Chapter 6
Case Studies

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Abstract In this chapter, we provide three case studies of students with different reading profiles. We demonstrate how using the five-step assessment to intervention approach explained in Chap. 2 assists in creating a detailed profile of each student's strengths and weaknesses in spoken and written language skills that are needed for successful reading comprehension. We highlight the importance of collaboration between professionals involved in the identification of students who experience difficulties in reading, to avoid duplication of assessments and to ensure targeted intervention can be provided by the most relevant professional at the required tier of intervention within a response-to-intervention (RtI) model.

Keywords Case studies · Speech-to-print profile · Reading difficulties

6.1 Case Study 1: James

James (S46: not his real name, age 9 years, 8 months) attended Year 4 at the school and had attended the school since Prep (foundation year). His enrolment form identified him speaking English as an additional language or dialect, but his teachers reported no concerns about his command of the English language. However, his teachers were concerned about his reading comprehension skills and had noticed difficulties in his spelling too (see Fig. 6.1). James' NAPLAN results (https://www.nap.edu.au/results-and-reports/how-to-interpret) were at the national minimum standard when he was tested in Year 3, particularly for writing and grammar and punctuation (reading band 3; writing band 2; spelling band 3; grammar and punctuation band 2). James performed at age level on the PROBE 2 (Parkin & Parkin, 2011); however, his performance on the PAT-R (Australian Council for Educational Research, 2018) was stanine 2, indicating performance well below expectations. When administering the *Reading Self-Concept Scale* (Chapman & Tunmer, 1995), James' response indicated average perceptions of difficulties, competence, and attitude. We investigated James' reading skills using our five-step assessment to intervention approach, as described in Chap. 2 (Fig. 2.2).

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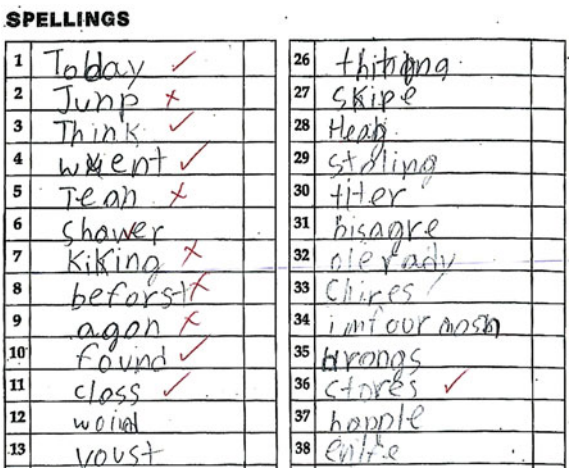


Fig. 6.1 James' performance on the *Single Word Spelling Test* (SWST; Sacre & Masterson, 2000)

6.1.1 Assessment Overview: Steps 1 to 4

Step 1: Assessment of Reading Skills

York Assessment of Reading for Comprehension (YARC; Snowling et al., 2012) results indicated severe difficulties in reading comprehension (SS = 73; age equivalent [AE] 6 years, 8 months).

Step 2i: Further Assessment of Students Who Scored Below Expectations: Check RA

James showed significant difficulties in reading accuracy (SS = 70, AE: 6;03 years), with 42.9% mispronunciations and 57.1% substitutions; and reading rate (SS < 70; AE 6;0 years) on the YARC.

Step 2ii: Further Assessment of Students Who Scored Below Expectations: Check LC

James showed satisfactory performance (SS = 12) in language comprehension, using the *Understanding Spoken Paragraphs* subtest from the CELF-4 (Semel, Wiig, & Secord, 2006).

