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Development of metacognitive skills in young adolescents : a bumpy ride to the high road

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Appendix A

Criteria for assessing the quality of metacognitive skillfulness in history

	Score
Orientation	
• Not reading the title and/or subtitles of paragraphs	0
• No activity prior to task performance	1
• Some orientations while reading, not (entirely) prior to task performance	2
• Obvious orientation at text level (e.g., looking at the structure of the text; reading subtitles of paragraphs) prior to task performance	3
• Aforementioned activities, including deeper (e.g., stating expectations about the content of the text prior to reading; activate prior knowledge)	4
Planning	
• Absent	0
• Superficial action (e.g., rereading arbitrary parts without specific goal)	1
• Navigating through text with a goal or another planned activity (e.g., selectively marking text parts; take notes)	2
• Aforementioned activities plus good time management	3
• Aforementioned activities plus executing a plan that was thought of in advance, (e.g., first reading whole text, followed by reading each paragraph and paraphrasing each paragraph in one's own words before reading the next paragraph)	4
Evaluation	
• Absent	0
• Just utterances like "I don't understand this", not followed by any action	1
• Self-corrections after having noticed failure or misunderstanding	2
• Variety of deeper evaluation and/or monitoring (e.g., checking comprehension, self-control by selecting text parts looking for information)	3
• Aforementioned plus explicitly formulating the learning outcome of this evaluation process	4

Elaboration

- | | |
|--|---|
| • Absent | 0 |
| • Some shallow elaborations elicited by questions/assignments in the text, not spontaneously | 1 |
| • Some shallow elaborations during text reading (e.g., paraphrasing almost literally) | 2 |
| • As below, but not during the whole task performance | 3 |
| • Deeper elaborations with clear conclusions formulated in whole sentences | 4 |

Appendix B

Criteria for assessing the quality of metacognitive skillfulness in math

	Score
Orientation	
• Absent	0
• Reading the assignments/task demands carefully prior to task performance	1
• Reading the assignments/task demands prior to task performance plus superficial orientations (e.g., verifying the number of assignments)	2
• Obvious orientation (visualizing the problem by making a sketch or by schematizing important information) prior to task performance	3
• Aforementioned activities, but deeper and more complete (e.g., activating prior knowledge; relating to a previously encountered, similar problem)	4
Planning	
• Absent	0
• Action plan consists in consulting explanation sheet, not followed by any action	1
• Action plan is executed only partly, followed by trial-and-error	2
• Action plan is executed partly, followed by a new plan	3
• Problem is solved by action plan that was formulated in advance	4
Evaluation	
• Absent	0
• Just utterances like “I don’t understand this”, not followed by any action	1
• Self-corrections after having noticed failure or misunderstanding; uncertainty leading to consult the explanation sheet	2
• Variety of deeper evaluation activities (e.g., checking comprehension, self-control, verifying the outcome systematically, questioning the appropriateness of the plan)	3
• Aforementioned plus explicitly evaluating the outcome of the learning process	4

Elaboration

- | | |
|--|---|
| • Absent | 0 |
| • Occasionally relating the outcome to the assignment or problem statement | 1 |
| • Systematically relating the outcome to the assignment or problem statement | 2 |
| • Concluding which information was important to solve the problem; stating which information was redundant | 3 |
| • After having solved the problem, student reflects on what was learned and its usefulness for future situations | 4 |

Appendix C

Correlations between intellectual ability, metacognitive skills, and learning performance over the years

