _____
 Substitutions = _____ Total Number of Errors = _____

Accuracy = 492 – Total number of errors = 492 - _____ = _____

Reading Rate = $\frac{\text{Number of Words}}{\text{Reading Time}} \times 60 = \frac{492}{\text{Reading Time}} \times 60 = \frac{\text{_____}}{\text{words/minute}}$

Reading Comprehension - Questions

Note to examiner: Read questions aloud to individual. Individual is not allowed to see questions.

- 1 Prior to the 16th Century, where was chocolate found?

- 2 The Mayans and the Aztecs enjoyed chocolate as a drink. Name three other purposes that it had for these people?

- 3 What does indigenous mean (see paragraph 1)?

- 4 In the context of paragraph 2, what does apathy mean?

- 5 How do you think Columbus felt about the King and Queen's reaction?

- 6 Why did the Spaniards replace the chilli with milk and sugar?

- 7 Give two reasons why it took a long time for other countries to be able to make chocolate drinks?

- 8 Why did the Spaniards guard the secret of chocolate with jealousy?
- 9 What formed the foundation of the first solid chocolate bar?
- 10 Who made it possible for chocolate to evolve from a beverage to a solid bar?
- 11 What was the difference between chocolate made prior to 1875 and chocolate made after 1875?
- 12 In the context of paragraph 3, what does affiliated mean?
- 13 In what ways are the modern uses of chocolate similar to that of the Aztecs and Mayans?
- 14 Today we eat and drink chocolate, what other modern uses for chocolate are given in this passage?
- 15 In the context of paragraph 4 what does relished mean?

Written Précis

Materials: Stop watch; YAA-R record form; YAA-R Written Précis sheet.

Instructions to be read aloud to individual: Please write a summary of the main points about the passage *The History of Chocolate*. You cannot look back at the passage to write this summary. I am going to time how long you take to write. You will be given a maximum of 10 minutes to write your summary. When I say stop, please stop writing; however, if you finish your summary before the time is up, please let me know.

Note to examiner: Please note that this task **MUST be administered immediately after** the Reading Comprehension test. If the individual finishes before 10 minutes, please note the time on their sheet. Record time in seconds.

Writing Speed

Materials: Stop watch; YAA-R record form; YAA-R Handwriting speed sheet; Word Processor.

Instructions to be read aloud to individual: Handwriting - Please copy the following sentence - *Erosion is a gravity driven process that moves solids in the environment* - as many times as you can and as quickly as you can until I tell you to stop writing. Typing – Please type the following sentence – *Transportation is the movement of people and good from one location to another* - as many times as you can and as quickly as you can until I tell you to stop typing.

Note to examiner: Stop the individual after 2 minutes for both tasks. Please note for the typing task that the sentence must be typed out for the individual at the top of the page (as in the handwriting task). Point to the sentence as you read it aloud.

Spoonerisms

Materials: Stop watch; YAA-R record form.

Instruction to be read aloud to individual: This task is a word game. I am going to tell you the name of a famous person and I need you to swap the beginning sounds of their first and last name. For e.g., *John Lennon* become *Lohn Jennon*. See I took the /J/ sound from John and the /L/ sound from Lennon and swapped them around. Let's start with some practice items.

Scoring: Total score of 2 for each item. Therefore assign 1 point for each target in the item. E.g., 2 points for *Lohn Jennon*; a score of 1 if either of these target is incorrect; as score of 0 if entire item is incorrect. Spoonerism rate is calculated for correct items only (i.e., score of 2). Record time in seconds.

Note to examiner: Begin timing at the offset of saying the item and stop timing when the individual has completed their response. If the individual is particularly struggling with this task please stop and note this. However, do make an effort to complete all items.

No.	Items	Target Response		Score /2	Syllables	Response Time
a	Michael Jackson	Jichael	Mackson			
b	Wayne Rooney	Rayne	Wooney			
1	Jensen Button	Bensen	Jutton		4	
2	Jo Whiley	Wo	Jiley		3	
3	Keifer Sutherland	Seifer	Kutherland		5	
4	Heather Mills	Meather	Hills		3	
5	Susan Boyle	Busan	Soyle		3	
6	Richard Hammond	Hichard	Rammond		4	
7	Chris Tarrant	Tris	Carrant		3	
8	Madeline Duggan	Dadeline	Muggan		5	
9	David Tenant	Tavid	Denant		4	
10	Colin Firth	Folin	Kirth		3	
11	Patsy Kensit	Katsy	Pensit		4	
12	Barbara Windsor	Warbara	Bindsor		5	
TOTAL Accuracy & Time				/24		secs
TOTAL Correct Items						
TOTAL Time for Correct Items						secs
Rate (sec/item)		TOTAL Time for Correct Items ÷ TOTAL Correct Items				secs

Rapid Naming

Materials: Stop watch; YAA-R record form; RAN digits and objects test (and practice) items.