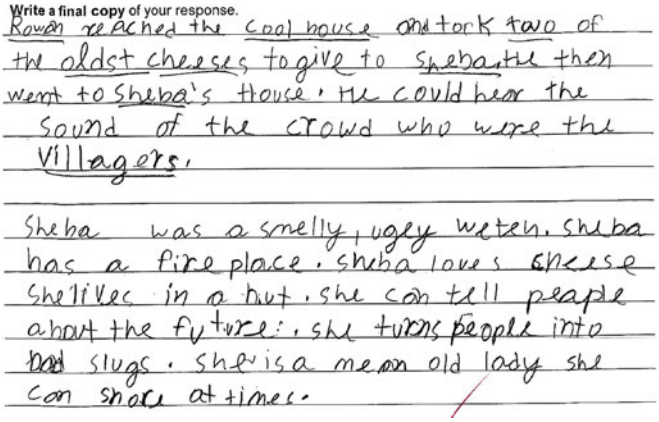
Step 3: Further Assessment of Students Who Scored Below Expectations on RA

Further assessment of word recognition, using the Castles and Coltheart test of single word reading (CC2; Castles, Coltheart, Larsen, Jones, Saunders, & McArthur, 2009) showed severe difficulties in single word reading across regular, irregular, and non-sense words (z's < −2.0). James performed poorly in orthographic knowledge (z = −2.32 using Year 3 norms of the *Letter-Sound Test* (LeST; Larsen, Kohnen, Nickels,

& McArthur, 2015). Furthermore, James performed significantly below expectations (SS = 5) on the Elision subtest of the *Comprehensive Test of Phonological Processing* (CTOPP; Wagner, Torgesen, & Rashotte, 2013), indicating difficulties in phoneme awareness.

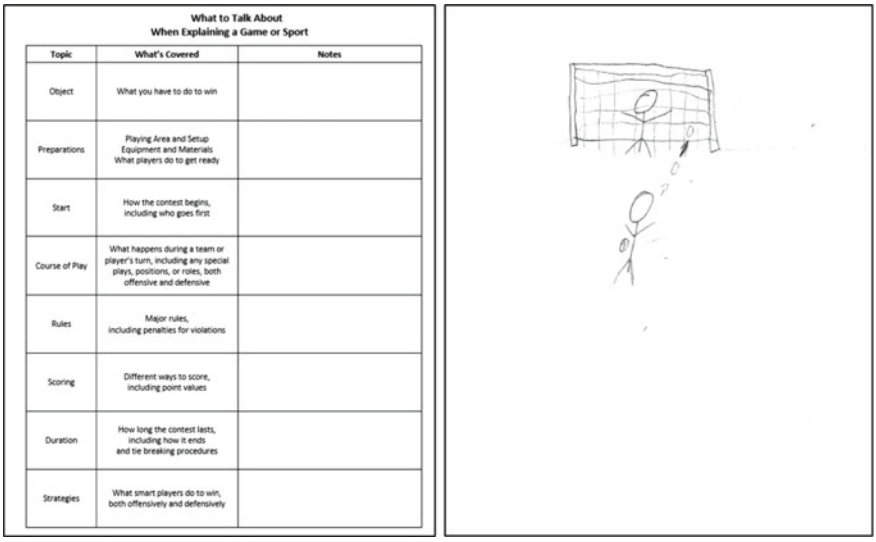
Step 4: Create a Speech-to-Print Profile

A speech-to-print profile was created based on the assessment results from Steps 1 to 3. The speech pathologist administered the *Rapid Automatic Naming* task of the CELF-4 which showed performance within normal limits. In addition, information was gathered from the classroom teacher, including James' performance on the *Single Word Spelling Test* (SWST; Sacre & Masterson, 2000) as shown in Fig. 6.1 (age equivalence 6 years, 9 months). James also participated in a curriculum-based assessment in English, based on the Novel *Rowan of Rin* by Emily Rodda. For this assessment, students had to explain how the author of this novel represents the main character in an important event. Students had to select an important event, complete several scaffolded tasks, including writing a draft, before producing a final copy of their response, which the teacher marked as not satisfactory for James' level of schooling (see Fig. 6.2). Because of the teacher's concerns about James' ability to answer some of the scaffolded questions and create a coherent response, the speech pathologist also administered an expository task (Heilmann & Malone, 2014) in which James was asked to explain his favourite game or sport. James chose to explain how to play soccer. The speech pathologist noticed James did not make effective use of the planning sheet in that he did not write down any keywords on page 1, but chose to draw a picture instead (Fig. 6.3). Although he used long sentences, he had difficulty formulating complex ideas and his explanation lacked cohesion (i.e. "*little discernible order to topics; much jumping between topics*; *and abrupt transitions between topics*"). The final speech-to-print profile is shown in Fig. 6.4.


