

The oral language and reading comprehension skills of adolescents in flexible learning programs.

Pamela C. Snow¹

Linda Graham²

Emina J. McLean³

Tanya A. Serry⁴

1. Corresponding author
Professor Pamela Claire Snow
La Trobe Rural Health School
La Trobe University, Bendigo, 3552
AUSTRALIA
Email: p.snow@latrobe.edu.au
Tel: +61 3 5444 7721
2. Professor Linda Graham
School of Early Childhood and Inclusive Education
Faculty of Education
Queensland University of Technology, Kelvin Grove 4059
Email: linda.graham@qut.edu.au
Tel: +61 7 3138 3738
AUSTRALIA
3. Ms Emina J. McLean
La Trobe Rural Health School
La Trobe University, Bendigo, 3552
AUSTRALIA
Email: e.mclean@latrobe.edu.au
Tel: +61 3 5444 7262
4. Dr Tanya Serry
School of allied Health, Human Services & Sport
La Trobe University, Bundoora, 3084
AUSTRALIA
Email: t.serry@latrobe.edu.au
Tel: +61 3 94791814
AUSTRALIA

Abstract

Purpose

Access to flexible learning programs (FLPs) for students who have been excluded or diverted from mainstream school settings is increasing internationally. While still technically “engaged with education” such students face long-term vulnerability with respect to acquiring marketable employment skills post-school. Language and literacy skills are central to such training; hence this study describes the oral language and reading comprehension profiles of a sample of FLP students.

Method

Fifty young people (mean age 16 years) enrolled in three FLPs in Victoria, Australia were assessed by a speech-language pathologist in order to profile their oral language and reading comprehension skills.

Result

Seventy-two percent of participants had oral language skills that placed them in an at-risk range on standardised measures, and 47.5% had reading comprehension ages of ≤ 12 years. A moderate significant association existed between oral language and reading comprehension skills.

Conclusions

Language and reading comprehension difficulties are prevalent in this population and may be missed in the context of the mental health and adjustment difficulties experienced by this group, but are likely to be key to academic engagement and success. Speech-language pathology scope of practice needs to include FLP settings.

Key Words: Oral language; literacy; flexible learning programs

Introduction

Flexible learning program (FLP) is a broad term used internationally to describe a range of educational services made available to young people who have left or been excluded from regular schools (Mills & McGregor, 2013). These educational services may be provided by government and non-government not-for-profit organisations, as in Australia (Te Riele, 2007), or by a mix of government, non-government and for-profit private providers, as in England and Sweden (Alexiadou et al., 2016). In Australia, FLPs are staffed largely by primary school teachers, potentially narrowing curricular options and opportunities for secondary school reintegration (Granite & Graham, 2012). A teaching qualification is no longer required for employment in FLPs in some countries, including the United States (Kennedy-Lewis, Whitaker, & Soutullo, 2016), and England, where only 82% of teachers in FLPs have qualified teacher status (House of Common Education Committee, 2018). Despite concerns about the content and quality of the educational programs they offer (Graham, Van Bergen, & Sweller, 2015), FLPs are proliferating rapidly in some countries (McCluskey, Riddell, & Weedon, 2015; Malcolm, 2016), due to increases in the exclusion of students with learning and/or behavioural difficulties from mainstream schools. FLPs are particularly common in countries employing high-stakes standardised assessment for school accountability purposes, possibly because redirection of academically weak students helps bolster school performance data on standardised assessment (Harris, Carrington, & Ainscow, 2017; Tomlinson, 2012). FLPs have been criticised for focusing too much on engagement activities with low intellectual demand, however, research has also found that students in these settings benefit from an emphasis on relationships and sense of belonging (Graham et al., 2015, 2016; Kennedy-Lewis, Whitaker, & Soutullo, 2016). This suggests that FLPs may have the potential to keep students engaged in academic learning long enough for them to attain the foundational skills necessary to succeed in further education, training and/or

employment (Mills & McGregor, 2016), provided their academic needs are fully understood and addressed.

FLPs in Australia

FLP growth has been fuelled by the development of policies that attempt to reduce unemployment and prevent welfare dependency by extending or reconnecting young peoples' engagement with education systems (Graham et al., 2015; Tomlinson, 2012). While this is an international trend, it is particularly evident in Australia (Thomas, McGinty, Te Riele, & Wilson, 2017). In an effort to promote longer and stronger engagement in formal schooling by secondary students, the Council of Australian Governments (COAG) has made school retention a specific focus (COAG, 2009). Across Australia, it is now compulsory for all young people to complete Year 10 (usually at age 15 or 16) and to participate full-time in education, recognised training or paid employment (or a combination of these) until age 17 (Department of Education, Employment and Workplace Relations 2011). It is recognised, however, that a substantial proportion of young people struggle academically, socially and/or behaviourally in mainstream school settings that do not adequately address their needs. In the absence of full-service inclusive schools with the capacity to flexibly cater to these students' academic and non-academic requirements, there is a significant risk that these young people will be lost to education and further training (Aro et al., 2018).