Instructions to be read aloud to individual: Please name the following digits/objects aloud from left to right as fast as you can. Let's begin with some practice items.

Note to examiner: Time how long the individual takes to name the list of digits/objects, noting errors. Administer the practice items first. During the practice for objects, correct individual if he/she makes an error; objects are: *shoe, car, duck, frog*. Items are to be named from left to right. Start timing once they start naming and stop timing when they name the last item. Record time in seconds.

Digits

Time (sec) : _____

Errors : _____

Rate: $\frac{\text{number of items}}{\text{time}} = \frac{50}{\text{_____}} = \frac{\text{_____}}{\text{words/second}}$

Practice Items

8 6 5 2 3 9 4 8 1 7

Test Items

3	9	4	6	8
7	1	5	3	8
9	2	8	2	1
4	3	6	5	7
9	1	8	2	4
1	3	7	5	9
6	2	4	9	5
1	7	5	8	4
6	3	2	8	1
7	5	9	4	3

Objects

Time (sec) : _____

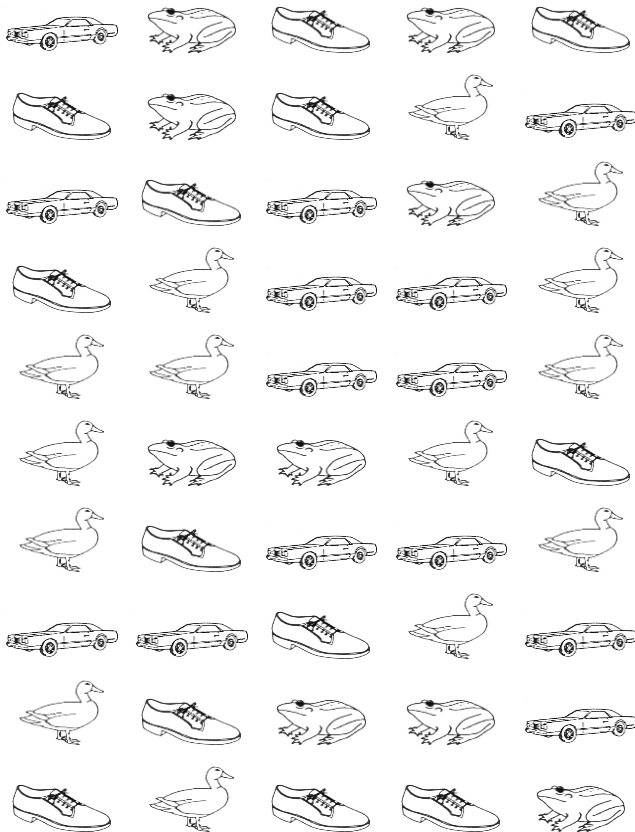
Errors : _____

Rate: $\frac{\text{number of items}}{\text{time}} = \frac{50}{\text{time}} = \frac{\text{words}}{\text{second}}$

Practice Items



Test Items



The History of Chocolate

Chocolate is now enjoyed all over the world but until the late sixteenth century it was only found in Central and South America. For years the indigenous people of Central and South America, the Aztecs and the Mayans, had been making chocolate from cacao beans and consuming it as a drink. Cacao beans carried great importance for both cultures: the Mayans considered them to be a gift from the gods and the Aztecs associated them with fertility. Both societies even used them as currency. Cacao beans were made into a chocolate drink by roasting them and adding water and chilli spice. The mixture also had medicinal purposes and was an important part of many traditional ceremonies.