Write a final copy of your response.
Rowan reached the cool house and took two of the oldst cheeses to give to Sheba. the then went to Sheba's House. He could hear the sound of the crowd who were the villagers.

Sheba was a smelly, ugey witch. Sheba has a fire place. Sheba loves cheese She lives in a hut. She can tell people about the future. She turns people into bad slugs. She is a mean old lady she can share at times.

Fig. 6.2 James' final copy of his English assessment



What to Talk About
When Explaining a Game or Sport

Topic	What's Covered	Notes
Object	What you have to do to win	
Preparations	Playing Area and Setup Equipment and Materials What players do to get ready	
Start	How the contest begins, including who goes first	
Course of Play	What happens during a team or player's turn, including any special plays, positions, or roles, both offensive and defensive	
Rules	Major rules, including penalties for violations	
Scoring	Different ways to score, including point values	
Duration	How long the contest lasts, including how it ends and tie breaking procedures	
Strategies	What smart players do to win, both offensively and defensively	

Fig. 6.3 James' expository planning sheet. (*Source* saltsoftware.com)

Spoken Language			**Written Language**		
Underlying representations	*Phonological Processing*				
Vocabulary knowledge	**Phonological Awareness**	**Storage and Retrieval**	**Rule/concept knowledge**	**Word – level**	**Text-level**
Syntax	*Syllable level*	*Non word repetition*	*Print concepts*	Word recognition	*Reading accuracy* SS: <70
Morphology	*Onset-rime level*	*Multisyllabic word repetition*	Grapheme-Phoneme Correspondences: *Z = -2.32 (Yr3 norms)*	*Regular word reading Z = -2.48*	*Reading comprehension SS: 73*
Phonology: No concerns	*Phoneme level Elision subtest SS: 5 (CTOPP)*	*Rapid Naming WNL*		*Irregular Z = -2.12*	*Reading fluency/rate SS: <70*
Text structure: Poor cohesion on expository generation task.				*Non-word Z = -2.62*	*Writing:* Teacher concerns – class example (Fig 6.2)
Understanding Spoken Paragraphs ScS:12				*Spelling*: teacher concerns (Fig 6.1).	

Fig. 6.4 James' speech-to-print profile (Adapted from Gillon, 2004, with permission from the author). *Note* for interpretation of scores, see Fig. 2.1 (Bell curve). Shading: white = not tested; light grey = within normal limits/no concerns; dark grey = significant difficulties

6.1.2 Case Discussion and Suggestions for Intervention (Step 5)

Based on the assessment results, it is clear that James has a profile of dyslexia (i.e. specific word recognition difficulties). James demonstrates reading comprehension difficulties due to his weaknesses in accurate and fluent word recognition skills, even though he shows adequate language comprehension skills. As explained in Chap. 1, these reading difficulties generally stem from phonological processing weaknesses; in James' case, he showed particular challenges with phoneme awareness tasks, but demonstrated age-appropriate performance in rapid automatic naming (i.e. phonological retrieval). James' difficulties in reading accuracy at sentence-level on the YARC were confirmed at word level on the CC-2, with significant difficulties on regular, irregular, and non-word reading. Moreover, James struggled on the LeST; closer inspection showed poor performance in naming of short vowels, digraphs, and diphthongs.

Worth mentioning is James' poor performance on the expository generation task, with limited use of complex sentences and poor cohesion. As shown in Fig. 6.3, James did not make efficient use of the planning sheet to organise his explanation of how to play the game/sport of his choice, soccer. James' difficulties on this task are most likely the result from reduced exposure to complex written materials due to his persistent word recognition difficulties (see also Chap. 1 for a discussion). Considering the emphasis on expository text from Year 4 of schooling (Snyder & Caccamise, 2010), this places James at high risk of facing challenges in most academic subjects, including English but also History and social studies.

Although James' teachers had been concerned about his reading skills, he had not been identified with specific word recognition difficulties. It seems likely that James' strong language comprehension skills masked his reading accuracy/word recognition difficulties during the early years of schooling. Early identification of James' significant difficulties in word recognition would have prompted early intervention. Considering the evidence that early intervention is critical for children with dyslexia to avoid long-term challenges in academic achievement and socio-emotional well-being, the importance of routinely use of sensitive reading assessment tools cannot be underestimated.

