

Asia Pacific Journal of Developmental Differences
Vol. 9, No. 1, January 2022 pp. 5—30
DOI: 10.3850/S234573412200009X



Educational Therapists' Perceptions after Training for an Enhanced Reading Comprehension Curriculum

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Abstract

This study examines Educational Therapists' perceptions and teaching behavior after receiving training in teaching an Enhanced Reading Comprehension Curriculum. It also examines the relationship between teaching experience and changes in perception. Findings showed that Educational Therapists' length of teaching experience affected the frequency they taught skills following training, and only Educational Therapists with less than four years of experience taught more of the skills on which they were trained. The training also did not increase the perceived importance of skills covered for the most experienced group of Educational Therapists (more than four years of experience), although it did for less experienced Educational Therapists. Nonetheless, all Educational Therapists reported increased ease in teaching the skills covered during training. More experienced Educational Therapists with two and a half to four years of experience further reported an increase in their perceived ease in teaching the reading comprehension skills not yet covered in training, while this remained unchanged for the most experienced Educational Therapists. With these findings, curriculum teams and trainers need to consider the teaching experience of educators when implementing in-service training. They also need to consider feedback from educators and address possible resistance towards changes to ensure that training is effective.

Keywords: Therapist Training, Dyslexia, Reading Comprehension Instruction

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INTRODUCTION

Dyslexia is considered to be one of the most common specific learning disorders, with its prevalence reported to range from 4 to 10% of the populations in the United States, the United Kingdom, and Australia (Landulfo, Chandy, & Wong, 2015). According to the Ministry of Education (as cited in Heng & Tam, 2006), the prevalence for Singapore is lower, where around 3 to 5% of the students in Singapore are estimated to have dyslexia.

According to the British Dyslexia Association (2007), dyslexia is a specific learning difficulty in the areas of language and literacy, which largely affects fluency in accurate word reading and spelling. For dyslexic readers who face difficulty with fluent reading, the task of comprehending reading materials poses an even greater difficulty. Given their lack of automaticity in word recognition, much of their cognitive resources are devoted to word decoding. Consequently, much lesser cognitive resources are left to allow dyslexic readers to comprehend the texts they read (Therrien, 2004). Given that the main aim of reading is to access the meaning of texts, it is important to incorporate reading comprehension as a component of literacy intervention for students with dyslexia, along with decoding and encoding strategies.

The Dyslexia Association of Singapore (DAS) provides the Main Literacy Programme (MLP), which is a specialised literacy programme for students who are diagnosed with dyslexia and attending mainstream primary or secondary schools. Reading comprehension instruction is covered as part of the intervention, but the reading comprehension curriculum used was not standardised in the old DAS curriculum nor the newer DAS integrated curriculum that was implemented in 2014. This lack of a standardised curriculum meant that the Educational Therapists lacked the “order and continuity” provided by standardised curriculums (Sparapani & Perez, 2015, p. 83). They had to rely on what they perceived their students needed and teach the skills they deemed appropriate, using methods such as the Know, Want-to-Know and Learned (K-W-L) reading strategy (Ogle, 1986). Guidance on the varied skills required for reading comprehension, structured ways to teach those skills, as well as comprehensive resources targeted at specific skills were also lacking. Hence, the therapists often had to seek out their own materials, as well as rely on the help from the more senior Educational Therapists.

Given the need for an explicit, structured, and standardised reading comprehension curriculum, the DAS Curriculum Team developed the Enhanced Reading Comprehension curriculum, in consultation with Dr Shanti Benjamin of ELCOT Consultants. The DAS team consulted Dr Shanti's work on secondary school-level reading comprehension skills and typical text features present in English Language Papers that meet requirements of the Cambridge University examinations. While referencing mainstream primary and secondary school materials, some of the skills highlighted by Dr Shanti were adopted, and the DAS team expanded the list of reading comprehension skills to include those

were needed for the primary school curriculum. The result was a skill-based curriculum that is aligned to the mainstream primary and secondary English Language curriculum, and includes a list of a wide range of skills (e.g., Question Analysis, Prediction, Referencing) that can be used with DAS students across a range of age as well as language and literacy abilities. In addition, resources (e.g., worksheets) to teach targeted skills and ways to teach each skill (e.g., prompts for specific questions) were provided as part of the Enhanced curriculum.

The implementation of the Enhanced Reading Comprehension curriculum brings about various changes for all DAS Educational Therapists. They now have to adopt the structured curriculum and teach the specific skills based on their students' literacy skills (or bands). The structure imposed by the Enhanced Reading Comprehension curriculum also creates a need for the Educational Therapists to change their perceptions regarding the importance of the different reading comprehension skills and alter their focus on skills taught in their classrooms.

While change is inevitable in many educational settings, it can be daunting for many people. A major factor that influences teachers' motivation to learn and adopt new training practices is their teaching experience. Rahimi and Alavi (2017) surveyed and interviewed 127 language teachers in Iran who experienced three years of change in curriculum. They found that both novice and experienced teachers were optimistic about the new curriculum but experienced teachers were more cautious about change and the practical obstacles of change. Similarly, Hargreaves (2005) studied 50 elementary and secondary teachers of different ages in Canada. The researcher found that younger teachers were more optimistic and enthusiastic, and they have been "socialised into working with change" (p. 973). In contrast, teachers in the late career stage were more likely to be strongly resistant to change. These teachers questioned changes more directly and needed to see that the changes were relevant to their teaching. In comparison, the mid-career teachers were open to try new practices but may be selective in the changes they adopt, and they may also go back to their old ways.

In a study that extended into the special needs education sector, Paloş and Gunaru (2017) studied 142 teachers who have a range of two to over 26 years of teaching experience from regular and special needs education in Romania. They found that dispositional resistance to change negatively predicts teachers' learning enjoyment, and that the personality factor of conscientiousness "moderates the relationship between dispositional resistance to change and the enjoyment of learning" (p. 468). For instance, teachers with low disposition resistance to change and a high level of conscientiousness enjoyed learning experiences more. With higher enjoyment from learning, it is expected that teachers across both mainstream and special needs education are more likely to partake in continued education and adopt the training methods learned.