Christopher Columbus was introduced to cacao and chocolate on his last journey to the Americas in 1502. He took some beans back to Spain to show the king and queen, however, they were viewed with apathy. Chocolate didn't truly arrive in Europe until 1585, when a shipment of beans came from Mexico to Spain. At this stage chocolate was still served as a drink but the Spaniards replaced the chilli with milk and sugar to sweeten the bitter taste. Cacao beans were in short supply and Spain guarded the secret of chocolate jealously. However, the luxury began to spread across the rest of Europe during the 17th century. Italy was next to appreciate chocolate and it finally arrived in England in 1650. Chocolate was only available to the wealthiest, who consumed it in fashionable 'chocolate houses', much like today's coffee shops. The first chocolate house opened in London in 1657.

Chocolate remained a beverage for almost two hundred more years. It wasn't until 1847 that Joseph Fry created the first solid chocolate bar for eating. Others followed soon after, with John Cadbury adding a chocolate bar to his range. The solid chocolate bar was based on cocoa butter, extracted from cacao beans in a method developed by the Dutch chocolate maker, Casparus van Houten in 1828. Chocolate was still dark at this point and there was not quite the selection that we have today. In 1875 Daniel Peter produced the first milk chocolate bar using powdered milk; he was assisted in his work by Henri Nestle, a name still affiliated with chocolate today.

The world continues to be obsessed with chocolate. We still love to eat chocolate, and Switzerland currently consumes the most at 10kg per person each year. Contemporary chefs not only produce chocolate based deserts and puddings but also combine sweet and savoury by adding chocolate to main course dishes, to stews, meat pies and even brussel sprouts. Modern society has also found other uses for chocolate. Chocolate face masks and chocolate massages are just some of the inventive ways in which chocolate has been used in health spas and beauty salons! It seems that chocolate, though now far removed from that known to the Aztecs, is as relished now as it was then.

Reading Comprehension Answers

Question	Correct Response Score 1	Incorrect Responses Score 0
1. Prior to the 16 th Century, where was chocolate found?	Central & South America Must have both to score 1	Americas (Q)
2. The Mayans and the Aztecs enjoyed chocolate as a drink. Name three other purposes that it had for these people?	Currency, medical purposes, traditional ceremonies Must have all three to score 1	Fertility
3. What does indigenous mean (see paragraph 1)?	Originating in and characteristic of a particular region or country; native	
4. In the context of paragraph 2, what does apathy mean?	Lacking in interest; indifferent; disinterested; not interested; do not care	Disdain; distaste; negatively; uncertainty; disapproval; not appreciated; disliked
5. How do you think Columbus felt about the King and Queen's reaction?	Disappointed; upset; hurt; gutted	Affronted; not happy; annoyed
6. Why did the Spaniards replace the chilli with milk and sugar?	To sweeten the bitter taste; to sweeten	To taste different (Q)
7. Give two reasons why it took a long time for other countries to be able to make chocolate drinks?	Short supply and Spain guarded it with secrecy Must have both to score 1	Cocoa beans were expensive

Question	Correct Response Score 1	Incorrect Responses Score 0
8. Why did the Spaniards guard the secret of chocolate with jealousy?	To maintain their monopoly on chocolate; to keep the price of chocolate high; it was in short supply so they wanted to keep it to themselves; they did not want anyone else to have it	Short supply (Q)
9. What formed the foundation of the first solid chocolate bar?	Cocoa butter	Dutch method
10. Who made it possible for chocolate to evolve from a beverage to a solid bar?	Casparus van Houten; van Houten	Joseph Fry; The Dutch; Dutch method
11. What was the difference between chocolate made prior to 1875 and chocolate made after 1875?	It was still dark before 1875; milk was added to it after 1875	Chocolate made after 1875 was made of powdered milk (Q) solid chocolate was made using milk and became lighter in appearance
12. In the context of paragraph 3, what does affiliated mean?	Connected to; associated with; attached to; linked to	
13. In what ways are the modern uses of chocolate similar to that of the Aztecs and Mayans?	Still served as a drink (beverage) today; ingested; consumed; used for health purposes; medical purposes	Used for purposes other than for eating (Q) Eating (Q)

Question	Correct Response Score 1	Incorrect Responses Score 0
14. Today we eat and drink chocolate, what other modern uses for chocolate are given in this passage?	Face masks & chocolate massages	Beauty salons and health spas (Q) Served as desserts; savoury dishes
15. In the context of paragraph 4 what does relished mean?	Enjoyed; savoured; loved; greatly enjoyed	Popular; appreciated

