



# **Matthew effects in a remedial reading intervention**

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# Introduction

- In this new era of National Standards, schools need to raise achievement levels to meet performance targets. What is the most effective use of tutoring resources to do this?
- Many schools are targeting their classroom teaching to the “bubble” pupils to do this, that is, students just below the Standard are given “disproportionate classroom attention and make larger score gains” (Ho, 2008, p. 357).
- The research question for the study was whether extra reading tuition is equally effective for all struggling readers, or whether it advantages only the “bubble” poor readers?

# The effects of tuition in after-school

- The study involved a reading tuition program that had been operating for several years. The results are based on total data collected over that period.
- The research question for the study was whether extra reading tuition is equally effective for all struggling readers, or whether it advantages only the “bubble” poor readers?

# Method

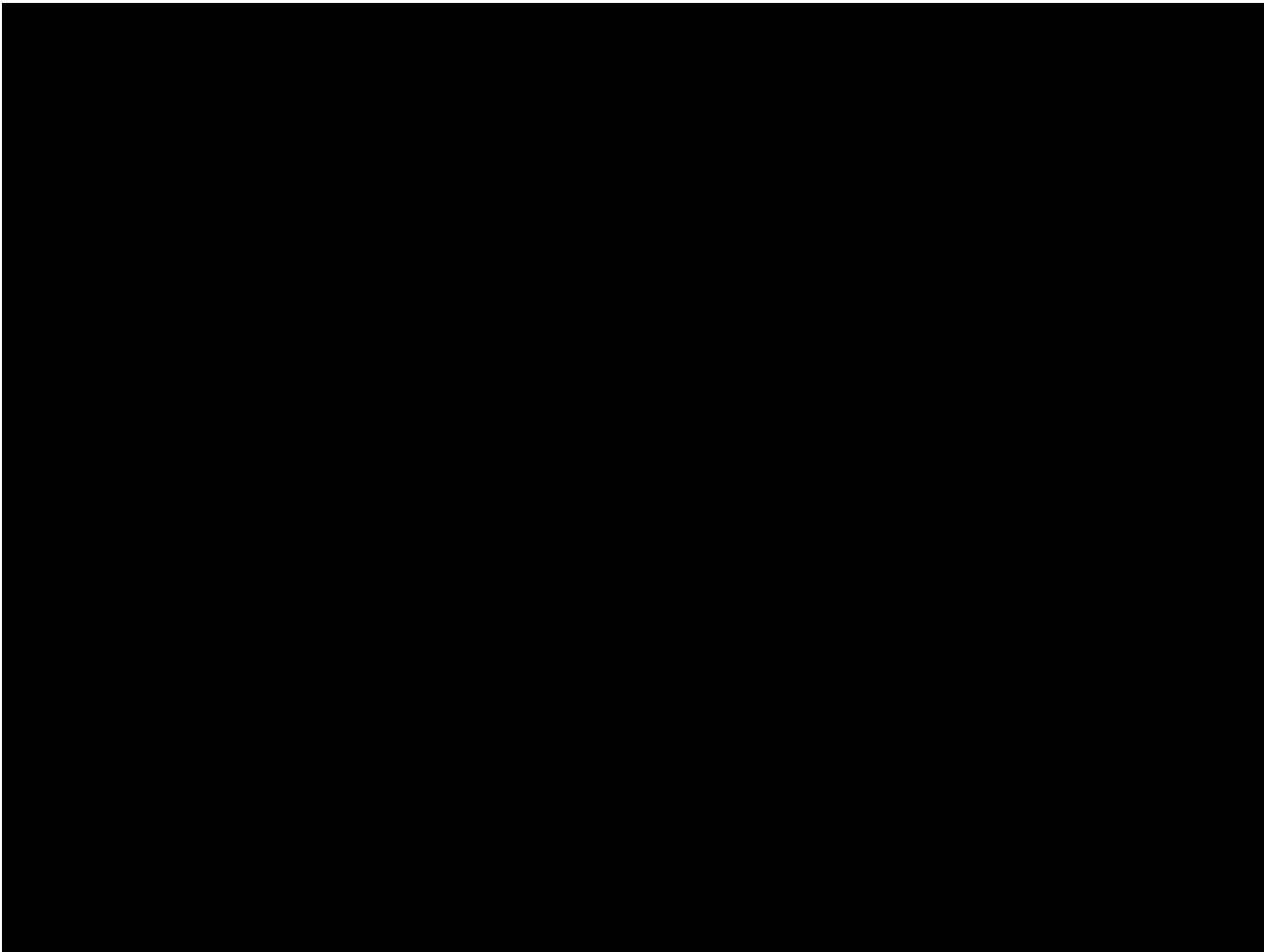
- Participants - 190 total pupils who attended the reading program over a five year period.
- Ages ranged from 6 through to 15 years.
- The average socioeconomic level of parents was in the middle range, for example, self-employed, nurse, account manager, and fitter and turner.
- Measures - Tutors assessed reading at the beginning and end of each year using the Neale Analysis of Reading Ability.
- Phonemic awareness was assessed with the Gough-Kastler-Roper Test.