Legend

- | | |
|--|---|
| 1. Intellectual ability (IA) Number Series 13 yrs | 27. MetaHQI Evaluation 14 yrs |
| 2. IA Verbal Analogies 13 yrs | 28. MetaHQI Elaboration 14 yrs |
| 3. IA Unfolding Figures 13 yrs | 29. MetaMQI Orientation 15 yrs |
| 4. IA Memory 13 yrs | 30. MetaMQI Planning 15 yrs |
| 5. IA Number Series 14 yrs | 31. MetaMQI Evaluation 15 yrs |
| 6. IA Verbal Analogies 14 yrs | 32. MetaMQI Elaboration 15 yrs |
| 7. IA Unfolding Figures 14 yrs | 33. MetaHQI Orientation 15 yrs |
| 8. IA Memory 14 yrs | 34. MetaHQI Planning 15 yrs |
| 9. IA Number Series 15 yrs | 35. MetaHQI Evaluation 15 yrs |
| 10. IA Verbal Analogies 15 yrs | 36. MetaHQI Elaboration 15 yrs |
| 11. IA Unfolding Figures 15 yrs | 37. Metacognition Math quantity (MetaMQn) Orientation 13 yrs |
| 12. IA Memory 15 yrs | 38. MetaMQn Planning 13 yrs |
| 13. Metacognition Math quality (MetaMQI) Orientation 13 yrs | 39. MetaMQn Evaluation 13 yrs |
| 14. MetaMQI Planning 13 yrs | 40. MetaMQn Elaboration 13 yrs |
| 15. MetaMQI Evaluation 13 yrs | 41. Metacognition History quantity (MetaHQn) Orientation 13 yrs |
| 16. MetaMQI Elaboration 13 yrs | 42. MetaHQn Planning 13 yrs |
| 17. Metacognition History quality (MetaHQI) Orientation 13 yrs | 43. MetaHQn Evaluation 13 yrs |
| 18. MetaHQI Planning 13 yrs | 44. MetaHQn Elaboration 13 yrs |
| 19. MetaHQI Evaluation 13 yrs | 45. MetaMQn Orientation 14 yrs |
| 20. MetaHQI Elaboration 13 yrs | 46. MetaMQn Planning 14 yrs |
| 21. MetaMQI Orientation 14 yrs | 47. MetaMQn Evaluation 14 yrs |
| 22. MetaMQI Planning 14 yrs | 48. MetaMQn Elaboration 14 yrs |
| 23. MetaMQI Evaluation 14 yrs | 49. MetaHQn Orientation 14 yrs |
| 24. MetaMQI Elaboration 14 yrs | 50. MetaHQn Planning 14 yrs |
| 25. MetaHQI Orientation 14 yrs | 51. MetaHQn Evaluation 14 yrs |
| 26. MetaHQI Planning 14 yrs | 52. MetaHQn Elaboration 14 yrs |
| | 53. MetaMQn Orientation 15 yrs |
| | 54. MetaMQn Planning 15 yrs |

- 55. MetaMQn Evaluation 15 yrs
- 56. MetaMQn Elaboration 15 yrs
- 57. MetaHQn Orientation 15 yrs
- 58. MetaHQn Planning 15 yrs
- 59. MetaHQn Evaluation 15 yrs
- 60. MetaHQn Elaboration 15 yrs
- 61. Learning Performance Math (LPM) 13 yrs
- 62. Learning Performance History (LPH) 13 yrs
- 63. LPM 14 yrs
- 64. LPH 14 yrs
- 65. LPM 15 yrs
- 66. LPH 15 yrs

Note: $N=25$

$p < .05$ if $r \geq .40$; $p < .01$ if $r \geq .50$

Correlations between intellectual ability, metacognitive skills, and learning performance over the years

