

Reading Through Gaming in Primary School

Introduction and Background Research:

Reading is an important skill for Primary school aged children to develop, and as such, there has been a lot of research focused around reading ability. One important piece of research done in this area was conducted by Hatcher (2000), who developed a method of determining the reading grade of any book by determining whether certain features were present, in order to give a numerical value to its difficulty. These features include factors such as the presence of auxiliaries, the number of lines, and the numbers of letters in words. Hatcher's work has been extensively used by educators to determine the grades of books and aid children's learning, and work has been done to adapt Hatcher's method and apply it to more than just books, including a website grading system.

Hatcher, P. (2000). Predictors of Reading Recovery book levels. *Journal of Research in Reading*, 23(1), 67-77. <https://doi.org/10.1111/1467-9817.00103>

Aims and Objectives of the Research:

Various researchers have confirmed the effectiveness of board games as a motivational tool in young children in regards to learning (Jipa et al., 2023). However, there is a significant gap in understanding of how to determine which games are suitable for which reading levels and abilities. The aim of this research was to adapt the Hatcher reading scale to fit boardgames, in order for educators to be able to use the scale to determine the reading level of any boardgame. This study also aimed to test the accuracy of the provisional scale by measuring the ability of Primary school children to read and play the board games predicted to be appropriate for their reading level.

Jipa, C., Berce, C., & Cosma, M. (2023). THE IMPACT OF USING BOARD GAMES ON THE DEVELOPMENT OF SITUATIONAL MOTIVATION IN PRIMARY SCHOOL CHILDREN. *Educația Plus*, 33(S1), 10-27

Research Methodology:

The data collection was conducted in a UK Primary School, where running records were taken of 72 students in years 1-3 (aged 5-8 years old) playing board games. With some students playing more than 1 game, the total of running records taken came to of 114 (with only 93 being used due to some being under 20 words). In order to obtain these running records, one researcher acted as the "teacher", leading the game and ensuring smooth play, with two researchers writing running records of any reading involved in the board game, with each researcher completing the running record for half of the students playing at the time. The students played games for around 30 minutes in groups of 2-6, with reading levels matched up where possible. The games were split by year, with students playing games predicted to be at their reading level based on (e.g. monopoly junior level 1 was played with year 1 students, whereas Cluedo was played with year 3 students) – this was based on provisional estimates of board game reading level. The reading levels of the students was collected from internal reading tests conducted by the school, and a continuous numerical scale was created to account for the mix of scales the school used to measure reading level (Read Write Inc. in year 1, and Oxford Reading Scale in years 2 and 3).

Read Write Inc.	Oxford Reading Scale	Reading Number Used
	Lilac	0
	Pink	1
Purple	Red	2
Pink	Yellow	3
Orange	Blue	4
Yellow	Green	5
Blue	Orange	6
Grey	Turquoise	7
	Purple	8
	Gold	9
	White	10
	Lime	11
	Brown	12
	Grey	13
	BEYOND	14

Fig 1. "Junior Colourbrain"