# Procedure

- Each pupil, once a week, had a specially tailored lesson that suited their reading skills. The chart below shows a typical lesson and the times allocated to each part (Nicholson, 2006; Dymock & Nicholson, 2007).

Teaching focus	Time allocation
Phonemic awareness and phonics	25
High frequency words	5
Reading of text	15
Comprehension	5
Spelling	5
Review	5

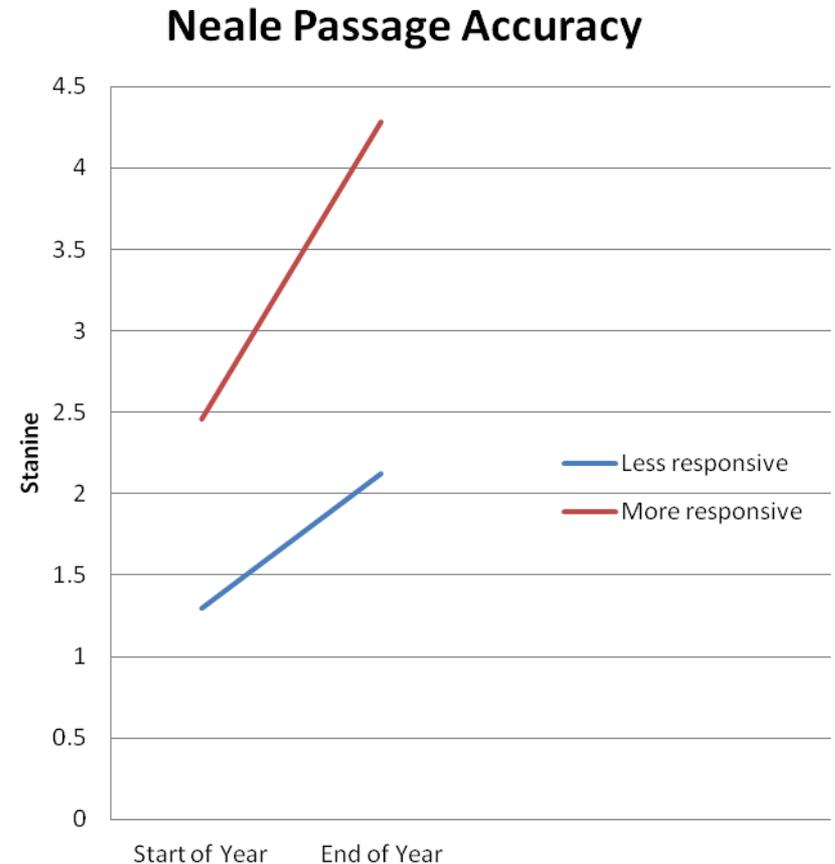


# Results

- There were 79 who were more responsive (42 percent) and 111 less responsive (58 percent).
- The average age of the more responsive was 10.34 (SD = 1.92) and the less responsive was 9.62 (SD – 1.69) years.