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	.58															
3	.70	.56														
4	.18	.29	.29													
5	.56	.53	.49	.45												
6	.34	.59	.37	-.07	.59											
7	.49	.39	.82	.33	.55	.20										
8	.27	.06	.36	.44	.31	-.10	.53									
9	.48	.39	.38	.40	.78	.36	.55	.23								
10	.44	.58	.51	.11	.36	.63	.32	.03	.21							
11	.35	.43	.61	.36	.60	.29	.77	.21	.75	.32						
12	.17	.19	.43	.49	.41	.03	.63	.59	.37	.20	.40					
13	.03	.28	.13	.09	.19	.01	.33	-.09	.17	.16	.37	.34				
14	.55	.64	.58	.18	.61	.32	.70	.22	.55	.43	.61	.40	.48			
15	.27	.32	.29	.14	.52	.25	.38	.04	.25	.06	.34	.22	.61	.45		
16	-.04	.23	-.03	.39	.23	.20	-.01	.09	.24	.30	.18	.43	-.04	.06	-.31	
17	-.11	.25	-.24	.09	.05	.15	-.36	-.46	.17	.18	-.04	-.14	-.03	.08	-.17	.43
18	.36	.33	.12	.12	.33	.11	.00	-.22	.27	.26	.18	.03	.25	.44	.08	.42
19	.03	.41	.09	.24	.27	.25	-.10	-.09	.15	.21	.08	.02	-.09	.20	.06	.37
20	.19	.36	.02	.08	.12	.02	-.04	-.39	.06	.26	.15	.00	.42	.44	.13	.31
21	-.23	.02	-.21	.06	.06	.17	-.28	-.43	.09	.15	.06	-.38	.05	-.09	.03	.09
22	.39	.44	.30	.28	.67	.40	.35	.26	.68	.31	.39	.21	-.04	.60	.14	.15
23	.23	.45	.13	.24	.52	.50	.23	.04	.40	.41	.42	.07	.23	.39	.34	.35
24	.30	.41	.17	.23	.62	.29	.35	.03	.63	.22	.51	.04	.26	.55	.44	-.01
25	.00	.43	.25	.35	.26	-.05	.43	.27	.23	.23	.52	.44	.42	.39	.16	.37
26	-.07	.17	.09	.07	.08	-.04	.16	-.06	.18	.01	.18	.25	.12	.20	-.04	.15
27	-.15	.41	.00	.12	.20	.29	.06	-.38	.11	.18	.26	.06	.44	.25	.41	.22
28	.02	.46	.20	.45	.42	.20	.29	-.10	.36	.28	.39	.21	.34	.41	.30	.22
29	-.04	.00	-.06	.18	.08	.18	-.08	-.01	.10	.20	.00	.19	.07	-.28	-.22	.38
30	.34	.59	.37	.36	.53	.34	.48	.35	.67	.35	.61	.41	.33	.51	.11	.44
31	-.04	.23	-.03	.39	.23	.20	-.01	.09	.24	.30	.18	.43	-.04	.06	-.31	1.00
32	.36	.55	.29	.29	.43	.23	.32	-.05	.58	.50	.57	.20	.47	.54	.18	.43
33	.02	-.05	-.10	.24	.00	-.21	-.04	-.05	-.07	.04	.04	-.05	.28	.00	.24	.09
34	.05	.24	.00	.23	.33	.10	.10	-.10	.40	.30	.27	.32	.43	.33	.21	.44
35	-.24	.17	-.15	.06	.08	.30	-.15	-.28	.18	.33	.17	.05	.17	.15	-.04	.49
36	.07	.30	.00	.34	.39	.13	.06	-.12	.43	.33	.30	.23	.26	.38	.06	.51
37	-.01	.13	.18	.33	.26	-.08	.36	.31	.11	.07	.42	.23	.56	.21	.65	-.20
38	.51	.43	.53	.24	.66	.23	.65	.21	.63	.18	.62	.32	.28	.86	.54	-.09
39	.10	.25	.32	.24	.30	.30	.32	.07	.08	.12	.36	.23	.55	.17	.76	-.14