PURPOSE

Past research has been heavy on the five essential components of effective literacy intervention, which includes reading comprehension (Point, 2004). However, the research has been focused on whether training teachers for reading comprehension instruction leads to improvements in students' performance, the methods of reading comprehension instructions (e.g., direct explanation or transactional), as well as the reading comprehension strategies (e.g., summarisation) that are effective for normal readers (National Reading Panel, 2000). In contrast, there is a dearth of research on the effective ways to train teachers in using evidence-based strategies in their reading comprehension instruction both during pre-service and in-service training (NRP, 2000). This seems especially so in the case of educators who work with students with learning disabilities.

Within DAS, the Educational Therapists in service differ on the personal front. These include their age, gender, pre-service educational background and training, as well as their experience in teaching students with dyslexia. These teacher characteristics could play a role in affecting the changes in the therapists' teaching and perceptions towards the training for the updated curriculum, as noted by NRP (2000). This research will thus contribute to the literature on training therapists who work with students with a learning disability (i.e., dyslexia) for instruction of a higher-order literacy skill such as reading comprehension. The findings will give a better understanding of the effectiveness of the internal training workshop conducted at the DAS and the factors that contribute to its effectiveness. The information can then be used to guide future training programs during curriculum changes.

RESEARCH QUESTIONS & HYPOTHESES

This study examined the changes in Educational Therapists' teaching behaviours and perceptions – their teaching frequency of reading comprehension skills, perceived importance of the skills, and perceived ease in teaching the skills – following training for an Enhanced Reading Comprehension curriculum. It also evaluates the role that teaching experience plays in these changes. The four research questions are listed as follows:

Research Question One: Does training and teaching experience affect the frequency at which Educational Therapists teach reading comprehension skills in their classes?

It is expected that following the training workshop for the DAS Enhanced Reading Comprehension curriculum, the frequency at which Educational Therapists teach the reading comprehension skills covered during training will increase, regardless of teaching experience. It is also hypothesised that following the training workshop for the DAS Enhanced Reading Comprehension curriculum, the frequency at which Educational Therapists teach the reading comprehension skills not covered during training will not change, regardless of teaching experience. This hypothesis is exploratory in nature as

past research rarely focused on investigating changes in areas/skills that are not covered during training.

Research Question Two: Does training and teaching experience affect Educational Therapists' perceived level of importance of reading comprehension skills?

It is expected that the perceived importance of reading comprehension skills that were covered during the training for the Enhanced Reading Comprehension curriculum will increase from pre to post-training, regardless of the Educational Therapists' teaching experience. It is also expected that for reading comprehension skills that are not yet covered during training, there will be a decrease in the perceived importance of these skills for Educational Therapists with lesser teaching experience. In contrast, for Educational Therapists with more teaching experience, it is expected that there will not be a significant change in the perceived importance of the skills not covered in training.

Research Question Three: Does training and teaching experience affect Educational Therapists' perceived level of ease in teaching reading comprehension skills?

It is expected that the perceived ease in teaching the reading comprehension skills that were covered during the training for the DAS Enhanced Reading Comprehension curriculum will increase from pre to post-training, regardless of the Educational Therapists' teaching experience. For skills that are not yet covered during training, it is expected that there will be a decrease in the perceived ease in teaching these skills for Educational Therapists with lesser teaching experience, whereas this would remain unchanged for Educational Therapists with more teaching experience.

Research Question Four: What are the reasons for changes in the Educational Therapists' frequency in teaching comprehension skills as well as their perceived importance of these skills?

Various reasons may contribute to the increase or decrease in the motivation of the Educational Therapists in adopting the skills in the Enhanced Reading Comprehension curriculum in their teaching. As noted by Osman & Warner, (2020), teachers may vary in how much they value the ideas presented in training, and their implementation of the training is influenced by contextual factors including curricular constraints and other training programs (Kennedy, 2016; Opfer & Pedder, 2011). By surveying the Educational Therapists directly, this research question looks into factors that influence the changes in their behaviours and thoughts, further informing on the gaps that should be addressed during training and curriculum enhancements.

METHODOLOGY

This paper is based on the dissertation submitted in fulfilment of the requirements for the degree of Master of Arts (Applied Psychology) at the National Institute of Education (NIE), Nanyang Technological University, under the same title (Chua, 2018). This current paper is also based on a longitudinal study that was designed and started by collaborators from Temasek Polytechnic and the DAS in 2016. The collaborators presented the preliminary findings under the title, 'An Investigation on the Teaching Practice of Reading Comprehension Skills for Individuals with Dyslexia in Singapore', at a symposium held at the NIE in 2017.

Participants

This study involved 47 Educational Therapists (7 male and 40 female) who were part of a longitudinal research project conducted by the DAS. These Educational Therapists provide specialised literacy remediation to students with dyslexia at one of the 13 DAS Learning Centres located island wide in Singapore. All Educational Therapists, including those recruited midway during the research project, were required to complete three surveys in the original research study as part of their work requirement. However, they were informed that their participation and responses would not affect their performance appraisals. At the time of the first survey, the age of the Educational Therapists ranged from 23 to 59 years old ($M = 35.91$, $SD = 10.99$), and they had three weeks to over 16 years of experience teaching students with dyslexia (approximate $M = 4.57$ years, $SD = 4.26$). Most of the Educational Therapists do not have formal teaching credentials such as the Postgraduate Diploma in Education from the NIE. Twenty-nine of the Educational Therapists possess an undergraduate degree, while nine of them have a Master's Degree, such as a Master of Education from the NIE. The remaining nine Educational Therapists have a Postgraduate Certificate or Diploma from the DAS.

Materials

The original DAS research study involved students from Temasek Polytechnic's Diploma in Psychology Studies program. The students created a series of three teacher surveys in collaboration with the DAS as part of their Final Year Project. DAS researchers adopted and modified the surveys created by the students to suit the various stages of curriculum adoption as well as added items of interest to the DAS Curriculum Team.

