Habilidades de leitura de legendas de filmes em escolares do ensino fundamental***

Movie subtitles reading skills of elementary school children

Michele Viana Minucci*
Maria Silvia Cárnio**

*Fonoaudióloga. Mestranda em Ciências pela Faculdade de Medicina da Universidade de São Paulo (FMUSP). Endereço para correspondência: R. Pensilvânia, 114 - Apto. 221 M - São Paulo - SP CEP 04564-000 (miminucci@yahoo.com.br).

**Fonoaudióloga. Doutora em Semiótica e Linguística Geral pela Faculdade de Filosofia, Letras e Ciências Humanas da Universidade de São Paulo (FFLCH - USP). Docente do Curso de Fonoaudiologia do Departamento de Fisioterapia, Fonoaudiologia e Terapia Ocupacional da FMUSP.

***Trabalho Realizado no Departamento de Fisioterapia, Fonoaudiologia e Terapia Ocupacional da FMUSP.

Abstract

Background: the abilities of school children for reading static texts have been widely discussed, however little is known about how well they can read dynamic texts and what skills are required for this kind of reading. Aim: to evaluate the skills involved in reading movie subtitles of 2nd and 4th graders of students at the a public school. Method: analysis of the level and skills needed for movie subtitles reading, through the retelling of a section of a movie watched individually by 60 students, 30 2nd graders and 30 4th graders matched for age and gender, with no sound and with subtitles. Results: there were no significant differences in the level of school literacy between students of the different school grades. Considering the skills and the subtitles reading level, 4th graders presented a significant better performance when compared to the 2nd graders. Fourth graders presented skills related to the levels of literal comprehension and independent comprehension, whereas 2nd graders where mostly at the decoding level. Conclusion: 2nd graders are at the textual decoding level of movie subtitles, while 4th graders are at the literal comprehension level of movie subtitles. This indicates that schooling has an influence on the reading of movie subtitles. However, the school literacy literacy was not a significant factor for movie subtitles reading.

Key Words: Reading; Educational Status; Comprehension; Education; Motion Pictures as Topic.

Resumo

Tema: as habilidades de leitura de textos fixos em escolares são amplamente conhecidas, no entanto ainda não se sabe como os escolares realizam a leitura de textos móveis e quais habilidades são necessárias para este tipo de leitura. Objetivo: avaliar as habilidades de leitura de legendas de filmes em escolares de segunda e quarta série do ensino fundamental de uma escola pública. Método: análise do nível e habilidades de leitura de legenda de filmes, por meio da recontagem de um trecho de filme assistido, de forma individual, sem som e com legenda, por 60 escolares, sendo 30 de segunda série e 30 de quarta série, pareados quanto ao gênero e idade. Resultados: não foram encontradas diferenças significantes quanto aos níveis de letramento escolar entre as duas séries. Quanto às habilidades e ao nível de leitura de legenda de filmes os escolares de quarta série obtiveram desempenho significativamente superior aos de segunda série, uma vez que apresentaram habilidades referentes aos níveis de compreensão literal e compreensão independente, enquanto os de segunda série, em média ficaram no nível de decodificação. Conclusão: os escolares de segunda série estão em nível de decodificação, enquanto os de quarta série encontram-se em nível de compreensão literal de leitura de legenda de filmes, demonstrando que a escolaridade influencia a leitura de legenda de filmes. Entretanto, o grau de letramento escolar não foi um fator significativo para a leitura de legenda de filmes.

Palavras-Chave: Leitura; Escolaridade; Compreensão de Leitura; Educação; Filmes (Cinema como Assunto).

Introduction

Literacy is related to use and social practice of reading and writing1 and these are influenced by different textual contexts2. Reading is an interactive process that involves different perceptual, auditory, visual, cognitive and linguistic skills which interrelate and allow the reader to develop his reading abilities from character decoding to reading comprehension3-6.

Amid the many presentation formats of written text, the subtitled video (mobile text), popularized by television an motion pictures, is a tool in assisting the development of reading skills, which are necessary for an individual to be considered a proficient reader7.