Approximately one-quarter of young Australians leave school without a Year 12 or equivalent qualification and 26.5% are not engaged in education, work or training at age 24 (Lamb, Jackson, Walstab, & Huo, 2015). FLPs have proliferated in Australian states and territories in an attempt to meet the needs of this group, such that there are now over 900 programs engaging over 70,000 students each year (Te Riele, 2014). FLPs exist across a range of settings, including mainstream schools, Technical and Further Education (TAFE) and community colleges, and as separate, stand-alone operations (Te Riele, 2014). Almost

all indicate that they target students at risk of non-completion and early school exiting. Government-run special schools for disruptive behaviour and suspension centres are not included in the definition or count of FLPs as attendance is generally by choice and mutual agreement, rather than the result of a departmental directive. FLPs also do not include schools run according to “alternative” educational philosophies, such as Steiner and Montessori Schools (Te Riele, 2014), although these are sometimes also referred to as “flexible and alternative education settings”.

The demographic profiles of young people in FLPs

The backgrounds of young people in FLPs typically show histories of factors that work against successful educational engagement and achievement. Such factors include coming from families without histories of school completion, having an unfavourable attitude towards school, histories of suspensions and exclusions on behavioural grounds, chaotic family structures and experiences of domestic violence, and being male (Clark et al., 2010; Wilson, Stemp, & McGinty, 2011). Many of these same risk factors are also strongly evident in the youth justice population, e.g., 87% in the sample studied by Snow, Woodward, Mathis, and Powell (2015). Most young people in the youth justice system typically departed formal schooling around Year 8 (approximately 14 years of age), without any employment skills and little prospect of progression to formal training programs (Snow et al., 2015). Research analysing New South Wales government school enrolments has identified patterns that suggest many students in special schools for disruptive behaviour “graduate” to juvenile justice around the same age (Graham, Sweller, & Van Bergen, 2010). There is also evidence of transfer between systems, with students enrolled in but not attending these special schools, electing to instead attend FLPs on a casual basis (Graham & Buckley, 2014).

Young people from Indigenous and culturally and linguistically diverse (CALD) backgrounds are over-represented in FLPs in Australia (Clark et al., 2010). This is

significant given the over-representation of such groups in other key populations, including special schools and suspension centres (Graham, 2012), as well as youth justice and child protection (AIHW, 2017). Young people attending FLPs also typically come from socially disadvantaged families and communities (Clark et al., 2010), which reduces access to social, human, and economic capital (Willingham, 2012) and risks exposure to impoverished early language and emergent literacy experiences (Roy & Chiat, 2013; Spencer, Clegg, & Stackhouse, 2012). The combination of this multitude of individual risk factors with harsh and inflexible school discipline practices that end with school exclusion contributes to a phenomenon known as the “school-to-prison pipeline” (Christle, Jolivette, & Nelson, 2005). This does not mean that all young people who disengage prematurely from school are on an inevitable trajectory to the criminal justice system, but it does increase the likelihood of this occurring when other risk-factors are present. It should also be noted that “prison” should not be interpreted only literally, as social marginalisation is a form of entrapment that prevents young people from engaging in the social and economic mainstream (Snow & Douglas, 2017).

Associations between oral language skills and reading comprehension

Oral language competencies, along with literacy skills, are fundamental for academic progression and success. Oral language refers to the socially shared code that people use to express and understand information and ideas via the verbal modality (Owens, 2015). Oral language competency is a multiply-determined skill-set comprising knowledge and use of a number of linguistic domains that include vocabulary, syntax, inferential and conceptual language, as well as conversational, narrative, and expository discourse. Although oral language is acquired naturally, particularly in the preschool years, through immersion and engagement in adult-mediated environments, an association exists between social disadvantage and restricted breadth and depth of language development in the early years

(Hart & Risley 1995; Neuman et al., 2018; Roy & Chiat, 2013; Spencer et al., 2012). It is well established that oral language competency is the gateway for successfully learning to read (Catts, Fey, Tomblin, & Zhang, 2002; Catts, Fey, Zhang, & Tomblin, 1999; Catts, Sittner, Bridges, Little, & Tomblin, 2008; Snow, 2016) and becoming literate in the broader sense (Hulme & Snowling, 2014; Mattingly, 1972). It is estimated that around 7 to 10 percent of children in community samples have a developmental language disorder (Tomblin, Records, Buckwalter, Zhang, Smith, & O'Brien, 1997), however, this rate rises to well over 50 per cent in certain high-risk groups, such as youth offenders (Snow & Powell, 2011).

