Enhancing reading fluency training: Peer and self-assessment of reading prosody

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INTRODUCTION

What are the characteristics of fluent reading ?

For experts

For children and non-experts

SPEED

PHRASING

DECODING

EXPRESSIVITY

SPEED

For children, reading well means reading quickly, a confusion due to reliance on words per minute for assessment (Dowd & Bartlett, 2019). However, fluent reading entails reading at an appropriate speed that allows comprehension, reading without hesitation and without errors, correctly placing pauses and intonation, and bringing the text to life with variations of rhythm, intonation and intensity (Kuhn et al., 2010).

OBJECTIVES

Aim of the project

Our main goal is reshaping this incorrect perception by **teaching pupils all levels of fluent reading** (automaticity and prosody). Since assessment plays a role in the acquisition and consolidation of skills (Allal, 2002), we will involve them in speed rate, precise reading, expressivity and phrasing evaluations.
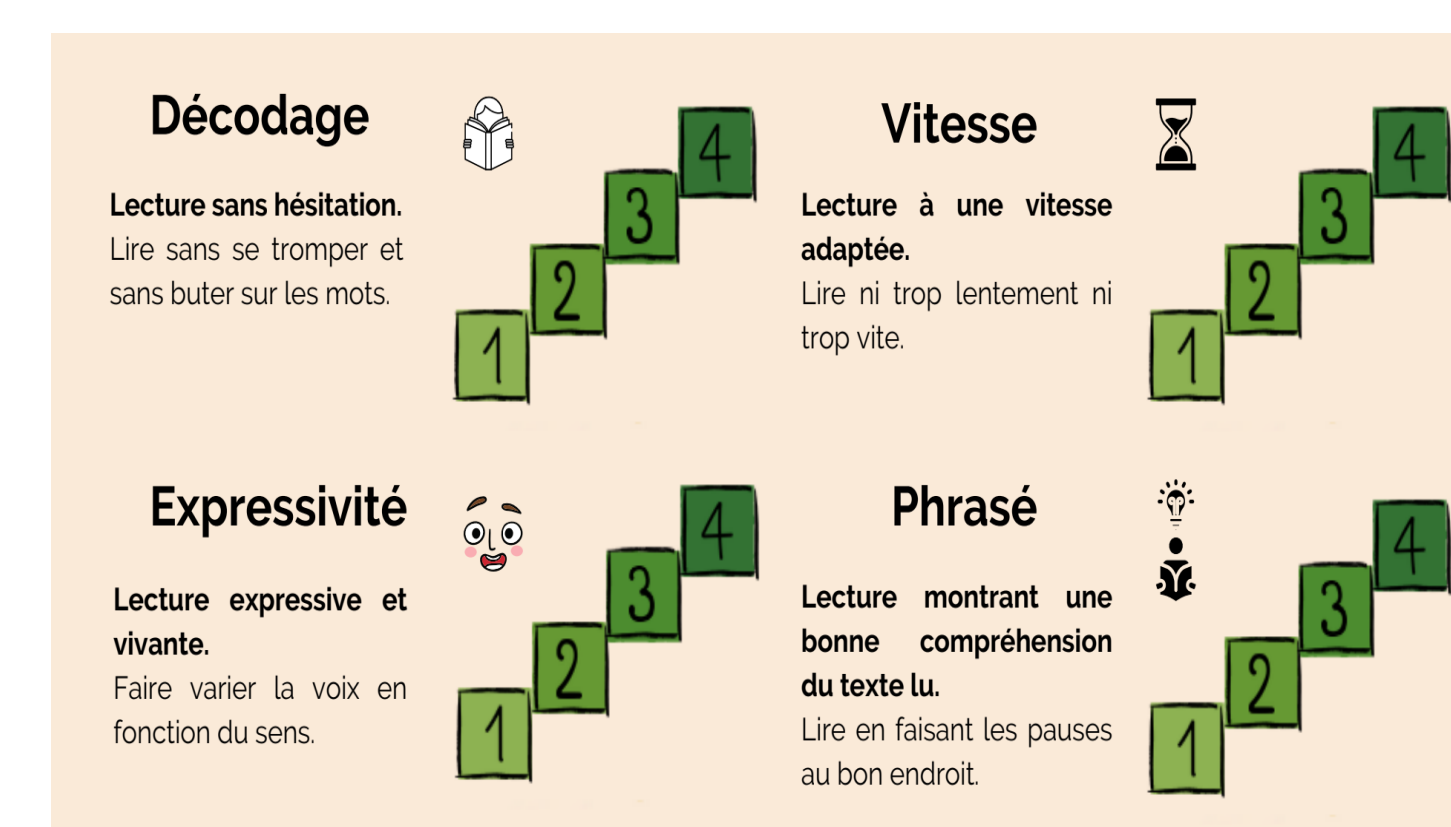
Objectives of this pilot study