Two versions of survey forms were used at the two points of data collection for this study: before Educational Therapists received training for the DAS Enhanced Reading Comprehension curriculum (Survey 1), and one year after adopting the Enhanced Reading Comprehension curriculum (Survey 2). The surveys contained questions on the teaching methods that the Educational Therapists used to teach reading comprehension skills, teaching resources, and feedback on the Enhanced Reading Comprehension curriculum

Table 1: Survey items corresponding to research questions

Research Question	Survey	
	Survey 1	Survey 2
Does training and teaching experience influence the frequency at which Educational Therapists teach reading comprehension skills in their classes?	Q1. Across all the classes that you have taught since working as a DAS Educational Therapist, we want to find out how often you teach the following Reading Comprehension skills in the classroom.	Q1. Across all the classes you teach since the implementation of the enhanced curriculum, we want to find out how often you teach the following Reading Comprehension skills in the classroom.
Does training and teaching experience influence Educational Therapists' perceived level of importance of reading comprehension skills?	Q2. We would like to find out which Reading Comprehension skills you think are important. Please rate the following Reading Comprehension skills based on their importance.	Q3. We would like to find out which Reading Comprehension skills you think are important. Please rate the following Reading Comprehension skills based on their importance.
Does training and teaching experience influence Educational Therapists' perceived level of ease in reading comprehension skills?	Q3. We would like to know which Reading Comprehension skills you find easy or difficult to teach. Please rate the following skills based on their ease of teaching.	Q4. Educational Therapists have been introduced to explicit and scaffolded ways of teaching Reading Comprehension through the enhanced curriculum. We are interested to find out more about the ease of teaching Reading Comprehension skills based on the enhanced curriculum. Please rate the following Reading Comprehension skills based on your ease of teaching them.

(on Survey 2). Three questions in Survey 1 and their corresponding questions on Survey 2 were selected to answer the research questions in this study (refer to Table 1).

The final version of Surveys 1 and 2 each contained three subscales which corresponded to aspects of comprehension instruction in the three research questions: Frequency, Perceived Importance, and Perceived Ease. The Educational Therapists were required to rate their responses on a 5-point Likert scale and an option of Not Applicable (N.A.) was available for reading comprehension skills that they did not know or were unfamiliar with. For the Frequency subscale item, the response options were: (1) Not at all, (2) Rarely, (3) Sometimes, (4) Often, and (5) Always. For the Perceived Importance and Perceived Ease subscale items, the Educational Therapists rated the extent to which they agree that the skills were important or easy to teach, respectively. For these subscales, the options provided were: (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, and (5) Strongly Agree.

In Survey 1, 24 reading comprehension skills were included for each question. Survey 2 had 29 reading comprehension skills for each question, with five reading comprehension skills added to match the Enhanced Reading Comprehension Curriculum. Besides the ratings on the subscales, Educational Therapists were required to explain their low frequency in teaching the reading comprehension skills (i.e., the skills that they rated "Not at all" or "Rarely" for the Frequency subscale). They were further asked what other skills they taught besides the reading comprehension skills listed in the surveys.

The surveys also collected demographic information such as the Educational Therapists' sex, age, their highest educational qualification obtained, the number of years they taught students with dyslexia, the number of years they taught at the DAS, as well as the literacy level of students they taught at each survey.

PROCEDURE

This study utilised part of the data from the DAS' longitudinal research project beginning from June 2016. Prior to commencement of this study, approval was obtained from the DAS to use the data collected and to collect new data from the Educational Therapists. The Psychology and Child & Human Development Academic Group (formerly Psychological Studies Academic Group) at the NIE also reviewed this study and deemed it to meet ethical guidelines.

At the time when Survey 1 was conducted, the Educational Therapists were informed of the purpose of the original DAS study (i.e., to learn more about how reading comprehension is taught in the DAS classes and the effectiveness of the Enhanced Reading Comprehension curriculum). The purpose of this dissertation study was later conveyed via an information sheet/consent form that was disseminated together with Survey 2 for Educational Therapists to complete and return to the student researcher.

Written consent for the use of their survey responses were obtained and the Educational Therapists were ensured of the confidentiality of their responses.

Training for the DAS Enhanced Reading Comprehension Curriculum

Educational Therapists who were in the DAS Curriculum Team conducted three half-day mass training workshops for the other Educational Therapists on the DAS Enhanced Reading Comprehension Curriculum. The first training workshop session took place on 3 August 2016, the second session on 23 August 2016, and the last session was on 5 September 2016. The Educational Therapists began using the Enhanced Reading Comprehension Curriculum in September 2016.

The training workshops utilised PowerPoint slides which explained the reading comprehension skills and their importance, as well as handouts/activities to show the teaching of reading comprehension skills. Examples and materials on the teaching of some skills were differentiated for students in different literacy ability bands. Each workshop session also included a summary of the skills covered at the start and/or end of the session, and the videos of the workshops were made available to the Educational Therapists. In addition to the training workshops and slides, a copy of the curriculum pack containing resources for the Enhanced Reading Comprehension curriculum was made available at each DAS Learning Centre. One reading comprehension skill (Contextual Clues) was not covered explicitly in the workshop but was included in the resource pack for Educational Therapists.

Administration of Teacher Surveys

The first survey in this study (Survey 1) was administered between June and August 2016, before the Educational Therapists attended the training workshops for the Enhanced Reading Comprehension Curriculum. The second survey (Survey 2) was administered in September 2017. Both surveys were administered online using Google Forms and the Educational Therapists were notified to complete the surveys via email from the DAS researchers. The surveys were each completed in two to three weeks and email reminders were sent before deadlines to remind the Educational Therapists to participate.

Due to unforeseen difficulties with the Google Form used to collect data, only information from a subset of the Educational Therapists (109 responses) from Survey 1 were recorded. Moreover, the number of completed surveys over the two time points decreased from 109 to 49. In all, 48 Educational Therapists responded to both Surveys 1 and 2, but only 47 responses were analysed as one Educational Therapist did not give consent for her data to be used.

DATA ANALYSIS

In this study, reading comprehension skills were split into three categories: skills covered during the training workshops or in the curriculum pack, skills that were not yet covered in training, and skills that were dropped from the Enhanced Reading Comprehension curriculum as reading comprehension skills. For each group of skills, three mixed between-within analyses of variance (ANOVA) were conducted with Time as the within-subject factor and Length of Teaching Experience as the between-subject factor. The dependent variables were Educational Therapists' reported frequency at which skills were taught, their perceived importance of the skills, as well as their perceived ease in teaching the skills.

Survey 1 was developed based on the original DAS Reading Comprehension curriculum whereas Survey 2 was developed based on the Enhanced DAS Reading Comprehension curriculum. Hence, the five additional reading comprehension skills present in Survey 2 but not in Survey 1 were excluded from the data analysis. In addition, Survey 1 contains seven skills which were dropped from the Enhanced DAS Reading Comprehension curriculum and were no longer considered relevant Reading Comprehension skills for analysis. Three skills were further omitted after initial analysis as nine or more Educational Therapists (20% or more of responders) chose the 'N.A' option on them and it was inferred that they were unfamiliar with these skills and thus have not taught them in their classes.