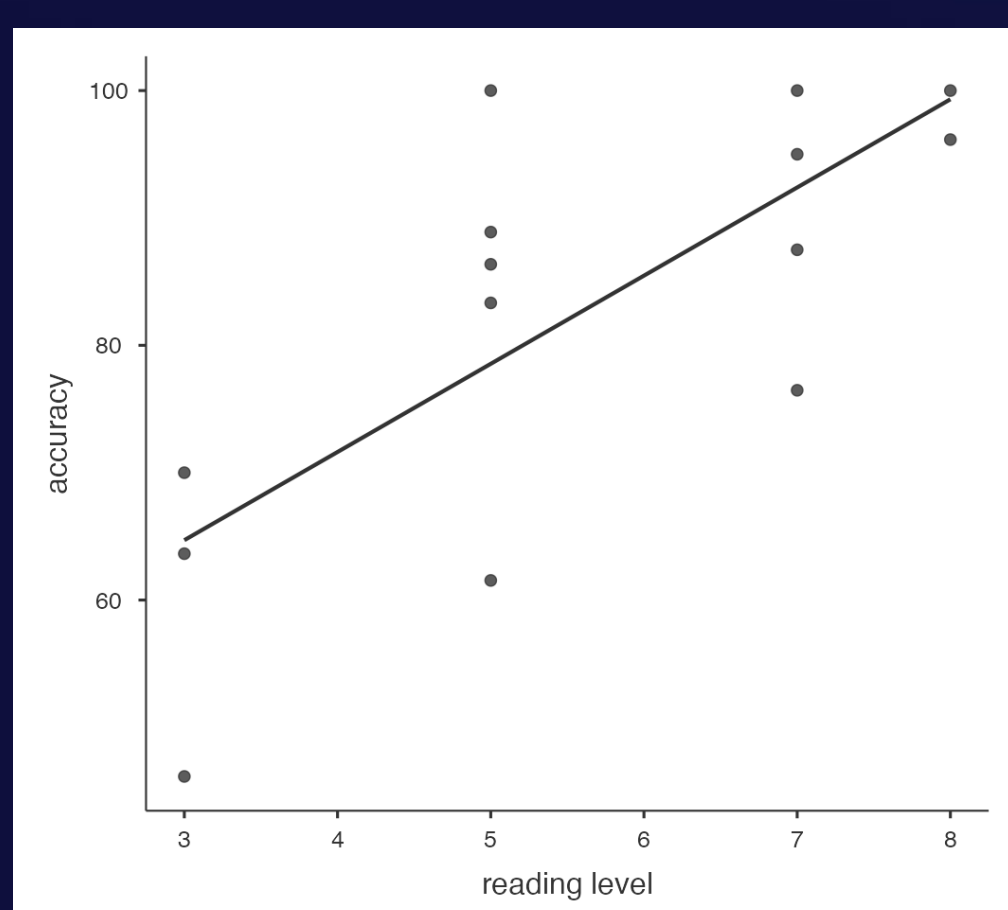


Fig 2. "Monopoly Junior L1"

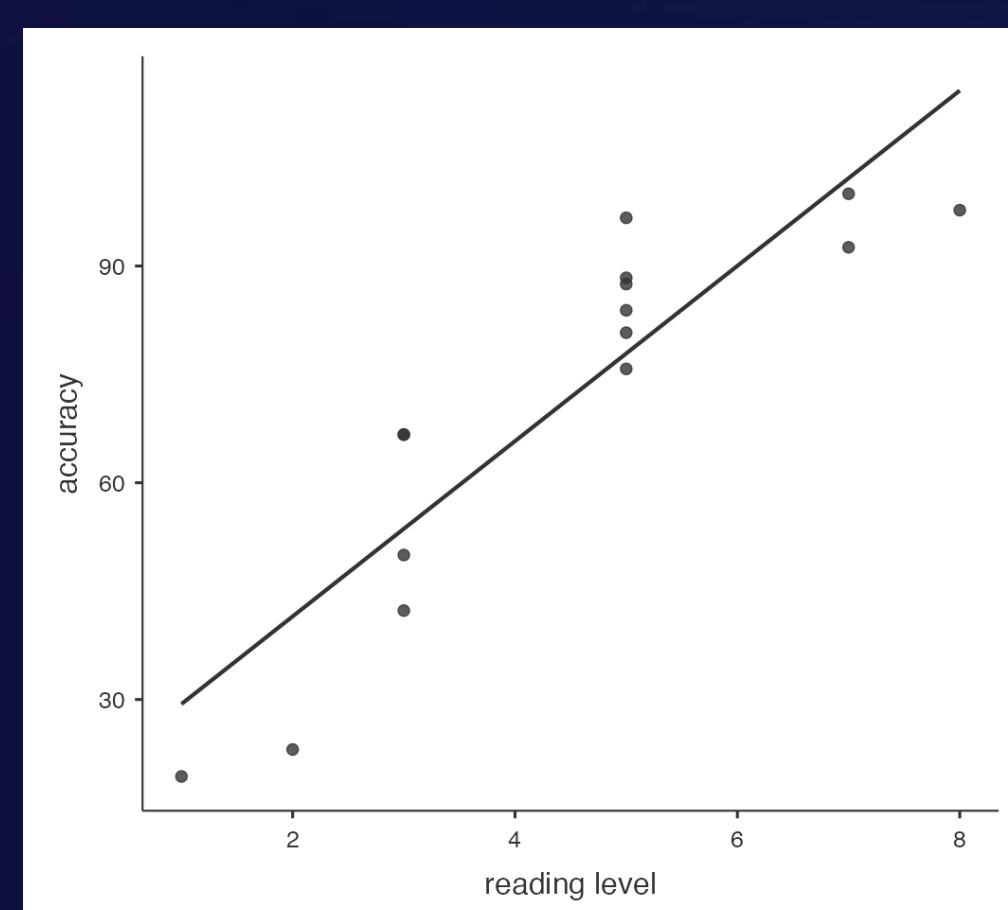
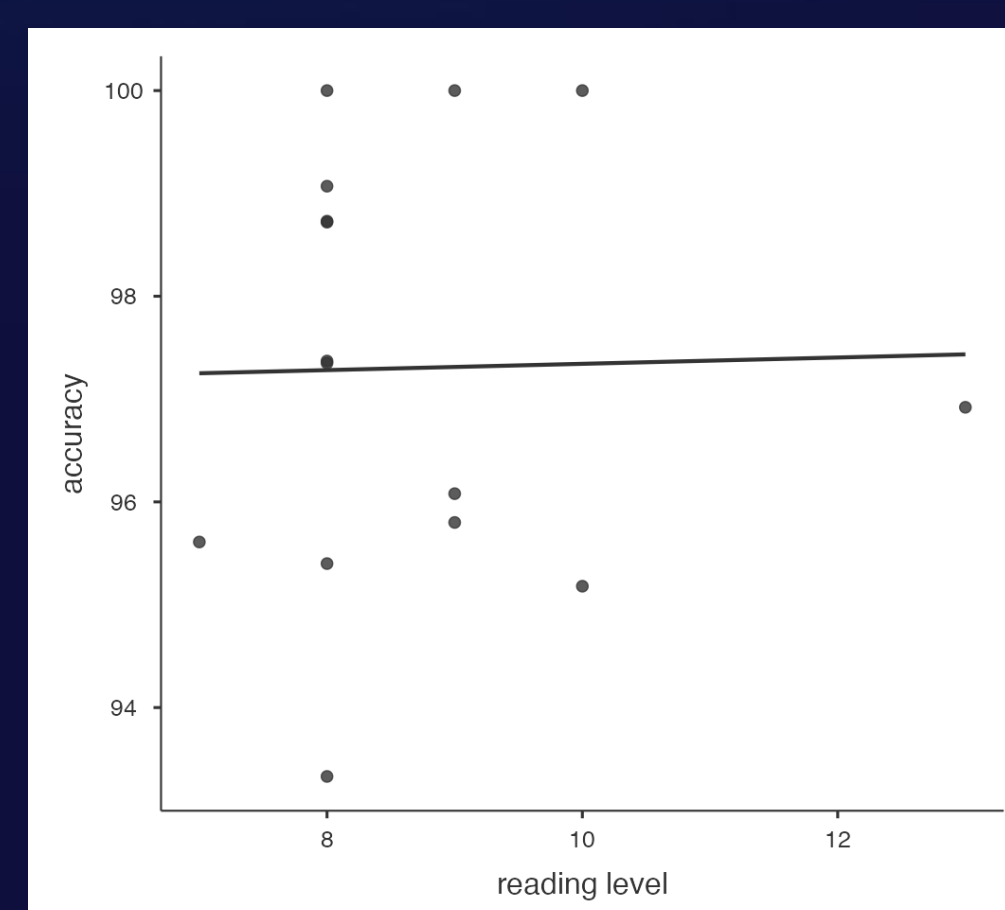