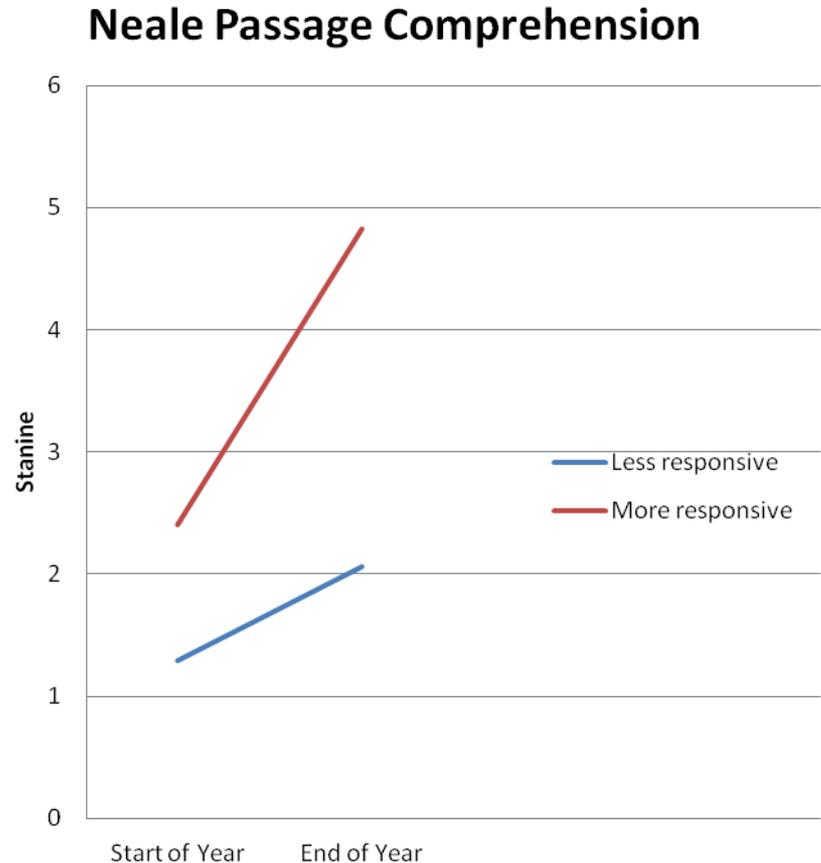
# Reading results

- The more responsive group went from 2.46 (SD = 1.03) to 4.28 (SD = 1.11), a gain of 1.82 stanines
- whereas the less responsive group went from 1.30 (SD = .55) to 2.12 (SD = 1.05), a gain of .82 stanines



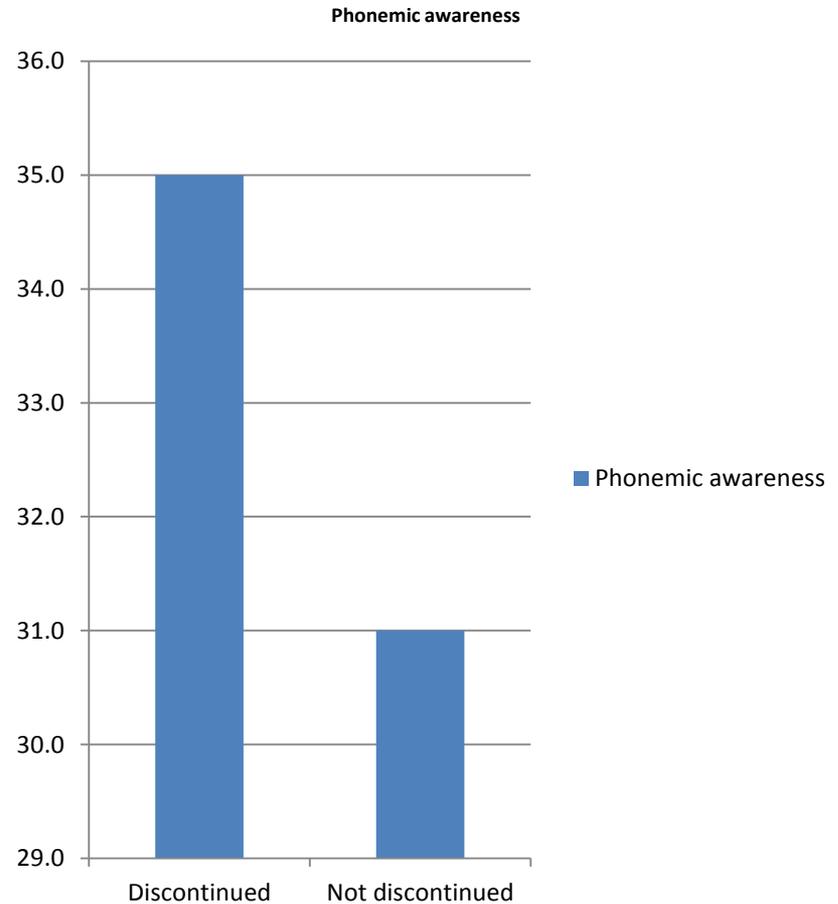
# Reading results

- The more responsive group went from 2.42 (SD = 1.20) to 4.81 (SD = .95), a gain of 2.39 stanines
- whereas the less responsive group went from 1.32 (SD = .7) to 2.15 (SD = .99), a gain of .83 stanines