Children and teenagers are daily increasing their time in front of television, computers, electronic games and portable phones in a context of social literacy. However, few educators can bring these experiences with mobile text to the school context, which would allow for the development schoolchildren reading and writing by way of digital literacy8.

The literature points to the importance of mobile text reading (movie subtitles, hipertext, "closed captions") for education. It also points to differences in reading evaluation for this text format9.

In reviewing the Brazilian literature on this theme, a single published study could be found on movie subtitle reading of hearing schoolchildren10.

Based on the above, this study intends to reduce this gap. Its goal is to compare the movie subtitle reading skills of 2nd and 4th grade elementary school (ES) children of a state (public) school, and relate their performance in school literacy with their movie-subtitle reading skills.

Method

This study was approved by the Ethics Committee for Research Project Analysis (CAPPesq) of the directorate of Hospital das Clínicas and Faculdade de Medicina da Universidade de São Paulo under the number 1248/06.

Sampling

60 schoolchildren took part in this study, 30 from the 2nd grade and 30 from the 4th grade of a state school in the city of São Paulo. The age of the participants varied between 7:8 years to 9:3 years on the 2nd grade, and between 9:9 years and 11:1 years

on 4th grade, with a 15/15 gender pairing in each grade.

The criteria for inclusion in the study group were: being already alphabetized, not having any sensory alteration, not having repeated any school grade, and having the parents or legal guardians sign a Free and Informed Consent Declaration (Termo de Consentimento Livre e Esclarecido), according to Resolution 196/96 of the National Health Concil (Conselho Nacional de Saúde).

Procedure

In a room in the school facilities, each subject was evaluated individually by the researcher as to his/her level of literacy and reading by way of a school literacy protocol11. This protocol contains tests on pairing; serialization; naming of letters and words; writing of subject's name, surname and/or familiar words; word and letter dictation; word and phrase reading; and cloze tests. The maximum score possible in this evaluation was 30 points.

The subject was then presented with the first 16 minutes of the Finding Nemo motion picture (Pixar Animation Studio and Walt Disney, 2003), without sound, with subtitles.

The subject then retold what he could understand and answered to five inferential questions about the watched segment. The retelling and the answers were audio recorded for posterior transcription and analysis.

The segment selected from the Nemo motion picture contained an average of 5.93 words per subtitle, with the display time of each subtitle varying from 750 milliseconds to to 7 seconds and 240 milliseconds.

Data analysis

The data were treated statistically by the Mann-Whitney tests, to evaluate the performance of the two groups separately, and the Pearson and Kendal correlation tests to analyze evidences of a linear relationship between the groups. Significance level adopted was $p = 0.05$ with 95% confidence intervals.

The analysis of the reading skills and the (movie subtitle) reading level was measured according to the Instrumental Reading Skills Protocol12 based on the theoretical suppositions of Castillo13.

In this protocol, a subject can score in four increasing levels: decoding, literal comprehension, independent comprehension and critical reading. The reading skills of more advanced levels receive higher scoring than lower levels.

The decoding level includes six skills, the literal comprehension level, five skills, the independent comprehension level, six skills, and the critical reading level, five skills. The scoring for the decoding level was two points for complete skill and one point for partial skill; for the literal comprehension was four points for complete skill and and two points for partial skill; for independent comprehension, six points for each skill; and for critical reading, eight points for each skill. The total scoring of all levels is one hundred and six points.

Results

The retelling showed that all schoolchildren understood the movie segment totally or partially.

The 4th grade students presented more advanced reading levels than the 2nd grade ones (Table 1) regarding the total scoring (Statistics U = 192.5; p-value < 0.001).

It should be noted that most subjects presented skills related to more advanced levels than the ones in which they were classified. However, according to the Castillo suppositions, a subject was considered in a certain level only when presenting all the skills in that level.

The performance of 2nd and 4th grade subjects on the school literacy avaliation was compared with the performance of movie subtitle reading (Figure 1), by way of the Kendall Correlation ($\hat{o}$) with values for $\hat{o} = 0.297$ with p-value = 0.031 for the 2nd grade and $\hat{o} = 0.281$ with p-value = 0.041 for the 4th grade. To ascertain the significance of the data related to the 4th grade, a Pearson correlation was also used, with values $\tilde{n} = 0.411$ and p-value = 0.024.