The final set of data consisted of 14 reading comprehension skills which were grouped and analysed based on whether they were covered during training or not yet covered. The 11 reading comprehension skills covered during the workshop or included in the curriculum resource pack were Literal Questions, Contextual Cues, Referencing Skills, Vocabulary Inferential Skills, Sequencing Skills, Synonyms or Antonyms, Similes, Metaphors, Idioms, Irony, and Use of Conjunctions. Three reading comprehension skills that were not yet covered during the training but were supposed to be taught to the Educational Therapists after this study has concluded were Content Inferential Skills, Prediction Skills as well as Summarising and Paraphrasing.

For the between subject factor (teaching experience), a large majority of the Educational Therapists reported a short length of teaching students with dyslexia; 34 out of the 47 participating Educational Therapists (72%) had less than five years of experience. Given the small number of usable survey responses, Educational Therapists of all lengths of teaching experience were included in the analysis. Hence, the Educational Therapists were ranked chronologically from the lowest to the highest in terms of their years of teaching experience at the time of Survey 1. Based on this ranking, the 47 Educational Therapists were placed in three roughly even-sized groups: 16 in the least experienced group (two years or less), 16 in the more experienced group (two and a half to four years), and the last 15 Educational Therapists in the most experienced group (more than four years).

RESULTS

Six separate mixed between-within subject analyses of variance (ANOVAs) were conducted. Time (pre and post-training) served as the within-subject variable. Length of teaching experience served as the between-subject variable.

Research Question One: Does training and teaching experience affect the frequency at which Educational Therapists teach reading comprehension skills in their classes?

Frequency of teaching reading comprehension skills covered in training. There is a significant interaction between length of teaching experience and training on the frequency at which Educational Therapists taught the 11 reading comprehension skills covered in training, $F(2,44) = 4.50$, $p = .017$, $\eta^2 = .17$ (see Table 2). There is no significant main effect of training, $F(1,44) = 1.23$, $p = .274$, $\eta^2 = .03$, nor length of teaching experience, $F(2,44) = 0.98$, $p = .385$, $\eta^2 = .04$.

Table 2: ANOVA summary table for frequency of teaching reading comprehension skills

Types of Skills	Source	SS	df	MS	F	p	η^2
Skills taught in training	Length of Teaching (A)	0.82	2	0.41	0.98	.385	.04
	Training (B)	0.21	1	0.21	1.23	.274	.03
	A X B	1.55	2	0.77	4.50	.017*	.17
	Error	7.57	44	0.17			
Skills not yet taught in training	Length of Teaching (A)	0.65	2	0.32	0.47	.626	.02
	Training (B)	0.58	1	0.58	2.11	.153	.05
	A X B	1.85	2	0.93	3.35	.044*	.13
	Error	12.13	44	0.28			
Non-reading comprehension skills	Length of Teaching (A)	0.10	2	0.05	0.07	.929	.003
	Training (B)	0.43	1	0.43	1.55	.22	.03
	A X B	1.57	2	0.79	2.82	.071	.11
	Error	12.25	44	0.28			

* $p < .05$

Table 3: Means of frequency in teaching the reading comprehension skills

	Length of teaching students with dyslexia	n	Pre-training		Post-training		t
			M	SD	M	SD	
Skills taught in training	Least Experienced	16	3.13	0.52	3.35	0.51	-1.53
	More Experienced	16	3.04	0.42	3.37	0.40	-2.98*
	Most Experienced	15	3.55	0.66	3.28	0.70	1.45
Skills not yet taught in training	Least Experienced	16	3.31	0.65	3.31	0.48	0.00
	More Experienced	16	3.29	0.64	3.38	0.61	-0.51
	Most Experienced	15	3.78	0.57	3.22	1.07	2.27

* $p < .05$ (significant p value $< .0167$ after Bonferroni correction)

Tests of simple main effects found that for Educational Therapists who are more experienced, the frequency at which they taught the 11 reading comprehension skills covered in training increased significantly from pre-training ($M = 3.04$, $SD = 0.42$) to post-training ($M = 3.37$, $SD = 0.40$): $t(15) = -2.98$, $p = .009$ (see Table 3).

Frequency of teaching reading comprehension skills not yet covered in training. There is a significant interaction between length of teaching and training on the frequency at which Educational Therapists taught the three reading comprehension skills not yet covered in training, $F(2,44) = 3.35$, $p = .044$, $\eta^2 = .13$ (see Table 2). There is no significant main effect of training, $F(1,44) = 2.11$, $p = .153$, $\eta^2 = .05$, nor of the length of teaching, $F(2,44) = 0.47$, $p = .626$, $\eta^2 = .02$.

Tests of simple main effects did not find any significant changes in the frequency at which the reading comprehension skills not yet covered in training were taught for Educational Therapists of all lengths of teaching experience (see Table 3).

Research Question Two: Does training and teaching experience affect Educational Therapists' perceived level of importance of reading comprehension skills?

Perceived importance of the reading comprehension skills covered in training. There is a significant interaction between length of teaching experience and training on the perceived importance of the 11 reading comprehension skills covered in training, $F(2,44) = 3.31$, $p = .046$, $\eta^2 = .13$ (see Table 4). There is no significant main effect of training, $F(1,44) = 1.00$, $p = .324$, $\eta^2 = .02$, nor length of teaching experience, $F(2,44) = 0.01$, $p = .999$, $\eta^2 = .000$ (see Tables 4 and 5).