Unlike oral language, which is a primary (innate) skill that is acquired naturally, reading and related literacy skills (spelling and writing) are biologically secondary (Geary & Bjorklund, 2000) and must be acquired through formal teaching. It is well established that learning to read for meaning, to spell accurately, and to write for functional purposes are all critically dependant on competencies across all modalities of oral language and all three are central to academic success (Konza, 2014; Nation, 2008; Snow, 2016).

While it is known that young people in FLPs have histories of low academic achievement (Te Riele, 2014), there is no research of which we are aware that investigates their oral language and literacy skills. These competencies have a significant impact on engagement with the academic curriculum. High rates of previously unidentified but clinically significant language disorders in related populations have been described, including in adolescents attending government special schools (James, 2016) and those in custody or serving community youth justice orders (Snow & Powell, 2011; Snow et al., 2015). Given the critical role of educational engagement as a protective factor in the lives of young people (Li & Lerner, 2011; Snow, 2016), it is important to understand the oral language and literacy status of young people on trajectories away from formal education, as these trajectories are associated with youth justice involvement and other long-term challenges, including

unemployment and unstable housing (Snow, 2019). Gaining a more detailed understanding of such young people's oral language and literacy profiles may create opportunities to target specialist services that can ameliorate these difficulties, as well as foster improved engagement with and achievement in both school and vocational education.

The aim of this study, therefore, was to describe the oral language skills and one aspect of literacy, namely reading comprehension skills, in a sample of adolescents attending FLPs in one Australian state. We further sought to examine the relationship between scores on oral language measures and those on a reading comprehension measure. We hypothesised that the prevalence of language difficulties would significantly exceed those seen in community samples and that there would be a significant, positive correlation between oral language skills and reading comprehension ability.

Method

Participants

A convenience sample of 50 young people enrolled in FLPs in Victoria, Australia, was recruited over an eight-month period in 2016-2017. Recruitment occurred across three FLPs, two located in regional Victoria and one in metropolitan Melbourne. None of these FLPs provided access to SLP services. Inclusion criteria were as follows: stable mental state (not suffering from acute mental illness, e.g., psychosis; not acutely agitated or distressed), not substance-affected, and having completed the majority of schooling in an English-speaking country. This sample of 50 young people represented 36% of the total number of young people enrolled across the three sites. Young people from Indigenous backgrounds were only recruited if they had grown up in metropolitan areas or regional centres and identified Standard Australian English (SAE) as their first language

The sample included thirty females, nineteen males and one young person who identified as transgender. The mean age was 16 years ($SD=1.8$; range 13-19). One

participant identified as Indigenous and there were no participants from other cultural/linguistic backgrounds.

The last full year level of mainstream schooling completed by participants was most commonly Year 8 (mode=8, range=Years 3-11). Nine participants (18%) had not progressed beyond Year 6. Thirty participants (60%) reported enrolment duration in their current FLP as one year or less, and nine reported being enrolled in their current setting for more than two years. Eighteen participants (36%) reported prior enrolment in another FLP setting. Twenty participants (40%) reported a history of school suspension or exclusion because of behavioural violations. Two participants reported previous special school attendance. Nineteen participants (38%) reported at least one neurodevelopmental diagnosis. Seven participants reported a diagnosis of autism spectrum disorder (ASD), six reported a diagnosis of attention deficit hyperactivity disorder (ADHD), one reported a diagnosis of intellectual disability (ID), and seven reported a speech language communication needs (SLCN) diagnosis, such as stuttering, articulation difficulty, and/or language disorder. While only seven participants reported a formal SLCN diagnosis, a further 17 self-reported difficulties on structured interview, and the remaining 26 reported no such difficulties. In one case, two diagnoses (SLCN and ID) were reported.

In terms of additional support or specialist help, 32 participants (64%) reported receipt of one or more services (Reading RecoveryTM /SLP/Aide/Other) while at mainstream school and 18 reported no such additional supports. Of those participants who reported receiving one or more services, six reported having received SLP services. Five reported participation in Reading RecoveryTM, 12 reported receiving support from a teacher aide (otherwise referred to as teaching or educational assistant), 19 reported “other help”, which included tutoring, engagement in a range of literacy and numeracy programs, and accessing sessions with the school psychologist or student wellbeing coordinator.