Step 5: Provision of Targeted Intervention

Based on James' profile (see also Fig. 6.4), he would benefit from intervention aimed at systematically improving: (1) his grapheme–phoneme knowledge; and (2) his phonological processing skills, making sure the intervention includes practice in spelling and reading to reach automaticity (see Al Otaiba, Gillespie Rouse, & Baker, 2018, for a review). Chapter 5 provides an example of an intensive intervention for students with a profile of specific word recognition difficulties. In addition, James would benefit from explicit instruction in how to use visual planners when evaluating and/or generating expository texts to guide not only his comprehension, but also his ability to generate these types of discourse genres.

6.1.3 Case Study 2: Hannah

Hannah (S02: not her real name) attended Year 4 when she became involved in the Reading Success project. Hannah (age 9 years, 10 months) spoke English as her first and only language and had attended the school since Prep (foundation year). Hannah had been referred to the speech pathologist because of concerns about her spoken language skills when she was in Prep but had not been verified with speech-language impairment (SLI). Hannah's teachers were still concerned about her oral language skills and had become increasingly concerned about her reading skills. Hannah's NAPLAN results were at the national minimum standard when she was tested in Year 3 for writing and spelling in particular (reading band 3; writing band 2; spelling band 2; grammar and punctuation band 3). Hannah's performance on the PAT-R was stanine 2 (5th percentile), indicating performance well below expectations. Hannah's PROBE-2 results were not available. When administering the *Reading Self-Concept Scale* (Chapman & Tunmer, 1995), Hannah's responses indicated very low self-ratings for reading difficulties and reading competence, but a high rating on reading attitude. We investigated Hannah's reading skills using our five-step assessment to intervention approach, as described in Chap. 2 (Fig. 2.2).

6.1.4 Assessment Overview: Steps 1 to 4

Step 1: Assessment of Reading Skills

York Assessment of Reading for Comprehension results indicated severe difficulties in reading comprehension (SS < 70; age equivalent [AE] 6 years, 0 months)

Step 2i: Further Assessment of Students Who Scored Below Expectations: Check RA

Hannah showed significant difficulties in reading accuracy (SS = 73, AE: 6;11 years)—with 29.2% mispronunciations, 62.5% substitutions, 4.2% additions, and 4.2% omissions; as well as reading rate (SS < 70; AE 6;07 years) on the YARC.

Step 2ii: Further Assessment of Students Who Scored Below Expectations: Check LC

Hannah demonstrated significant difficulties (SS = 5) in language comprehension, using the *Understanding Spoken Paragraphs* subtest from the CELF-4 (Semel et al., 2006).

Step 3: Further Assessment of Students Who Scored Below Expectations on RA

Further assessment of word recognition, using the CC-2 showed severe difficulties in single word reading across regular ($z = -2.31$), irregular ($z = -1.37$), and nonsense

words ($z = -2.42$). Hannah also performed poorly in orthographic knowledge ($z = -1.9$ using Year 3 norms of the LeST). However, Hannah performed within typical limits on phonological awareness on the CTOPP, based on her scores on the elision and blending words subtests (composite score 88; 21st percentile).

Step 4: Create a Speech-to-Print Profile

Based on the assessment results from Steps 1 to 3, a speech-to-print profile was created. The speech pathologist administered additional subtests from the CTOPP and found Hannah to score within normal limits in rapid naming (Composite score 94; 35th percentile), but below expectations on tasks measuring phonological memory (Composite score 76; 5th percentile). To obtain a complete picture of Hannah's spoken language skills, the speech pathologist also administered the CELF-4. It was found that Hannah showed significant receptive and expressive spoken language difficulties (core language standard score 63; receptive language composite SS 70; expressive language composite SS 61).