Table 4: ANOVA summary table for perceived importance of reading comprehension skills

Types of Skills	Source	SS	df	MS	F	p	η^2
Skills taught in training	Length of Teaching (A)	0.001	2	0.000	0.001	.999	.000
	Training (B)	0.10	1	0.10	1.00	.324	0.02
	A X B	0.65	2	0.32	3.31	.046*	.13
	Error	4.30	44	0.10			
Skills not yet taught in training	Length of Teaching (A)	0.08	2	0.04	0.18	.837	.008
	Training (B)	1.78	1	1.78	17.00	<.001*	.28
	A X B	0.42	2	0.21	2.02	.145	.08
	Error	4.61	44	.11			
Non-reading comprehension skills	Length of Teaching (A)	0.09	2	0.04	0.16	.852	.007
	Training (B)	0.76	1	0.76	5.20	.027*	.11
	A X B	0.54	2	0.27	1.87	.166	.08
	Error	6.39	44	0.15			

* $p < .05$

Table 5 Means of perceived importance of reading comprehension skills

	Length of teaching students with dyslexia	Pre-training			Post-training		t
		n	M	SD	M	SD	
Skills taught in training	Least Experienced	16	4.13	0.45	4.17	0.32	-0.31
	More Experienced	16	4.01	0.40	4.29	0.45	-2.44
	Most Experienced	15	4.22	0.41	4.09	0.47	1.42
Skills not yet taught in training	Least Experienced	16	4.60	0.43	4.15	0.36	
	More Experienced	16	4.48	0.32	4.33	0.40	
	Most Experienced	15	4.44	0.45	4.22	0.48	
	Total (All Lengths)	47	4.51	0.40	4.23	0.42	

* $p < .05$ (significant p value <.0167 after Bonferroni correction)

Tests of simple main effects did not find any significant changes in the perceived importance of reading comprehension skills covered in training for Educational Therapists of all lengths of teaching experience (see Table 5).

Perceived importance of the reading comprehension skills not yet covered in training.

There is no significant interaction between length of teaching and training on the perceived importance of the three reading comprehension skills not yet covered in training, $F(2,44) = 2.02$, $p = .145$, $\eta^2 = .08$ (see Table 4). There is no significant main effect of length of teaching experience, $F(2,44) = 0.18$, $p = .837$, $\eta^2 = .008$. However, there was a main effect of training where the Educational Therapists reported a significant decrease in their perceived importance of the reading comprehension skills not yet covered from pre-training ($M = 4.51$, $SD = 0.40$) to post-training ($M = 4.23$, $SD = 0.42$); $F(1,44) = 17.00$, $p < .001$, $\eta^2 = .28$ (see Tables 4 and 5).

Research Question Three: Does training and teaching experience affect Educational Therapists' perceived level of ease in teaching reading comprehension?

Perceived ease in teaching the reading comprehension skills covered in training.

There is no significant interaction between length of teaching and training on the perceived ease in teaching the 11 reading comprehension skills covered in training, $F(2,44) = 2.77$, $p = .074$, $\eta^2 = .11$ (see Table 6). There is no significant main effect of length of teaching experience, $F(2,44) = 2.30$, $p = .112$, $\eta^2 = .10$. However, there was a main effect of training, where Educational Therapists reported a significant increase in their perceived ease in teaching reading comprehension skills covered from pre-training ($M = 3.49$, $SD = 0.60$) to post-training ($M = 3.90$, $SD = 0.52$); $F(1,44) = 19.42$, $p < .001$, $\eta^2 = .31$ (see Tables 6 and 7).

Perceived ease in teaching the reading comprehension skills not yet covered in training. There is a significant interaction between length of teaching experience and training on the perceived ease in teaching the three reading comprehension skills not yet covered in training, $F(2,44) = 3.74$, $p = .032$, $\eta^2 = .15$ (see Table 6). There is no significant main effect of length of teaching experience, $F(2,44) = 0.31$, $p = .734$, $\eta^2 = .01$ but a significant main effect of training, $F(1,44) = 12.39$, $p = .001$, $\eta^2 = .22$.

Tests of simple main effects found that for Educational Therapists who are more experienced, their perceived ease in teaching the three reading comprehension skills not covered in training increased significantly from pre-training ($M = 3.08$, $SD = 0.55$) to post-training ($M = 3.81$, $SD = 0.52$): $t(15) = -4.77$, $p < 0.001$ (see Table 7).

Table 6: ANOVA summary table for perceived ease in teaching reading comprehension skills

Types of Skills	Source	SS	df	MS	F	p	η^2
Skills taught in training	Length of Teaching (A)	1.83	2	0.92	2.30	.112	.10
	Training (B)	3.74	1	3.73	19.42	<.001*	.31
	A X B	1.07	2	0.53	2.77	.074	.11
	Error	8.46	44	0.19			
Skills not yet taught in training	Length of Teaching (A)	0.32	2	0.16	0.31	.734	.01
	Training (B)	3.43	1	3.43	12.39	0.001*	.22
	A X B	2.07	2	1.03	3.74	.032*	.15
	Error	12.16	44	0.28			
Non-reading comprehension skills	Length of Teaching (A)	1.34	2	0.67	1.44	.248	.06
	Training (B)	1.69	1	1.69	7.88	.007*	.15
	A X B	0.21	2	0.11	.49	.616	.02
	Error	9.46	44	0.22			

* $p < .05$

Table 7: Means of perceived ease in teaching reading comprehension skills

	Length of teaching students with dyslexia	Pre-training			Post-training		t
		n	M	SD	M	SD	
Skills taught in training	Least Experienced	16	3.44	0.43	3.84	0.59	
	More Experienced	16	3.23	0.40	3.89	0.46	
	Most Experienced	15	3.82	0.78	3.96	0.52	
	Total (All Lengths)	47	3.49	0.60	3.90	0.52	
Skills not yet taught in training	Least Experienced	16	3.25	0.64	3.67	0.57	-2.15
	More Experienced	16	3.08	0.55	3.81	0.52	-4.77*
	Most Experienced	15	3.58	0.78	3.58	0.69	0

* $p < .05$ (significant p value <.0167 after Bonferroni correction)

Additional Data Analysis

It was noted that Educational Therapists who are most experienced showed a decreasing trend in the frequency at which they taught the 14 reading comprehension skills following the training workshop. To explore the skills which the most experienced Educational Therapists possibly taught in their classes, further analyses were conducted on the seven skills which were no longer considered as reading comprehension skills in the DAS Enhanced Reading Comprehension curriculum.

Frequency in teaching skills no longer considered reading comprehension skills.

There is no significant interaction between length of teaching experience and training on the frequency at which Educational Therapists taught the seven non-reading comprehension skills, $F(2,44) = 2.82$, $p = .071$, $\eta^2 = .11$ (see Table 2). There is also no significant main effect of training, $F(1,44) = 1.55$, $p = .22$, $\eta^2 = .03$, nor of length of teaching, $F(2,44) = 0.07$, $p = .929$, $\eta^2 = .003$ (see Table 8).