o We assessed the **reliability of peer and self-assessment** against evaluations by teachers and reading experts, using the **EMDF** (Godde, Bosse & Bailly, 2021), **a scale adapted for children** from the Multidimensional Fluency Development Scale (Rasinski, 2004 ;).

o Since a learner's performance does not depend only on their objective skills, we added some subjective measures such as **self-efficacy** (Bandura, 1977) that is defined as people's beliefs about their ability to produce some performance and successfully complete a task (here, in reading activities).

METHOD

o 40 pupils from grade 4 and 5
o 5 teachers
o 4 experts

T1

INDIVIDUAL PHASE
o Working memory and self-efficacy (perceived reading competence) measures
o Words per minute
o 2 reading recordings (with expressivity instructions)

COLLECTIVE PHASE
o 30-minutes training session with the adapted MFDS
o Assessments of 10 recorded readings of grade 4 children

T2 (one week later)

COLLECTIVE PHASE
o Reminder of the scale and training session
o Assessments of 10 recorded readings (the same as in T1)

INDIVIDUAL PHASE
o Flexibility and self-efficacy (perceived reading competence) measures
o Self-assessments of their two recorded readings

Multidimensional Fluency Development Scale
(adapted for French children - EMDF)

Décodage
Lecture sans hésitation.
Lire sans se tromper et sans buter sur les mots.

Vitesse
Lecture à une vitesse adaptée.
Lire ni trop lentement ni trop vite.

Expressivité
Lecture expressive et vivante.
Faire varier la voix en fonction du sens.

Phrasé
Lecture montrant une bonne compréhension du texte lu.
Lire en faisant les pauses au bon endroit.

RESULTS (1)

Inter-rater agreement (Krippendorff's alpha)

	Numbers of reviewers	Fluency score		Automaticity score		Prosody score	
		T1	T2	T1	T2	T1	T2
Children	40	**0,725**	**0,634**	0,691	0,628	0,666	0,526
School 1	20	0,713	0,553	0,689	0,588	0,628	0,375
School 2	20	0,751	0,706	0,705	0,675	0,716	0,641
Teachers	5	**0,862**	**0,822**		0,76		0,884

o Great reliability of teachers assessment both in T1 (0,862) and T2 (0,822)
o Good reliability of peer assessment both in T1 (0,725) and T2 (0,634)
o School 2 > School 1
o Better agreement on expressivity (for teachers) and better agreement on decoding (for pupils)

RESULTS (2)

Mean Fluency (out of 16) : 11,5

Mean perceived reading competence / self-efficacy (out of 6) : 4,27 (T1) and 4,24 (T2)

Self-assessment

o Good reliability (Cohen's kappa) between the self-assessment result and the score assigned by their teacher (κ = 0,81 for School 1 ; κ = 0.73 for School 2)

o Correlation between self-assessment and fluency score, especially with the text that was used on the training session (0,74 vs. 0,60)

o Correlation between self-assessment and self-efficacy, only with the text that was used on the training session

o Correlation between self-efficacy and fluency score

Peer assessment

o No significative correlations

DISCUSSION

o Inter-rater agreement is good, even for children → encouraging for a concrete application of EMDF in schools.

o For the inter-rater agreement, we have a difference between the two classes. This difference may be due to the habits of the students in whether or not to practice self-assessments and/or peer assessments → importance of teaching practices.

o The most predictive factor of student self-assessment is fluency. Therefore children are rather objective in their way of self-assessment.

o Beyond fluency, there is also an effect of self-efficacy (perceived reading competence) on self-evaluation but only on the text on which the students have already evaluated their peers → importance of comparison in order to evaluate oneself.

o The correlation between fluency score and peer-assessment is very weak, as well as the one between self-efficacy and peer-assessment → more investigation is needed to understand peer-assessment.

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