TABLE 1. Number of students from 2nd and 4th grade in each level according to the movie subtitle reading skills .

Grade	n	Reading Level			
		Decoding	Literal comprehension	Independent comprehension	Critical reading
2nd	30	23	5	2	0
4th	30	12	8	10	0

FIGURE 1. Correlation between performance in school literacy and movie subtitle reading skills of 2nd and 4th grade.

Habilidades de leitura de legendas de filmes em escolares do ensino fundamental.

229
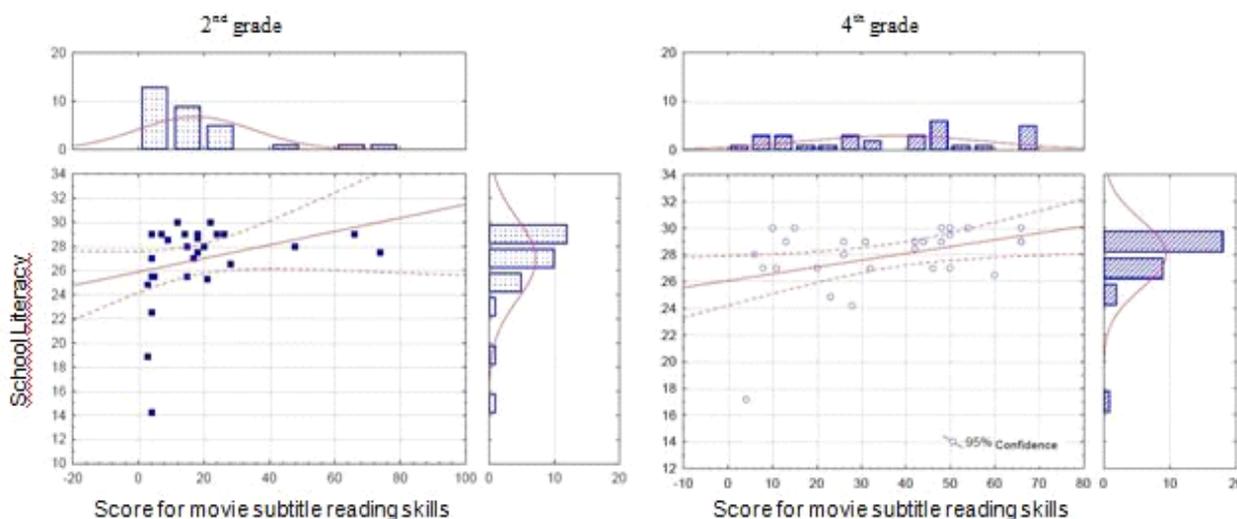
Discussion

Only a weak correlation was found between school literacy level and and movie subtitle reading skills, showing that, in principle, school literacy level did not influence the movie subtitle reading performance of the subjects. This could be explained by limits in the method used to assess school literacy, which included only assessment of the reading skills of fixed words and phrases, unlike the skills needed for reading mobile texts.

The amount of schooling was a significant factor in the result, as 2nd and 4th grade schoolchildren differed in their movie subtitle reading skills and level. This is probably related to fixed text reading skills and corroborates a study with Canadian elementary schoolchildren on from 1st to 4th grades. This study demonstrated reading skills enhanced with more schooling, due to the increase in sacadic eye movement during reading[14].

In general, 2nd grade schoolchildren presented skills related to the decoding level, since they were too focused on the grapheme-phoneme relationship. This focus reduces speed, fluency, and reading comprehension, corroborating the findings of Linebarger[15]. However, some 2nd graders also demonstrated some of the skills present in the following reading levels (literal comprehension and independent comprehension), like understand the meaning of full sentences, reporting on what was read, retaining specific facts or details, answering questions explicitly related to the content and paraphrasing the text, showing that they are in the development process for theses skills for reading movie subtitles. It is possible that the fixed text evaluation, if it were performed, would have shown the skills related to literal comprehension to be already present, as was demonstrated in a previously performed study[16].