Eighteen participants (36%) reported having undertaken vocational training, however only a third of those who did so had completed it, with the remainder discontinuing their enrolment in these programs. Twenty-two participants (44%) reported currently being in some form of part-time paid employment. Of those who were in paid employment, 27% had been employed for 0-6 months, 27% for 7-12 months, and 46% for more than 12 months.

Fourteen participants (28%) reported mental health issues as the primary reason for their referral to the FLP. Females were over-represented in this subgroup, accounting for 60% of the full sample but 79% of participants who nominated mental health problems as the main reason for their referral. Nine participants, all male, reported behavioural problems as the primary reason for referral. Eight participants reported being the victim of bullying as their principal reason for referral, while general school disengagement (including poor attendance) was reported as the primary reason by seven participants. Less frequently reported reasons for referral to the FLP included learning difficulties (n=4), physical health problems (n=2), being the carer for a parent or sibling (n=3), pregnancy (n=2), and “having family issues” (n=1). For most participants, more than one factor applied.

Procedures

The study was approved by the La Trobe University Human Research Ethics Committee and the Victorian Department of Education and Training. Staff in the FLP made the initial approach about the project to eligible students and contact details of those who were interested in participating were then passed on to the research assistant. A structured biographical interview, which has been used in previous studies of at-risk young people (e.g., Snow et al., 2015), was used to elicit self-report information regarding neurobiological diagnoses, receipt of additional supports at school, and post-school vocational training and/or employment. Participants were asked to indicate their reason(s) for referral to the FLP and where multiple factors were given, all are reported here. Language and literacy assessments

were conducted in a quiet room, by the same speech-language pathologist. Rest breaks were offered if needed, as was the opportunity for the assessment to be conducted over two sessions. A formal hearing screening was not performed.

Measures

Expressive and receptive language. Expressive and receptive language skills were assessed using the core subtests of the Clinical Evaluation of Language Fundamentals – 4th edition, Australian standardisation (CELF-4; Australian standardisation; Semel, Wiig, & Secord, 2003). A Core Language Score (CLS) was derived using scores from the Recalling Sentences, Formulated Sentences, Word Classes (Receptive and Expressive) and Word Definitions subtests. The CELF-4 CLS provides an omnibus norm-referenced score derived from receptive and expressive lexical-semantic and grammatical skills, and is widely used in Australia and overseas, in both clinical and research contexts, as an accepted measure to determine the presence of a clinical language disorder and entitlement to specialist services (e.g., speech-language pathology services in schools).

Figurative language. Three subtests of the Test of Language Competence-Expanded Edition (TLC-E; Wiig & Secord, 1989) were included as measures of understanding of figurative language, in contrast to the CELF-4, which is commonly regarded as a measure of “structural” aspects of language (e.g., vocabulary and syntax use and understanding). Raw scores are converted to scaled scores with a mean of 10 and standard deviation of 2.5.

Subtest 1 - Ambiguous Sentences. This subtest requires the interpretation of sentences with lexical, surface structural and underlying structural ambiguities for which two alternative meanings are identified and explained by the participant; e.g., “John was looking up the street”. In this case, the correct answer is that John was either standing on the street and physically looking up to the other end or he was looking up the street on a map.

Subtest 2 - Listening Comprehension: Making Inferences. This subtest requires the drawing of inferences based on incomplete information, which is presented as an event chain by choosing two plausible story outcomes from four choices. For example: “The sun was shining when the Robertsons started out for the picnic. Unfortunately, they had the picnic in the living room. They had the picnic in the living room because”: (participant selects two plausible options from four choices).

Subtest 4 - Figurative Language. This subtest requires the participant to interpret metaphoric expressions by selecting an alternative from a choice of four options, e.g., recognizing that the phrase “There is rough sailing ahead of us” has a non-literal meaning concerning difficult times. In each of these subtests, the participant both heard and saw the printed stimuli, which were placed in clear view and read aloud by the examiner.

Reading comprehension. The Australian Council for Educational Research (ACER) Compass Reading (Literacy) Assessment was administered as a measure of reading comprehension ability, as it is the preferred reading assessment tool in these three FLP settings. The Compass Reading Assessment was designed for young people and adults from marginalised groups and/or those with a background of education disengagement. The Compass Reading Assessment is a computer-based, online, on-demand, multiple choice question test. A report is generated immediately upon completion of the test and the results provide a reading skill school-level equivalent and an age-level equivalent which both relate directly to the Australian Core Skills Framework (ACSF) levels (Department of Education and Training, 2012). The ACSF levels are Level 1 (lower primary school level; age equivalent of 6-7 years), Level 2 (middle primary school level; age equivalent of 8-9 years), Level 3 (upper primary/lower secondary level; age equivalent of 10-12 years) and Level 4 (middle secondary level and above; age equivalent of 12 years and above).