Fig 3. "Unstable Unicorn"



Results and Discussion:

The records gained from the in-school research were quantified, with the percentage accuracy being calculated. The accuracy was then measured against reading level, and a Pearson's correlation test was done. A very strong correlation was found in 5 Second Rule [$r(8) = .963, p < .001$], and Junior Colourbrain = [$r(3) = .958, p = .010$], as well as with Monopoly Junior – Level 1, with [$r(13) = .932, p < .001$]. There was also a strong correlation with Monopoly Peppa Pig Edition [$r(13) = .640, p = .010$]. However, there was no statistically significant correlation found with Unstable Unicorn [$r(13) = .010, p = .970$], Cluedo [$r(14) = .226, p = .399$] or with Brainbox [$r(15) = -0.780, p = .766$].

Several of these results are consistent with what would be expected based on the type of reading and vocabulary present in each of the board games. Some, however, did not meet expectations. There may be several reasons for this, including the very low word count present for many of the running records. This was because, playing the board games for 30 minutes did not produce a very large sample, especially considering 21 of the records were ignored due to there being under 20 words (meaning a single mistake would have taken the accuracy to below 95%). This meant that each game had very few samples, with the highest being Brainbox with only 17. Several of the board games also involved repeated cards or phrases, which were included in the word count, but may have affected the results (increasing accuracy due to practice), especially with Unstable Unicorns which had a particularly high volume of repeated cards. Furthermore, many of the children would rush the reading due to excitement of wanting to play the boardgame, leading to missed words or phrases, which affected the accuracy rating. This was especially true of the more proficient readers in games such as Cluedo.

Conclusion:

The initial aims of the research was to develop a scale for rating the reading level of boardgames according to the features and difficulty of reading involved. However, this objective was not met due to the complexity of the task (which was discovered during the research process) and the limited time that was available for data collection, since a regression analysis would require the data from significantly more board games than used in this study (only 7). Further research will continue based on the data collected in this study, which illustrated a potential link between reading level and ability to read and play board games. As such, this study can act as a springboard for future research, as it provides a useful foundation of information regarding this understudied area of how boardgames relate to children's reading level.