To investigate Hannah's spoken language skills at text-level in a context that is relevant to her school environment, the speech pathologist administered the *Test of Narrative Language* (TNL; Gillam & Pearson, 2004) which assesses a child's oral narrative comprehension and production skills across three formats: (a) the child first listens to a script without pictures, then answers comprehension questions, before retelling the script; (b) the child first listens to a story based on a sequence of five pictures, then answers comprehension questions, before generating a story with five new pictures; and (c) the child listens to a fictional story while looking at a picture (dragon story), and asked comprehension questions related to that story, before generating a fictional story based on a different single picture (alien story). Hannah obtained standard scores of five for narrative comprehension and oral narration, which yielded an overall Narrative Language Ability Index of 70, indicating significant difficulties. Hannah's speech-to-print profile is shown in Fig. 6.5.

6.1.5 Case Discussion and Suggestions for Intervention (Step 5)

Based on the assessment results, it is clear that Hannah has a profile of mixed reading difficulties. In other words, her reading comprehension difficulties stem from significant weaknesses in word recognition and language comprehension. It is interesting to note that Hannah performed within normal limits on phoneme awareness. This may reflect the fact that she had received phonological awareness intervention from the speech pathologist in Year 2. It is not clear whether this intervention included activities aimed at improving Hannah's grapheme knowledge (i.e. letter-sound correspondences), particularly more complex ones. Further inspection of her LeST results showed a mastery of all 26 letters of the alphabet (except for /*i*/ and /*x*/), but difficulty with most digraphs (e.g. /*ng*/, /*gn*/, and /*igh*/) as well as diphthongs. It

Spoken Language			Written Language		
Underlying representations	*Phonological Processing*				
Vocabulary: Expressive ScS:4 Word Classes ScS: 5	**Phonological Awareness**	**Storage and Retrieval**	**Rule/concept knowledge**	**Word – level**	**Text-level**
Syntax Expressive ScS:3 Receptive ScS: 5	*Syllable level*	*Non word repetition SS:76 (CTOPP)*	*Print concepts*	Word recognition	*Reading accuracy* SS: 73
Morphology	*Onset-rime level*	*Multisyllabic word repetition*	Grapheme-Phoneme Correspondences: *Z = -1.90 (Yr3 norms)*	*Regular word reading Z = -2.31*	*Reading comprehension SS < 70*
Phonology: No concerns	*Phoneme level SS:88 (CTOPP)*	*Rapid Naming CTOPP: WNL*		*Irregular Z = -1.37*	*Reading fluency/rate SS <70*
Text structure: TNL: SS70 Expressive SS:5 Receptive SS: 5				*Non-word Z = -2.42*	*Writing*
Understanding Spoken Paragraphs ScS:5				*Spelling*	

Fig. 6.5 Hannah's speech-to-print profile (Adapted from Gillon, 2004, with permission from the author). *Note* For interpretation of scores, see Fig. 2.1 (Bell curve). Shading: white = not tested; light grey = within normal limits/no concerns; dark grey = significant difficulties

is also not clear if this intervention specifically included spelling and reading tasks aimed at improving fluency (automaticity). It is of concern that Hannah showed a relatively low self-concept when we asked her questions regarding reading using the Self-Concept Scale (Chapman & Tunmer, 1995), indicating she found reading difficult and that she was not very good at it. In contrast, she scored higher when asked about her attitudes towards reading, highlighting she quite liked reading. As shown in Chap. 4, it is important to consider the students' self-perceptions when initiating intervention to ensure they are engaged in the process. In Hannah's case, a SWOT analysis would have provided invaluable information.

Considering Hannah demonstrated significant spoken language difficulties on standardised tests of language ability (the CELF-4 and the TNL), the speech pathologist transcribed Hannah's alien story (from the TNL), using Systematic Analysis of Language Transcripts, New Zealand/Australia version (SALT-NZ/AU; Miller, Gillon, & Westerveld, 2017) to perform a more detailed language sample analysis (Miller, Andriacchi, Nockerts, Westerveld, & Gillon, 2016). As shown in Fig. 6.6, Hannah's story was short, and showed a few grammatical errors, such as incorrect use of an article, referential pronoun, and noun-verb agreement. When comparing her performance to age-matched peers from the TNL database using SALT-NZ/AU, Hannah showed little use of complex sentences (low MLU: mean length of utterance); semantics (low semantic diversity in number of different words), and grammatical accuracy (in % utterances with errors). The SALT-NZ/AU database standard measures report is shown in Fig. 6.7 (with areas of difficulty highlighted in grey).

```
$ Child, Examiner
+ Language: English
+ ParticipantId: Hannah
+ Gender: F
+ CA: 9;6
+ Grade: 4
+ Context: Nar
+ Subgroup: TNL
+ Aliens
C there was a[ew] alien ship what[ew] just landed.
C and they were coming out.
C they were : a mum, a kid, a dog .
C and a dad.
C : and another girl.
C and there's a boy and a girl in the corner.
C and (the boy :02)  the girl was trying to drag the boy.
C and the aliens[ew] girl : was waving.
C and the : girl : was shouting get the man to come out and say hello.
C and the little girl was leading the dog.
C and they looked like they were gonna Camp.
C that's it.
```