Time = _____seconds

Number of words = _____

Writing Speed (seconds) = $\frac{\text{number of words}}{\text{time}} \times 60 = \underline{\hspace{1cm}} \times 60 = \underline{\hspace{1cm}}$ words/minute

Content = _____

Number of Spelling Errors = _____

Spelling Error Rate = $\frac{\text{NumberofErrors}}{\text{NumberofWords}} \times 100 = \underline{\hspace{1cm}} \times 100 = \underline{\hspace{1cm}}$

Scoring for Written Précis

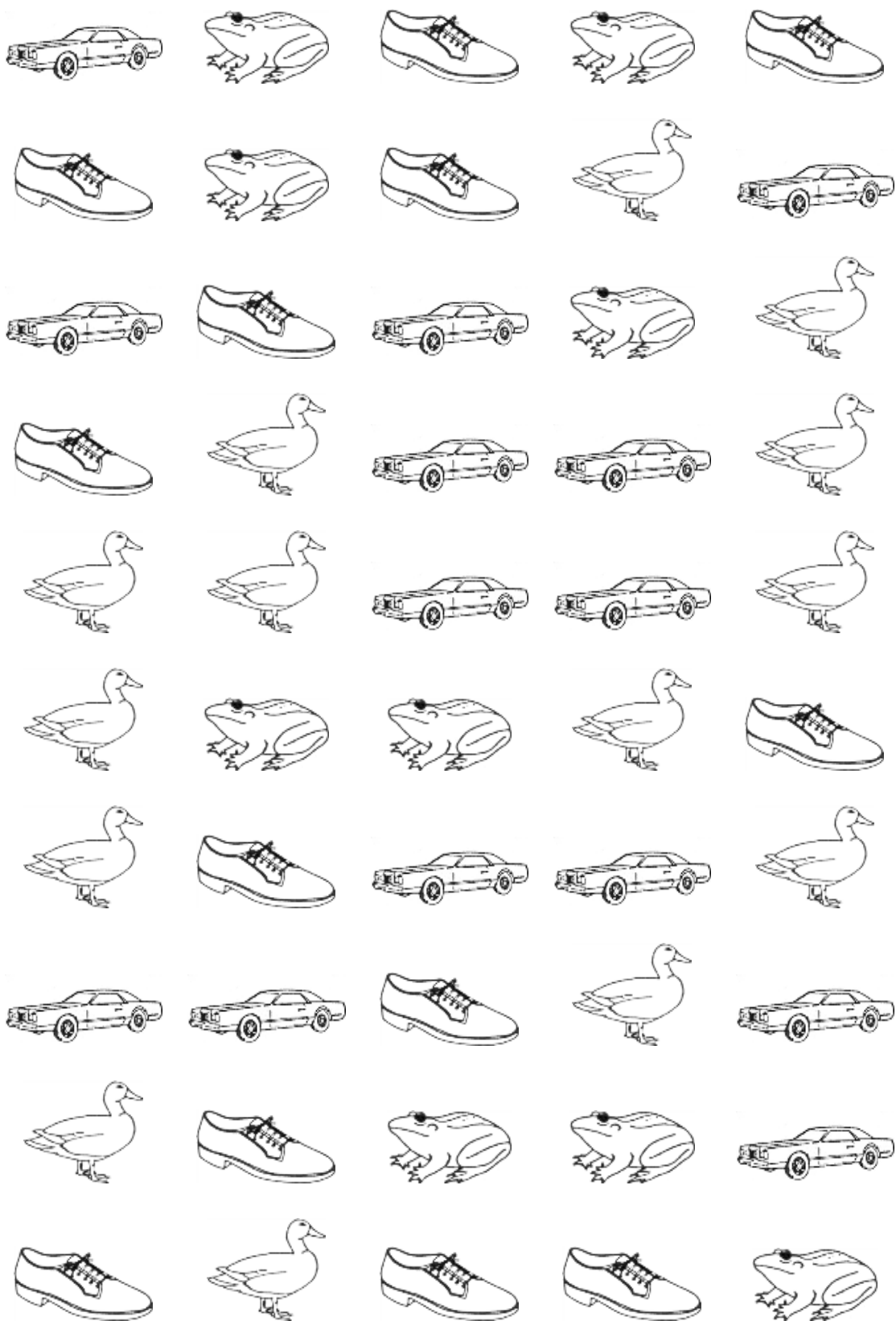
Note to examiner: Score 1 for each point (total of 20 points). Please note that spelling errors **do not** affect scoring, **except for the distinction between cacao beans and cocoa butter**. Additionally, to gain a score of 1 each point must be included within the correct context.