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
40	.59	.74	.54	.35	.58	.27	.52	.03	.45	.34	.51	.21	.46	.81	.58	-.02
41	-.18	.17	-.01	.41	.17	.15	-.05	.04	.05	.06	.01	.22	-.11	.11	.02	.31
42	.19	-.07	.04	.33	.24	-.08	.02	.22	.00	-.03	-.12	.30	.17	.18	.17	.33
43	-.16	.20	-.12	.39	.09	-.02	-.21	.01	.03	-.05	-.01	-.04	-.09	.09	.09	.30
44	.27	.35	.02	.05	.26	.11	.01	-.27	.24	.19	.18	.07	.32	.47	.13	.23
45	-.36	-.07	-.25	.16	.06	.04	-.21	-.30	.03	.12	.18	-.26	.29	-.18	.15	.00
46	.27	.15	.19	.10	.53	.42	.25	.11	.54	.16	.30	-.06	.03	.31	.23	-.10
47	-.27	-.11	-.18	-.03	.05	.19	-.20	-.23	-.01	.02	.13	-.17	.12	-.26	.21	.07
48	.44	.55	.25	.25	.63	.44	.21	-.15	.47	.38	.41	-.07	.28	.51	.48	-.01
49	-.08	.24	.12	.37	.25	-.06	.25	.17	.07	.15	.36	.43	.57	.23	.50	.19
50	-.03	.34	.16	.22	.19	-.06	.31	.00	.31	.17	.39	.34	.49	.39	.10	.20
51	-.30	.10	-.03	.09	.01	.17	.05	-.23	.00	.10	.25	.11	.50	.01	.36	.10
52	-.29	.03	-.14	.23	.24	.02	.11	-.13	.35	.02	.28	.14	.29	.22	.04	.17
53	-.05	.07	.00	.07	.07	.18	-.15	-.35	-.07	.25	.05	-.06	.11	-.11	-.16	.35
54	-.10	.04	-.07	-.03	.43	.51	.04	-.21	.43	.13	.28	.11	.20	.21	.31	.18
55	-.23	-.01	-.17	.46	.08	.18	-.24	-.06	.01	.15	-.02	.14	-.08	-.31	-.17	.66
56	.18	.52	.29	.30	.27	.25	.30	-.03	.38	.62	.48	.31	.53	.42	.13	.51
57	-.08	.04	-.08	.37	.04	-.23	.09	.19	-.07	.15	.05	.19	.40	.16	.17	.11
58	-.16	-.04	-.14	.28	.19	.10	-.05	-.09	.24	.32	.23	.00	.09	.00	.01	.35
59	-.12	.04	-.22	.09	.01	.18	-.34	-.24	-.07	.07	-.14	-.14	.00	-.13	-.06	.31
60	-.26	.10	-.19	.33	.11	.07	-.15	-.24	.19	.25	.12	.11	.15	.04	-.13	.52
61	.64	.64	.64	.42	.75	.40	.71	.49	.61	.44	.56	.47	.22	.86	.40	.09
62	.41	.50	.24	.23	.60	.33	.12	-.10	.39	.36	.19	.13	.11	.56	.24	.17
63	.33	.45	.14	.22	.69	.36	.28	.19	.59	.31	.39	.31	.26	.64	.36	.32
64	.29	.46	.14	.28	.45	.26	.09	-.13	.29	.47	.15	.12	.22	.57	.23	.19
65	.32	.42	.41	.36	.67	.40	.49	.29	.75	.41	.64	.51	.19	.62	.17	.37
66	.22	.46	.04	.00	.32	.25	.00	-.19	.32	.23	.12	.04	.21	.48	.00	.35

Correlations between intellectual ability, metacognitive skills, and learning performance over the years