The 4th graders, by and large, presented more developed skills. However some of them needed support for understanding some texts, as they were still at the literal comprehension level. Even so, only eight schoolchildren were able to reach all the skills at this level. The ten subjects who achieved the independent comprehension reading level were able to identify the main ideas, to establish cause-effect relationships, to formulate previsions, hypotheses and inferences, and extract conclusions. None of the students could present skills related to the critical reading level which corroborates the results presented by the Sistema de Avaliação do Ensino Básico (SAEB - Basic Education Evaluation System)[17]. Those results demonstrated that schoolchildren in this phase, and also in high school, could not reach the critical reading level.

Some subjects might have previously watched the movie with audio, without subtitles, which might have had some influence on their subtitle reading, however, this variable was not controlled for, as the main objective of this study was to evaluate the movie subtitle reading comprehension, and so the only data relative to the retelling of the content expressed in the subtitles was analyzed.

The speed of subtitle display was a complicating factor, specially for 2nd graders, given the high number of complaints. The difficulty was exacerbated by the impossibility of reviewing the text to reread the informations contained, which demanded from the readers greater reading speed, visual memory and attention in order to comprehend the subtitles.

Thus, the decoding seems not to be a single factor in movie subtitle reading comprehension, since other factors are also involved in this process, such as visual attention[3-18], sensibility, prosodic representation[19] and frequency of word incidence[4].

The results corroborate the literature cited above, since the words with higher frequency were decoded with more precision.

The 4th graders superior performance over the 2nd graders corroborates the study of Stivanin and Scheuer[20], which maintain that reading speed is related to the use of the phonological or lexical route, which is developed during schooling. Student at higher grades have already established the orthographic relationships and use less the phonologic routes, with subsequent increase in movie subtitle reading speed and comprehension.

In composing subtitles, there are relevant factors for reading comprehension, which should be analyzed in the subtitling process. However this doesn't currently seem to be taken into account considering the difficulties currently faced by the spectators in the syntactical analysis of the subtitle texts. As such, a barrier for the comprehension of mobile text is raised, hampering the effective performance analysis of such readers regarding this textual format[21].

Based on the literature and in the results herein, we emphasize the importance of the stimulation of mobile text reading, since television is ever present in children's routine. Despite the majority of television programming for the school age group not containing great textual variety[22], it is important to promote public awareness of the use of subtitles

for both movies and for daily programming, by way of closed captions23.

We disagree with the literature that discourages the use of digital media as tools in the learning and reading development processes in schoolchildren2. However we agree with those authors as to the importance of the fixed text for the development of reading proficiency.

We stress that the television and the computer should not be seen as teacher substitutes, but as tools to aid in the schoolchildren learning process and their insertion in the context of the digital age24. Subtitles help children focus on the story central theme as well as its details, helping them not be dispersed by the visual and sound effects of the programming15.

This study might aid written language teaching professionals demonstrating the importance of using different textual resources and media, regardless of schooling level. However, care must be taken as to the selection of material and evaluation of the required skills in each school level, with the goal of enhancing reading performance.

Conclusion

2nd and 4th grade schoolchildren differ in their movie subtitle reading skills and levels. 2nd graders presented skills more closely related to the decoding level, while 4th graders presented skills more closely related to more advanced levels (literal and independent comprehension).

This difference might be related to the high speed of text presentation on screen, which seemed to hamper the comprehension of movie subtitles by starting readers. This study shows schooling level to impact significantly the reading of mobile texts.

Only weak correlation was observed between school literacy levels and movie subtitle reading performance in this study, which may be a result of limitations on the tool used for school literacy evaluation.

We suggest that more studies relating to the skills, levels and comprehension of mobile text reading in the Brazilian population should be done, given the relevance of this kind of text on modern society.

References

1. Soares, M. Letramento e alfabetização: as muitas facetas. Rev Bras Educ. 2004;25:5-17.

2. Kerr MA, Symons SE. Computerized presentation of text: Effects on children's reading of informational material. Read Writ. 2006;19:1-19

3. Solan HA, Shelley-Tremblay J, Ficarra A, Silverman M, Larson S. Effect of attention therapy on reading comprehension. J. Learn Disabil. 2003;36:556-63.