1. Central and South America
2. Aztecs and Mayans
3. Cacao beans
4. Currency/medicinal purposes/traditional ceremonies
5. Made from water and chilli spice/chilli
6. Christopher Columbus/Columbus
7. He took some beans back to Spain/back to show the King & Queen
8. King and Queen did not like it/viewed with apathy/apathetic/disregarded/not interested/did not care/indifferent
9. Spaniards replaced chilli with milk and sugar/added milk and sugar
10. Spain guarded secret/secret guarded/guarded jealously
11. Luxury/regarded as a luxury/wealthy/expensive/rich people
12. Spread to Italy and England/spread to Europe
13. Joseph Fry/Fry
14. John Cadbury/Cadbury
15. Solid bar
16. Powdered milk
17. Henri Nestle
18. Savoury/main course/main dish
19. Today/modern society/now
20. Face masks/chocolate face masks/massages/chocolate massages

8 6 5 2 3 9 4 8 1 7

3	9	4	6	8
7	1	5	3	8
9	2	8	2	1
4	3	6	5	7
9	1	8	2	4
1	3	7	5	9
6	2	4	9	5
1	7	5	8	4
6	3	2	8	1
7	5	9	4	3





Typing Speed

Transportation is the movement of people and goods from one location to another.

Number of Words : _____

Writing Speed = $\frac{\text{number of words}}{2}$ = _____

Appendix B

Normative data based on a sample of 106 university students with no history of reading difficulty.

Centile Score	5	15	25	40	50	60	75	85	95	Mean	SD	Confidence Intervals (95%)
<i>Tests</i>												
<i>Reading Comprehension</i>												
Comprehension (max = 15)	6	7	8	9	10	11	12		13	9.74	2.30	9.30-10.19
Reading Accuracy (max = 492)	479	482	484	486	487	488	490	491	492	486.33	4.69	485.43-487.23
Reading Time (sec)	233.14	207	197.10	185	179.73	174	164.99	160.30	148.73	182.77	24.20	178.11-187.43
Reading Rate (word/min)	126.62	142.61	149.77	159.57	164.24	169.66	178.92	184.15	198.48	164.15	20.39	160.22-168.07
<i>Written Précis</i>												
Content (max = 20)	6	9	10	12	13	14	15	16	18	12.55	3.59	11.86-13.25
Précis Time (sec)	600		551	471.89	424.56	390.68	336.74	280.84	199.11	428.21	130.41	403.09-453.33
Précis Rate (words/min)	15.54	17.90	18.87	20.79	21.70	22.88	24.12	25.99	29.42	21.80	4.09	21.01-22.59
Spelling Error Rate	5.92	3.34	2.64	1.92	1.56	.99	.57	.00		1.89	2.04	1.49-2.28

Centile Score	5	15	25	40	50	60	75	85	95	Mean	SD	Confidence Intervals (95%)
<i>Tests</i>												
<i>Writing Speed - Rate (word/min)</i>												
Handwriting	23.62	26	27.62	29.50	31.25	32	34.50	35.50	38.37	31.09	4.41	30.23-31.94
Typing	24.52	30.50	35.38	38.50	42	45.60	52	63.82	75.12	45.06	14.79	42.21-47.91
<i>Spoonerisms</i>												
Accuracy (max=24)	15	20.05	21	22	23_____		24_____			21.89	2.97	21.32-22.47
Total Time (sec)	124.35	61.39	50.70	39.78	33.70	27.44	24.93	21.51	18.05	45.22	37.65	37.97-52.47
Rate (sec/item)	4.77	2.49	1.96	1.59	1.35	1.13	.94	.87	.69	1.76	1.36	1.50-2.02
<i>RAN Rate (word/sec)</i>												
Digits	1.97	2.61	2.71	2.99	3.23	3.44	3.73	4.01	4.54	3.24	.73	3.10-3.39
Objects	1.24	1.49	1.65	1.78	1.88	1.99	2.16	2.29	2.47	1.88	.35	1.82-1.95