# Phonemic awareness

- Maximum score = 42
- the more responsive group (N=79) started with a score of 35.23 (SD = 8.51)
- and the less responsive 30.78 (SD = 10.58)



# Discussion

- The after-school reading tuition in this study was successful only for those who started the program behind, but not too far behind in reading, and who started the program with average or better receptive vocabulary and higher phonemic awareness.
- Tunmer, Hoover, and Chapman (2010) hypothesise that the poor reader with better vocabulary is able to disambiguate decoding miscues such as “stowmatch” for *stomach*, that is, due to better knowledge of vocabulary, for example, what *stomach* means. This in turn helps reading comprehension.
- The results of the present study may apply to remedial interventions in general in that pupils who are not too far behind when they start the program make better progress (Chapman, Tunmer, & Prochnow, 2001; Reynolds & Wheldall, 2007).
- A policy implication of this study is that remedial interventions can get more value for the dollar if they focus on the bubble kids, that is, the ones who are not too far behind.

# Discussion continued

- It seems that remedial reading programs have their own Matthew effects, that is, rich-get-richer and poor-get-poorer effects, (Stanovich, 1986; Nicholson, 2003, 2008).
- A possible solution to prevent schools focusing on just the bubble pupils is for schools to be required to show growth gains for all pupils, that is added value, rather than simply the numbers above and below the Standards cut-off (Nicholson, 2010; Ho 2008).



# References

- Chapman, J. W., Tunmer, W. E., & Prochnow, J. E. (2001). Does success in the Reading Recovery program depend on developing proficiency in phonological processing skills? A longitudinal study in a whole language instructional context. *Scientific Studies of Reading, 5*, 141-176.
- Dymock, S.J., & Nicholson, T. (2007). *Teaching text structures: A key to nonfiction reading success*. New York: Scholastic, 240 pp.
- Gough, P.B., & Tunmer, W.E. (1986). Decoding, reading, and reading disability. *Remedial and Special Education, 7*, 6-10.
- Ho, A. D. (2008). The problem with “proficiency”: Limitations of statistics and policy under No Child Left Behind. *Educational researcher, 37*, 351-360.
- Iversen, S., Tunmer, W. E., & Chapman, J. W. (2005). The effects of varying group size on the Reading Recovery approach of preventive early intervention. *Journal of Learning Disabilities, 38*, 456-472.
- Nicholson, T. (2010, March). *Is your child up to Standard?* Paper presented at Professorial Lecture Series, Massey University, New Zealand.
- Nicholson, T. (2008). Achieving equity for Maori children in reading by 2020. *New Zealand Annual Review of Education, 18*, 159-182.
- Nicholson, T. (2006). *Phonics handbook*. Chichester, England: Wiley.
- Nicholson, T. (2003). Risk factors in learning to read, and what to do about them. In B. Foorman (Ed.), *Preventing and remediating reading difficulties: Bringing science to scale* (pp. 165-196). Timonium, MD: York Press.
- Reynolds, M., & Wheldall, K. (2007). Reading recovery 20 years down the track: Looking forward, looking back. *Journal of Disability, Development, and Education, 54*, 199-223.
- Stanovich, K. (1986). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly, 21*, 360-406.
- Tunmer, W.E., Hoover, W. A., & Chapman, J.W. (2010, July). *Vocabulary knowledge and the development of word recognition skills: The missing link?* Paper presented at the meeting of the Society for the Scientific Study of Reading, Berlin, Germany.
- Tunmer, W.E., & Chapman, J.W. (2007). Language-related differences between discrepancy-defined and non-discrepancy defined poor readers: A longitudinal study of dyslexia in New Zealand. *Dyslexia, 13*, 42