4. Berninger VW, Abbott RD, Vermeulen K, Fulton CM. Paths to reading comprehension in at-risk second-grade readers. J. Learn Disabil. 2006;39:334-51.

5. Catts HW. The narrow view of reading promotes a broad view of comprehension. Lang, Speech, and Hearing Serv in Schools. 2009;40:178-83.

6. Murphy CF, Schochat E. Correlações entre leitura, consciência fonológica e processamento temporal auditivo. Pró-Fono R. Atual. Cient. 2009;21:13-8

7. Leppa¨nen U, Aunola K, Nurmi J. Beginning readers' reading performance and reading habits. J. Res Read. 2005;28:383-99

8. Banaszewski TM. Digital storytelling: finds its place in classroom. Multimedia Schools. 2002;9:32-35

9. Campbell FA, Goldman BD, Boccia ML, Skinner M. The effect of format modifications and reading comprehension on recall of informed consent information by low-income parents: a comparison of print, video, and computer-based presentations. Patient Educ Couns. 2004;53:205-16

10. Cárnio MS, Bolognato LR. Decodificação de palavras e velocidade de leitura de legendas de filme de escolares do Ensino Fundamental. In: 15o. Congresso Brasileiro de Fonoaudiologia e 7o. Congresso Internacional de Fonoaudiologia, 2007, Gramado. Rev Soc Bras Fonoaudiol - suplemento especial; 2007

11. Cárnio MS, Pereira MB, Andrade RV. Protocolo de triagem de letramento utilizado no Estágio Supervisionado em atenção primária: Programa Escola. FMUSP, 2005.

12. Zacharias L, Cárnio MS. Compreensão de leitura em surdos: trabalho fonoaudiológico com a técnica Scaffolding. In: 13o. SIICUSP, 2005, Ribeirão Preto. Anais do 13o. SIICUSP, 2005

13. Castillo HV. A leitura de textos literários vs. textos científicos por leitores incipientes. In: Witter GP (org). Leitura de textos e pesquisas. Campinas: Alínea; 1999 pg. 55-64.

14. Roy-Charland A, Saint-Aubin J, Evans MA. Eye movements in shared book reading with children from kindergarten to Grade 4. Read Writ. 2007;20:909-31.

15. Linebarger DL. Learning to read from television: the effects of using captions and narration. J Educ Psychol. 2001;93:288.

16. Lerkkanen MK, Rasku-Puttonen H, Aunola K, Nurmi JE. Reading performance and its developmental trajectories during the first and the second grade. Learn Instruct. 2004;14:111-30.

Habilidades de leitura de legendas de filmes em escolares do ensino fundamental.

231

17. Ministério da Educação (Brasil), SAEB - 2005, Primeiros Resultados: médias de desempenho do SAEB/ 2005 em perspectiva comparada, Brasília: Ministério da Educação, 2007.

18. Bosse ML, Valdois S. Influence of the visual attention span on child reading performance: a cross-sectional study. J Res Read. 2009;32:230-53

19. Ashby J. Prosody in skilled silent reading: evidence from eye movements J Res Read. 2006;29:318-33.

20. Stivanin L, Scheuer CI. Tempo de latência para a leitura: influência da frequência da palavra escrita e da escolarização. Rev Soc Bras Fonoaudiol. 2007;12(3):206-13.

21. Scott CM. A case for the sentence in reading comprehension. Lang Speech Hear Serv Sch. 2009;40:184-91.

22. Moses A, Duke NK. Portrayals of print literacy in children's television programming. J Lit Res. 2008;40(3):251-89.

23. Koolstra CM, Van der Voort THA, Van der Kamp LJTh. Television's impact on children's reading comprehension and decoding skills: a 3-year panel study. Res Q.1997;32(2):128-52.

24. Sutherland-Smith W. Weaving the literacy web: changes in reading from page to screen. Read Teach. 2002;55(7):662-9