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
18	.48															
19	.56	.42														
20	.43	.81	.30													
21	.33	.27	.41	.17												
22	.26	.36	.38	.16	.13											
23	.13	.29	.38	.34	.40	.32										
24	.10	.30	.20	.23	.24	.70	.37									
25	.10	.15	.36	.27	-.09	.14	.27	.30								
26	.24	-.06	.24	.19	-.21	.18	-.08	.07	.44							
27	.36	.18	.47	.51	.31	.06	.63	.19	.40	.44						
28	.46	.33	.44	.50	.24	.47	.40	.51	.48	.52	.71					
29	.02	.08	-.33	-.07	.14	-.12	.03	-.19	-.16	-.35	-.15	-.09				
30	.25	.36	.29	.17	.13	.49	.43	.41	.53	.12	.19	.42	.23			
31	.43	.42	.37	.31	.09	.15	.35	-.01	.37	.15	.22	.22	.38	.44		
32	.52	.58	.43	.51	.28	.39	.55	.39	.55	.27	.46	.56	.07	.73	.43	
33	.04	.28	-.04	.41	.08	-.21	.04	.20	.21	.02	.14	.26	-.13	.09	.09	.19
34	.42	.61	.55	.57	.35	.34	.40	.37	.43	.27	.52	.58	.08	.48	.44	.69
35	.65	.40	.45	.33	.45	.14	.43	-.03	.08	-.07	.44	.28	.26	.29	.49	.50
36	.58	.68	.54	.64	.50	.44	.49	.37	.31	.22	.50	.67	.16	.48	.51	.67
37	-.28	-.13	-.02	.03	.00	.03	.21	.32	.52	.13	.28	.33	-.19	.21	-.20	.22
38	.02	.36	.17	.30	.05	.66	.30	.63	.18	.11	.15	.37	-.35	.38	-.09	.34
39	-.29	-.14	-.02	-.01	.05	-.16	.39	.08	.12	-.06	.43	.18	-.03	.08	-.14	.09
40	.15	.42	.35	.53	.02	.39	.45	.48	.38	.28	.51	.56	-.32	.36	-.02	.55
41	.39	.25	.45	.32	.09	.40	.05	.21	.12	.15	.25	.51	-.13	.14	.31	-.04
42	-.03	.49	.11	.34	.03	.04	.23	-.18	-.11	-.13	.02	-.02	-.09	.04	.33	.13
43	.50	.36	.82	.30	.42	.31	.32	.20	.22	.02	.36	.40	-.36	.18	.30	.24
44	.38	.77	.23	.90	.02	.36	.27	.33	.18	.16	.38	.47	-.01	.23	.23	.40
45	.11	-.03	.10	.08	.75	-.05	.34	.17	.07	-.10	.33	.20	.14	.11	.00	.25
46	.00	.23	.21	-.04	.44	.54	.45	.47	-.22	-.14	.10	.29	.06	.34	-.10	.25
47	.14	-.01	.29	.04	.42	-.17	.53	-.12	-.03	-.15	.49	.11	.03	.01	.07	.19
48	.21	.53	.20	.47	.29	.61	.41	.81	.11	-.12	.26	.53	.04	.29	-.01	.37
49	-.07	.00	.23	.13	.05	-.05	.28	.27	.70	.16	.35	.26	-.13	.17	.19	.29
50	.31	.18	.33	.35	.00	.27	.17	.22	.75	.69	.51	.61	-.14	.49	.20	.65
51	.17	.03	.20	.21	.30	-.09	.48	.03	.20	.06	.67	.44	.10	.13	.10	.29
52	.38	.31	.29	.39	.35	.34	.26	.34	.30	.32	.50	.72	.08	.39	.17	.40
53	.11	.26	-.24	.21	.33	-.19	.02	-.16	-.27	-.26	-.01	-.08	.66	-.03	.35	.06
54	.23	.24	.13	.19	.36	.48	.38	.39	-.18	.12	.38	.38	.16	.21	.18	.17
55	.31	.22	.23	.18	.31	-.07	.36	-.19	-.05	-.09	.30	.26	.52	.11	.66	.16

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
56	.43	.46	.40	.43	.29	.23	.45	.26	.57	.25	.46	.54	.19	.67	.51	.90
57	.05	.00	-.16	.19	-.05	-.27	.05	.02	.29	.00	.09	.19	-.01	.15	.11	.22
58	.42	.30	.33	.24	.51	.11	.51	.09	.15	-.11	.37	.37	.30	.23	.35	.51
59	.34	.30	.41	.29	.27	-.16	.49	-.33	-.12	-.20	.42	.05	.19	-.02	.31	.22
60	.67	.50	.54	.52	.46	.23	.31	.18	.30	.24	.51	.69	.20	.36	.52	.52
61	-.03	.27	.23	.22	-.19	.66	.43	.53	.32	.16	.15	.41	-.24	.48	.09	.39
62	.44	.62	.47	.56	.24	.73	.31	.49	.12	.26	.29	.56	-.09	.24	.17	.41
63	.37	.52	.47	.42	.12	.73	.55	.69	.41	.20	.32	.54	-.23	.58	.32	.56
64	.51	.53	.35	.54	.26	.52	.19	.58	.18	.16	.21	.56	-.15	.26	.19	.40
65	.37	.31	.30	.06	.11	.64	.33	.43	.32	.05	.03	.29	.10	.66	.37	.55
66	.61	.71	.59	.59	.28	.48	.42	.25	.21	.25	.42	.49	-.04	.45	.35	.63

Correlations between intellectual ability, metacognitive skills, and learning performance over the years