Fig. 6.6 Hannah's SALT transcript of the alien story (TNL, Gillam & Pearson, 2004). *Note* C = child; ew = error at word level; :02 = pause of 2 s

Next, the speech pathologist analysed Hannah's narrative at macrostructure level for the use of story grammar elements and cohesion (Hughes, McGillivray, & Schmidek, 1997). Hannah provided a description of the picture (i.e. characters), but there was little evidence of a problem-oriented narrative (i.e. problem "*and they were coming out*"), with no mention of a plan, actions, and a resolution. In Year 4, students are expected to produce true narratives containing all story grammar elements (characters, setting, initiating event, problem, plan, actions, resolution, and conclusion) across multiple episodes (Applebee, 1978). Considering the importance of narrative proficiency for classroom participation and academic achievement (Australian Curriculum Assessment and Reporting Authority [ACARA], 2012; Milosky, 1987), narrative intervention is clearly warranted.

Step 5: Provision of Targeted Intervention

Based on Hannah's profile (i.e. mixed reading difficulties), she would benefit from intervention targeting both her language comprehension and word recognition skills. Intervention for word recognition should aim to systematically improve: (1) her grapheme–phoneme knowledge; and (2) her phonological processing skills, making sure the intervention includes practice in spelling and reading to reach automaticity. Chapter 5 provides an example of an intensive intervention aimed at enhancing word recognition skills. In addition, Hannah would benefit from narrative intervention aimed at improving her story structure knowledge (i.e. story grammar) as well as her ability to use complex sentences (e.g. Gillam & Gillam, 2016; Westerveld & Gillon, 2008). Considering Hannah's significant reading difficulties, ongoing monitoring of her spoken and written language skills is clearly needed.

TNL Aliens coded

TRANSCRIPT INFORMATION	DATABASE INFORMATION
Speaker: Hannah (Child)	Database: TNL Narrative Samples
Sample Date: 4/8/2016	49 Samples Matched by Age
Current Age: 9;6, Grade: 4	Entire transcript
Context: Narration (TNL)	Context: Narration (Aliens)

STANDARD MEASURES REPORT

	LANGUAGE MEASURE	Child		DATABASE				
		Score	+/-SD	Mean	Min	Max	SD	%SD
	Compared to 49 Samples Matched by Age (ENTIRE TRANSCRIPT)							
	Current Age (9;6)	9.50	0.22	9.43	9.00	10.00	0.33	3%
	TRANSCRIPT LENGTH							
	Total Utterances	12	-0.59	21.08	6	96	15.42	73%
#	C&I Verbal Utts	12	-0.58	19.63	6	73	13.05	66%
	All Words Including Mazes	86	-0.90	173.71	61	511	97.97	56%
	Elapsed Time	---						
	INTELLIGIBILITY							
	% Intelligible Utterances	100%	0.28	98.99	76.92	100.00	3.62	4%
	% Intelligible Words	100%	0.30	99.85	96.75	100.00	0.52	1%
	SYNTAX/MORPHOLOGY							
#	MLU in Words	7.00	-0.63	8.06	4.54	12.50	1.69	21%
#	MLU in Morphemes	7.00 *	-1.03	8.88	4.92	13.43	1.83	21%
#	Verbs/Utterance	1.25 *	-1.13	1.64	0.74	2.71	0.34	21%
	SEMANTICS							
#	Number Total Words (NTW)	84	-0.79	150.08	51	400	84.02	56%
#	Number Different Words (NDW)	43 *	-1.15	73.96	32	140	26.85	36%
#	Type Token Ratio (TTR)	0.51	-0.23	0.53	0.31	0.70	0.09	17%
#	Moving-Average TTR (84)	0.51 *	-1.61	0.60	0.44	0.73	0.06	10%
	VERBAL FACILITY							
	Words per Minute	---						
	Pauses Within Utterances	6 **	41.86	0.02	0	1	0.14	700%
	Pauses Between Utterances	0	-0.14	0.02	0	1	0.14	700%
	Pause Time as % of Total Time	---						
#	Maze Words as % of Total Words	2.3% *	-1.24	10.59	1.20	27.67	6.65	63%
	Abandoned Utterances	0	-0.52	0.41	0	3	0.79	193%
	ERRORS							
#	% Utterances with Errors	16.7% *	1.08	7.15	0.00	38.36	8.85	124%
	Number of Omissions	0	-0.27	0.61	0	16	2.30	375%
	Number of Error Codes	3	0.66	1.27	0	17	2.62	207%