Table 8: Means in teaching non-reading comprehension skills

	Length of teaching students with dyslexia	Pre-training			Post-training	
		<i>n</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Frequency	Least Experienced	16	3.29	0.66	3.33	0.56
	More Experienced	16	3.29	0.64	3.35	0.61
	Most Experienced	15	3.64	0.78	3.13	0.91
Perceived Importance	Least Experienced	16	4.48	0.44	4.11	0.55
	More Experienced	16	4.30	0.44	4.29	0.47
	Most Experienced	15	4.31	0.48	4.15	0.36
	All Lengths	47	4.37	0.45	4.19	0.46
Perceived Ease	Least Experienced	16	3.58	0.62	3.79	0.57
	More Experienced	16	3.37	0.41	3.77	0.61
	Most Experienced	15	3.76	0.76	3.96	0.47
	All Lengths	47	3.57	0.62	3.84	0.55

Perceived importance of the non-reading comprehension skills. There is no significant interaction between length of teaching and training on the perceived importance of the three non-reading comprehension skills, $F(2,44) = 1.87$, $p = .166$, $\eta^2 = .08$ (see Table 4). There is no significant main effect of the length of teaching experience, $F(2,44) = 0.16$,

$p = .852$, $\eta^2 = .007$. However, there is a significant main effect of training, where the perceived importance of the non-reading comprehension skills decreased significantly from pre-training ($M = 4.37$, $SD = 0.45$) to post-training ($M = 4.19$, $SD = 0.46$); $F(1,44) = 5.20$, $p = .027$, $\eta^2 = .11$ (see Table 4 and 8).

Perceived ease in teaching the non-reading comprehension skills. There is no significant interaction between length of teaching experience and training on the perceived ease in teaching the seven non-reading comprehension skills, $F(2,44) = 0.49$, $p = .616$, $\eta^2 = .02$ (see Table 6). There is also no significant main effect of length of teaching experience, $F(2,44) = 1.44$, $p = .248$, $\eta^2 = .06$ (see Table 6). However, there is a significant main effect of training, where the perceived ease in teaching the non-reading comprehension skills increased significantly from pre-training ($M = 3.57$, $SD = 0.62$) to post-training ($M = 3.83$, $SD = 0.55$); $F(1,44) = 7.88$, $p = .007$, $\eta^2 = .15$ (see Table 8).

Research Question Four: What are the reasons for changes in the Educational Therapists' frequency in teaching comprehension skills as well as their perceived importance of these skills?

Although the changes were insignificant, it was observed that the frequency in teaching of the 14 reading comprehension skills following training generally decreased for the most experienced group of Educational Therapists following training. To investigate the reasons for this decrease, qualitative responses from the 15 Educational Therapists with most teaching experience were explored.

When asked to explain why they did not teach the listed reading comprehension skills, among the 15 most experienced Educational Therapists, 10 of them (66.67%) stated that the skills were less relevant to their students compared to other skills. They elaborated that their students needed more support in basic literacy skills first before tackling the listed higher order reading comprehension skills. Another reason cited by an experienced Educational Therapist was that there was too much content to teach while another Educational Therapist explained that she did not know what some of the skills were. The last three Educational Therapists gave a "not applicable" response.

DISCUSSION

DAS Educational Therapists were surveyed on the frequency at which they taught reading comprehension skills, their perceived importance of those skills, as well as their perceived ease in teaching those skills before and after attending a training workshop for the DAS Enhanced Reading Comprehension curriculum. This study also explored the role of experience in teaching students with dyslexia on the changes in the Educational Therapists' perceptions following the training. Overall, the results showed some support for the hypotheses across the three areas of Educational Therapists' perceptions (frequency, perceived importance, and perceived ease).

Teaching Frequency

It was found that whereas the least and more experienced Educational Therapists taught the skills covered in training more frequently, the most experienced group of Educational Therapists showed a decrease in their teaching of the skills covered in training. Hence, there was little support for the hypotheses that training but not teaching experience would affect the frequency change at which the reading comprehension skills were taught post workshop. Little support was also found for the hypothesis that following training, the frequency at which Educational Therapists teach the reading comprehension skills not covered during training will not change, regardless of teaching experience. For the skills not yet covered in training and the non-reading comprehension skills, the most experienced Educational Therapists generally taught less of the skills whereas Educational Therapists with least or more experience showed little change in their teaching frequency of these skills.

Despite having received the same training and materials for a standardised curriculum, Educational Therapists with different lengths of teaching experience changed differently in the frequency at which they taught the reading comprehension skills following training. For Educational Therapists with the least experience (less than two years) and more experience (two to four years), their positive reaction to the training is in line with past research, which found that beginning teachers are more receptive to change and adopting new practices (Hargreaves, 2005; Rahimi & Alavi, 2017). As suggested by Hargreaves (2005) in his study on Canadian teachers' emotional responses to educational change, this could be because less experienced teachers (with less than five years of teaching experience in his case) are in the process of building up their teaching competence and repertoire of skills. Therefore, they may be more responsive towards adopting changes and new practices.

In contrast, opposite effects of training were found for Educational Therapists with the most teaching experience. In this study, it appears that a teaching experience of four years was sufficient to lower Educational Therapists' responsiveness to in-service training. This finding concurred with those of Hargreaves (2005) as well as Rahimi and Alavi (2017), who found that more experienced teachers are more cautious and resistant to change, or they could be more selective in the changes that they adopt. Similar lines of research by Saborit, Fernandez-Rio, Estrada, Mendez-Gimenez, and Alonso (2016) further highlighted that there was a negative correlation between teaching experience and attitudes towards innovative teaching methods (i.e., cooperative learning in their study). Overall, it appears that teaching experience plays a large role in influencing how much therapists adopt new skills in their teaching, and training may be less effective for most experienced educators if their pre-existing mindset and perceptions are not addressed during the training.

Perceived Importance

There was little support for the hypothesis that the training will increase the perceived importance of the skills covered during training regardless of teaching experience. However, the results showed that teaching experience played a role. The least and more experienced Educational Therapists showed the expected increase in their perceived importance of skills covered in training. In contrast, the most experienced Educational Therapists perceived the skills covered in training as being less important. For the skills that were not covered in the workshop, the hypothesis that teaching experience will affect the change in perceived importance of skills was not supported as well. Across all three levels of teaching experience, Educational Therapists showed a decrease in their perceived importance of skills not yet covered in training as well as the non-reading comprehension skills.