	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
34	.29															
35	-.09	.52														
36	.17	.83	.62													
37	.44	.16	-.13	.02												
38	.03	.23	.03	.33	.24											
39	.20	.00	.03	-.08	.67	.19										
40	.20	.37	.11	.41	.30	.72	.34									
41	.22	.26	.24	.36	.06	.24	.00	.11								
42	.29	.26	.14	.25	.03	.17	.18	.19	.13							
43	.15	.39	.43	.48	.13	.18	.07	.23	.65	.22						
44	.25	.55	.27	.61	-.04	.38	-.11	.48	.42	.24	.22					
45	.29	.22	.31	.23	.45	-.07	.36	-.06	.07	-.02	.24	-.09				
46	-.14	.28	.23	.43	-.01	.39	.15	.27	.00	.10	.17	.08	.12			
47	-.01	.21	.49	.21	.27	-.21	.53	-.12	.04	.01	.37	-.04	.54	.25		
48	.17	.32	.12	.46	.25	.56	.21	.56	.29	-.04	.22	.57	.15	.48	.01	
49	.21	.25	.00	.16	.69	.14	.54	.28	.05	.03	.24	-.02	.29	-.21	.20	.19
50	.08	.56	.14	.39	.34	.20	-.02	.40	.09	-.05	.10	.29	.15	-.14	-.07	.03
51	-.05	.26	.44	.31	.38	-.06	.63	.08	.14	-.05	.28	.11	.44	.19	.79	.18
52	.20	.66	.44	.70	.12	.21	-.09	.22	.44	.00	.28	.48	.26	.41	.17	.28
53	.01	-.03	.37	.17	-.21	-.15	.10	-.09	-.07	.20	-.17	.07	.30	.00	.04	.15
54	-.07	.36	.44	.45	.09	.35	.29	.07	.36	.13	.17	.31	.33	.55	.41	.45
55	.14	.26	.54	.43	-.06	-.33	.21	-.16	.34	.37	.36	.08	.30	.15	.50	.05
56	.25	.70	.56	.63	.27	.15	.20	.43	.02	.12	.23	.26	.33	.16	.22	.25
57	.72	.15	.11	.13	.41	.01	.22	.25	.07	.25	.04	.00	.23	-.19	-.12	-.05
58	.17	.59	.75	.66	.13	-.03	.04	.08	.10	.16	.33	.17	.45	.35	.52	.19
59	-.08	.32	.67	.36	-.22	-.27	.14	.07	.07	.36	.38	.24	.14	.20	.62	-.04
60	.29	.76	.65	.84	.00	-.04	-.13	.12	.54	.10	.53	.49	.32	.23	.33	.26
61	-.03	.20	.02	.33	.22	.77	.23	.75	.23	.18	.16	.33	-.29	.45	-.21	.53
62	-.09	.41	.16	.62	-.02	.59	-.08	.56	.40	.23	.34	.63	-.06	.34	-.15	.69
63	.13	.53	.21	.60	.22	.61	.07	.48	.38	.17	.41	.51	-.03	.40	.05	.60
64	.33	.40	.20	.59	.05	.53	-.07	.55	.47	.12	.34	.52	.05	.21	-.29	.65
65	-.22	.31	.41	.46	.08	.61	.07	.34	.24	.03	.21	.17	.00	.34	.00	.37
66	-.18	.57	.49	.74	-.25	.30	-.18	.44	.16	.20	.40	.59	-.13	.43	.11	.38

	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
50	.38																
51	.43	.20															
52	-.02	.52	.33														
53	-.11	-.29	.13	.10													
54	-.04	-.01	.46	.44	.26												
55	.05	-.15	.46	.24	.53	.36											
56	.37	.60	.38	.36	.23	.17	.31										
57	.31	.16	-.02	.17	.06	-.24	.12	.35									
58	.07	.16	.36	.55	.20	.29	.56	.53	.25								
59	-.09	-.08	.41	.23	.18	.13	.60	.21	.00	.60							
60	.07	.41	.40	.80	.12	.36	.58	.58	.20	.71	.44						
61	.21	.20	-.02	.17	-.22	.18	-.12	.27	.15	.01	-.07	.02					
62	.10	.28	.04	.30	.01	.41	.03	.23	-.22	.11	.02	.35	.55				
63	.34	.35	.17	.38	-.32	.45	.01	.39	.04	.18	-.02	.38	.66	.69			
64	.20	.20	-.07	.32	.05	.24	.00	.35	.34	.14	-.13	.43	.54	.74	.66		
65	.26	.28	.11	.24	-.01	.37	.05	.44	.00	.26	-.04	.25	.63	.48	.66	.47	
66	-.01	.37	.26	.44	.00	.33	.16	.48	-.19	.27	.38	.54	.38	.69	.63	.48	.41