 # Calculations based on C&I Verbal Utts
** At least 1 SD (** 2 SD) from the database mean*
Moving-Average TTR based on a subset of 40 Database samples
Database selection criteria: age +/- 6 months (9;0 - 10;0)

Fig. 6.7 SALT—standard measures database report

6.2 Case Study 3: Bill

Bill (S38: not his real name) attended Year 1 of his local primary school. Bill (age 7 years, 1 month) had attended the school since the commencement of Prep (foundation year) the previous year. His enrolment form identified him as only speaking English in the home environment. At the end of Year 1, Bill demonstrated reading skills that were considered to be 'within expectations' for his Year level, with a PM Benchmark (Smith, Nelley, & Croft, 2009) level of 21 (with level 16 considered satisfactory at the end of Year 1). As part of the Reading Success project, we investigated Bill's reading skills using our five-step assessment to intervention approach, as described in Chap. 2 (Fig. 2.2).

6.2.1 Assessment Overview: Steps 1 to 4

Step 1: Assessment of Reading Skills

York Assessment of Reading for Comprehension results indicated severe difficulties in reading comprehension (SS < 70; age equivalent [AE] < 5 years).

Step 2i: Further Assessment of Students Who Scored Below Expectations: Check RA

On the YARC, Bill showed mild difficulties in reading accuracy (SS = 84, AE: 5; 10 years), with 14.3% mispronunciations, 71.4% substitutions, and 14.3% refusals. We were unable to calculate reading rate as the beginner level passage is not timed and Bill exceeded the maximum number of reading accuracy errors on Level 1 of the YARC.

Step 2ii: Further Assessment of Students Who Scored Below Expectations: Check LC

Bill showed language comprehension skills well below expectations (SS = 4), using the *Understanding Spoken Paragraphs* subtest from the CELF-5 (Wiig et al., 2017).

Step 3: Further Assessment of Students Who Scored Below Expectations on RA

Further assessment of word recognition, using the CC-2 showed difficulties in single word reading across regular (z-score = −1.22), and nonsense words (z-score = −1.03). However, Bill demonstrated satisfactory skills in irregular word reading (z = −0.73). Bill performed within expectations on the SPAT-R (Neilson, 2003); he showed difficulties in his orthographic knowledge on the LeST (z-score = −1.04).

Step 4: Create a Speech-to-Print Profile

A speech-to-print profile was created, based on the assessment results from Steps 1 to 3. The final speech-to-print profile is shown in Fig. 6.8.

6.2.2 Case Discussion and Suggestions for Intervention (Step 5)

Based on the assessment results, it is evident that Bill has a reading profile most consistent with mixed reading difficulties, that is, Bill demonstrated reading accuracy below expectations as well as difficulties with his language comprehension. In looking more closely at Bill's word recognition skills, it was evident that he had difficulties with his single word reading, including regular and nonsense words on the CC-2. He also showed poor orthographic knowledge. However, an area of strength