In line with findings on changes in teaching frequency, experienced therapists who work with students with a learning disability, similar to teachers in mainstream settings, may be less receptive to changes imposed on their teaching practices. It could be possible that more experienced Educational Therapists have developed their own ways of teaching along with their preferred set of skills to teach over the years. Moreover, with experience, the Educational Therapists could have developed greater flexibility in their selection of materials and concepts to teach in their own classes, in a way noted by Shower (2017) in his study. He found that some teachers diverged from coursebook materials and adapted their own teaching as they gained confidence and curriculum knowledge to do so. Hence, even with a standardized curriculum, the experienced teachers could alter the delivery of the curriculum at the classroom level. In this present study, this could be seen in the qualitative responses from the most experienced Educational Therapists, where they highlighted that they considered some of the skills included in the Enhanced Reading Comprehension curriculum to be irrelevant for their students. This perception could have eventually affected their decisions to teach the reading comprehension skills covered in training to a smaller extent, and they might have taught more of the skills that were not included in the Enhanced Reading Comprehension curriculum.

It was further noted that the perceived importance of skills not yet covered in training decreased for the most experienced Educational Therapists. This is contrary to the prediction that the perceived importance of these skills will remain unchanged for this group of Educational Therapists. This finding suggests that the training did change the Educational Therapists' thoughts about the importance of skills that were not covered, although it remains unclear which skills have gained importance since the most experienced Educational Therapists did not see the skills covered in training as well as the non-reading comprehension skills as being more important as well.

Perceived Ease

Support was found for the hypothesis that the training will increase the perceived ease in teaching the reading comprehension skills covered in training, regardless of teaching experience. In comparison, partial support was found for the hypothesis that length of teaching experience will affect the perceived ease in teaching reading comprehension skills not yet covered. As predicted, perceived ease in teaching skills not yet covered in training did not change significantly for the most experienced Educational Therapists. However, findings were opposite of what was expected for the Educational Therapists with least and more teaching experience – they reported an increase in ease in teaching reading comprehension skills not yet taught during training as well as the non-reading comprehension skills.

The finding that post-training, all groups of Educational Therapists found teaching of reading comprehension skills covered to be easier suggests that aspects of the training were effective in equipping the Educational Therapists with the pedagogy or materials to deliver the instruction. This could include the teaching strategies imparted as well as the teaching materials provided. In addition, this study also found that Educational Therapists with more teaching experience reported increased perceived ease in teaching the skills not yet covered in training. Similarly, for the least experienced Educational Therapist, there was also an increase in the perceived ease of the skills not yet covered, albeit the change being non-significant. It is possible that beginning teachers were exploring other skills not covered in training in their own capacity or through informal training (e.g., discussion with colleagues). Hence, they could be gaining more knowledge of skills and find skills generally easier to teach. It could also be possible that less experienced Educational Therapists have not accumulated enough knowledge to gauge the ease at which they could teach the skills not yet covered in training accurately.

IMPLICATIONS

The findings highlight the need to consider multiple factors when providing training and implementing a new curriculum for educators working with students with specific learning difficulties. Importantly, the teaching experience of the teachers needs to be considered and differentiated training methods may be required for the teachers of different levels of teaching experience, given that their responses towards the training differ.

Considering that the experienced Educational Therapists may be less receptive to changes in curriculum, they may need a longer time to gain familiarity with the new curriculum before they will adopt it and the relevant materials in their classroom teaching. To help transit the Educational Therapists into the new curriculum, it may be helpful to address their perceptions towards changes in curriculum directly during training sessions and obtain as well as adopt their feedback. As Kennedy (1999) noted,

addressing and raising the awareness of attitudes and beliefs in teachers is an important part when facilitating changes in their teaching behaviors in the classrooms. In addition, Buff (2014) found that if a person perceives that learning has value for them and that they have control over their learning situation, they experience more joy in learning. Increasing the participation of Educational Therapists in training could therefore reduce their resistance to changes, leading to positive shift in the perceived importance of the covered skills, thereby making the training more effective.

The study findings additionally point to the need for curriculum teams to evaluate the skills they select when developing a new curriculum. The skills included in the curriculum should be comprehensive enough so that they are relevant to the student population as well as perceived to be relevant by the experienced educators. Consulting experienced therapists during the process of curriculum development would thus be helpful.

For educators early in their career, it would be important to ensure that they receive continued support in their early development of teaching competency. Meister and Melnick (2003) found that teachers in the early stages of their career generally report struggles in many areas of teaching including classroom management and effective teaching of reading and language skills. Thus, tools such as sample lesson plans for reading comprehension teaching and checklists for the components of lesson plans can be made part of the curriculum resource pack to guide and monitor the therapists' progress in training.

LIMITATIONS OF CURRENT STUDY

This study was conducted in a naturalistic setting where DAS Educational Therapists taught students of varying ages/grades who have been diagnosed with dyslexia. The natural setting thus resulted in certain methodological limitations, which are discussed in the following section.

Teacher/Student Factors

While this study focused on the training workshop conducted for the DAS Enhanced Reading Comprehension curriculum and its effect on the Educational Therapists, it was highly likely that the Educational Therapists received additional support outside the workshop. Educational Therapists work closely with each other and they often informally share teaching materials and resources, as well as strategies for working with the students. A team of Educational Advisers (comprising senior therapists) also supports the less experienced Educational Therapists in their teaching. These informal sources of support could have exerted some influence on the Educational Therapists' teaching practices and their perceptions of the various reading comprehension skills.

Another teacher and student factor that rendered the design of the original DAS study

complicated is the fluidity in the movements of the students across the different literacy ability bands, along with the changes in classes/combination of students that Educational Therapists have to teach across terms. As this study spanned around a period of a year (four terms), there were changes in the students that each Educational Therapist had to teach, and the focus of literacy intervention changed as students moved between the literacy bands. Since the reading comprehension skills were differentiated for different literacy bands, the many changes among the students and Educational Therapists made it difficult to track the changes in the skills which the Educational Therapists needed to teach for each class. Nonetheless, it was noted that except for two Educational Therapists who only needed to teach the intermediate literacy band, all the other Educational Therapists needed to teach across a range of literacy bands across the four lesson terms. Thus, most Educational Therapists would have needed to work with students with a range of literacy abilities and teach a range of reading comprehension skills during this study.

Similarly, Educational Therapists were informed of the aims of this study prior to completing the final survey form. Hence, there is a possibility that the Educational Therapists' knowledge of the study goals could have influenced and led them to respond in ways that are deemed more desirable. As with other surveys used in research studies, social desirability bias could play a role in affecting individuals' responses (Lavrakas, 2008).

High Attrition Rate

Another limitation of this study would be the high attrition in the survey response rates across the two surveys. Despite the surveys being made compulsory for all active DAS Educational Therapists who attended the training workshop, the response rate declined significantly over time. This could be related to the surveys being lengthy and possibly time consuming to answer, and the fact that the Educational Therapists were aware that their responses would not affect their work appraisal. Eventually, the overlap between the Educational Therapists who responded in Surveys 1 and 2 was small, resulting in an overall small sample size for this present study. The most experienced Educational Therapists also provided little qualitative responses that could have helped to explain the reasons for not teaching the listed reading comprehension skills.

Lack of Fidelity Check

Besides limitations of the sample, the original DAS study did not incorporate a fidelity check on the implementation of the Enhanced Reading Comprehension curriculum during the period of study. Although DAS Educational Therapists were required to submit a recording of a segment of their lesson, it was not stipulated that it had to be part of a reading comprehension lesson. It was thus not possible to verify the teaching frequency of skills reported in this survey as well as the reading comprehension skills listed in the

Educational Therapists' lesson plans which were submitted to the DAS. As the survey was retrospective in nature, there could be inaccuracies when Educational Therapists attempted to recall the frequency at which they taught the 21 skills.

Progressive Changes in the DAS Enhanced Reading Comprehension Curriculum

The list of reading comprehension skills in Survey 1 was developed based on the information in the DAS Enhanced Reading Comprehension curriculum, which was accurate at the time of survey construction. However, between Surveys 1 and 2, changes were made to the curriculum and some items on Survey 1 were rendered irrelevant in the Enhanced Reading Comprehension curriculum. Furthermore, upon the request of the DAS Curriculum Team, items were also added to Survey 2, and these additional items had no corresponding items in Survey 1. Creating an accurate and relevant set of skills for the pre-and post-training surveys based on a finalised curriculum would have reduced unnecessary responding for Educational Therapists and provided a more complete set of data.

FUTURE DIRECTIONS

Due to the scope of this study, only a fraction of items from the original DAS Surveys were included. As the rest of the survey responses contain information on the other aspects of training, such as the teaching materials deemed useful by Educational Therapists, as well as their perceptions on the usefulness of the Enhanced Reading Comprehension curriculum, further analyses may reveal information that could aid in future curriculum development and enhancement efforts.

As highlighted in the report from NRP (2000), other teacher characteristics such as the therapists' age and pre-service educational background could affect their reading comprehension instruction and perhaps their responses to training. Future studies could also explore personality factors, such as conscientiousness, which has been noted by researchers like Palos and Gunaru (2017) to moderate teachers' resistance to change. In addition to teacher factors, there could be student factors and feedback that interact with teachers' knowledge and behaviors to influence the course of the lessons (Richards, Gallo, & Renandya, 2001). For instance, in the preliminary study, student interest was listed as an important point of consideration when Educational Therapists choose skills to teach. Future studies can thus investigate other teacher and student variables to give better insight into the factors that could be directly or indirectly influencing teachers' behaviors and perceptions.

For the current study, focus was given to Educational Therapists' perceptions and reported teaching behavior (i.e., frequency in teaching skills). Also based on the original DAS study, a sister study was conducted in which quantitative information on the DAS students' progress in reading comprehension skills in relation to the old and Enhanced

Reading Comprehension curriculum were collected. However, as students included in that study were not necessarily the same students taught by the Educational Therapists whose responses were included in this study, the findings in both studies could not be linked directly. Future studies could track changes in Educational Therapists' perceptions and teaching behaviors after training while correlating these changes to changes in their students' actual test performance. This will provide stronger evidence for the effectiveness of training contributing to actual improvements in students' skills. Educational Therapists can also be surveyed further on the impact of the Enhanced curriculum on their teaching, such as the perceived improvements in their students' skills, or the changes they have to make to their teaching of other literacy skills (e.g., phonology or morphology) and how this affects their students' intervention.

Future studies could also explore the effectiveness of the Enhanced Reading Comprehension curriculum for students in various literacy bands (i.e., with different literacy abilities). As noted by one of the most experienced Educational Therapist, some of the skills included in the Enhanced curriculum are too difficult for some students. While the curriculum has been differentiated and designed to cover students across all bands, monitoring the gains in the students' skills over time would confirm the suitability of the skills designed for each band, and modifications to these skills in future iterations of the curriculum enhancement can be made.

In addition, besides obtaining teachers' self-reports on their attitudes and behaviors, the curriculum team could obtain a more direct measure of the effectiveness of the training through testing actual changes in the teachers' knowledge of the reading comprehension skills before and after training. This will allow the curriculum developers and trainers to understand if the training had led to an increased knowledge of the skills considered important. Without the teachers having better understanding of the skills included in the enhanced curriculum from the training, they will be unlikely to try teaching those skills, even if they see them as being more important following the training.

Researchers can also consider surveying the teachers' behaviors and perceptions over a longer period of time. The period of the training could have possibly been too short to produce considerable impact on the Educational Therapists' attitudes and actual teaching. As Smith (2014) noted in his literature review, past research has shown that short courses or workshops held just once did not produce a lasting impact on teaching practice. With a longer period of study, Educational Therapists would have more time to absorb the information given and test out the strategies taught in their own practice. Feedback can then be given to the trainers or the curriculum team, and adopted in later stages of curriculum change. Moreover, the effects of training can be tracked to inform if they are lasting or if teachers revert to their old ways of teaching after a brief period of trying out the new curriculum and materials.

In future curriculum development and enhancement efforts, curriculum teams could

additionally consider holding focus group discussions with the educators. With additional input, the team may be better able to foresee issues with the new curriculum and make adjustments before rolling out the curriculum in full to the entire school/organisation. The focus group sessions could also shed light on the reasons for the low response rates for Survey 2, thereby aiding improvements in the data collection procedure.

CONCLUSION

Overall, this study contributes to the current literature by investigating the role of teaching experience in affecting Educational Therapists' response to training for an enhanced reading comprehension curriculum. This study differs from past studies in its focus on in-service therapist training on reading comprehension instruction for students with a learning disability. The findings show that it is important to consider teacher factors, such as length of teaching experience, when designing teacher training programs. To ensure that training is effective for curriculum changes, curriculum developers and trainers will need to tailor their programs, taking into consideration feedback from teachers/therapists.

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