Spoken Language			**Written Language**		
Underlying representations	*Phonological Processing*				
Vocabulary knowledge	**Phonological Awareness**	**Storage and Retrieval**	**Rule/concept knowledge**	**Word – level**	**Text-level**
Syntax	*Syllable level SPAT-R WNL*	*Non word repetition*	*Print concepts*	Word recognition	*Reading accuracy* SS: 84
Morphology	*Onset-rime level SPAT-R WNL*	*Multisyllabic word repetition*	Grapheme-Phoneme Correspondences: *Z = -1.04*	*Regular word reading Z = -1.22*	*Reading comprehension SS: <70*
Phonology: No concerns	*Phoneme level SPAT-R WNL*	*Rapid Naming*		*Irregular Z = -0.73*	*Reading fluency/rate SS: Not calculated*
Text structure				*Non-word Z = -1.03*	*Writing*
Understanding Spoken Paragraphs SS: 4				*Spelling*	

Fig. 6.8 Bill's speech-to-print profile (Adapted from Gillon, 2004, with permission from the author). *Note* For interpretation of scores, see Fig. 2.1 (Bell curve). Shading: white = not tested; light grey = within normal limits/no concerns; dark grey = significant difficulties

for Bill included reading irregular words at the single word level, which reflects a strength in sight word reading. He also showed adequate phonological awareness skills when we administered the first seven subtests of the SPAT-R.

Bill would benefit from further assessment of his spoken language skills by the speech pathologist to determine whether his difficulties on the *Understanding Spoken Paragraphs* subtest of the CELF-5 stemmed from difficulties at word- and sentence-level. We would also want to check his ability to use spoken language at the discourse level, for example, to tell or retell a fictional narrative (see Chap. 2 for an overview of relevant assessment tasks). In addition, we would ask the teacher for classroom examples of Bill's written work, including the most recent results of a spelling test.

It is of concern that Bill's reading difficulties had not been identified by the school-based reading assessment, PM Benchmark. This assessment was administered at a similar point in the school year to the YARC. As outlined in Chap. 3, Bill is one of the 13 students (14% of the Year 1 cohort) who performed within typical limits on the PM Benchmark but showed significant difficulties on the YARC reading comprehension subtest.

Step 5: Provision of Targeted Intervention

Following the completion of the assessment, as part of the Reading Success project, Bill received access (without one-on-one support in a whole-class setting) to the Reading Doctor App by his classroom teacher to target his orthographic knowledge. Re-assessment on the LeST following this intervention indicated continued difficulties with orthographic knowledge (z-score = −1.62). Closer inspection of time spent

on the app showed Bill was given access for only 56 min, reaching level 6 (out of 10). This is significantly less than the time spent by the students in Year 5 (see Chap. 5), indicating the importance of future research investigating the dosage effects of this type of intervention.

In terms of other support, Bill's narrative comprehension and production skills were assessed by the speech pathologist in Term 1, Year 2. He subsequently received small-group intervention targeting his narrative skills in Terms 2 and 3 of Year 2. These small groups were run by the speech pathologist at the school with support from a teacher aide. Following this intervention and on re-assessment with the YARC at the end of Year 2 (i.e. one year later), Bill demonstrated improvements in his reading accuracy (now SS 88) and reading comprehension (SS <70 to SS 86). Bill's reading rate continued to reflect difficulties (RR 76), though, suggesting he was still decoding at a slower rate than expected for his age. Considering the importance of fluent word recognition for reading comprehension, it is important Bill's reading skills are closely monitored.

6.3 Chapter Summary

In this chapter, we shared three case examples to demonstrate the usefulness of our five-step assessment to intervention framework (based on the Simple View of Reading) in: (a) determining which students may need further assessment of their spoken and/or written language skills, (b) understanding an individual student's strengths and weaknesses in the skills needed for successful reading comprehension, and (c) selecting specific targets for intervention. Both Year 4 students James and Hannah had performed at or above the benchmark on the NAPLAN in Year 3; both students showed difficulties on the PAT-R. However, further inspection revealed very different reading profiles, with significant implications for intervention and progress monitoring practices. Our case example Bill emphasised the importance of identification of reading difficulties during the early years of schooling and how timely intervention may assist early reading success. As outlined in Chap. 1, using the stepped assessment framework and its corresponding speech-to-print profile will thus encourage collaborative practice, by not only ensuring there is no double-up of assessments, but also by promoting a shared understanding between all professionals involved in the teaching of reading to aim for timely and effective instructional practices within a multitiered systems of support approach.

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