Participants completed a series of practice multiple-choice questions in order to determine the appropriate level of difficulty for the formal assessment. Participants attempted Level Blue (lower primary level), Level Orange (middle primary level) or Level Purple (upper primary/lower secondary level) based on their responses to the practice questions. Knowledge of text location and interpretation, contextual understanding, and text language and knowledge were assessed by this tool across argumentative, imaginative and informative text types. For this study, a member of school staff set up the test and then participants independently completed it on school computers in a quiet space. Either a member of school staff or the research assistant supervised participants for the duration of the assessment. Detailed test administration guidelines are available through ACER (2009).

Discourse and pragmatic language skills. The La Trobe Communication Questionnaire (LCQ; Douglas, O’Flaherty, & Snow, 2000; Douglas, Bracy, & Snow, 2007a, b) was used to ascertain students’ own views about their everyday discourse/pragmatic language abilities. This tool is derived from Grice’s (1975) Cooperative Principle of Conversation, which is built around four key maxims pertaining to quality (speakers should say only that which they believe to be true), quantity (speakers should say neither more nor less than what is required to convey meaning to their listener), relation (speakers should keep their contributions relevant), and manner (speakers should converse in an orderly, easy to follow way). In addition to representing these maxims, the LCQ contains items pertaining to communication behaviours that are influenced by cognitive-communicative function; e.g., losing track of conversations in noisy places and difficulty thinking of things to say to keep a conversation going. LCQ items are self-rated on a 1-4 ordinal scale pertaining to the perceived frequency with which difficulties are experienced (1 = never; 4 = always). Six items are reverse scored, in order to guard against a response-set pattern. The LCQ has been

shown to have strong validity and reliability, as well as a robust factor structure (Douglas et al., 2000; 2007a, b).

Data Analysis

Inter-rater reliability and scoring accuracy checks were conducted on a random sample of twenty percent of standardized test scores before data entry and data analyses were undertaken. Data entry accuracy checks were conducted on a random sample of twenty percent of participants' variables. Data accuracy checks were also conducted for descriptive statistical analyses and further analyses. All checks were conducted by a SLP not involved in data collection, entry, or analyses.

Results

Language Skills

CELF-4 Core Language Score (CLS). The mean scaled score on the CELF-4 CLS was 85.1 (SD=14.3; range=43-113). Notably, no participants achieved a CELF-4 CLS in the above-average range (>115). The breakdown of CELF-4 and TLC-E scores is summarised in Table 1.

Test of Language Competence-Expanded Edition. Mean scaled scores on all three TLC-E subtests fell below the test's mean of 10 (SD=3), but were more than 1 SD below the mean on listening comprehension and just on 1 SD below the mean on figurative language [Table 1 about here]

La Trobe Communication Questionnaire. Scores across the five discourse domains captured by the LCQ are summarised in Table 2. Participants identified higher levels of difficulty in the Manner and Cognitive-Communicative domains. This indicates that participants in this sample perceive hesitations and dysfluencies in their everyday communication skills, report that they are easily side-tracked by irrelevant information, and

have difficulty with topic management processes, such as beginning and ending conversations, and dealing with multiple simultaneous communication partners.

[Table 2 about here]

Reading Comprehension

Compass Reading Assessment. Data on reading comprehension skills were available on 40 of the 50 participants (see Table 3). The usual reasons for non-availability of Compass data were: participants declining to complete the assessment with FLP staff, FLP staff overlooking the assessment, and/or participants being absent from the FLP for long periods. Of the 10 who did not complete the COMPASS assessment, 3 reported neurodevelopmental diagnoses, as follows: ASD n=1; ADHD n=2. None reported SLCN.

Almost half of the 40 participants (47.5%) that completed the Compass Assessment had reading comprehension skills that placed them at primary or lower secondary school levels, despite the mean age being over 16 years, which would normally correspond to Year 10 or 11. Of note, three participants (7.5%) had scores that placed their performance at lower to middle primary school levels. These three young people were aged 13, 14 and 16 years.

Examination of the oral language skills (CELF-4 CLS) of the 10 young people on whom Compass data were not available indicated that their language skills were poorer than those of the young people for whom full data were available. The CELF-4 CLS mean for the subgroup with Compass data was 86.3 (SD=13.7), while that of the subgroup for whom Compass data were not available was 80.5, however this difference was not statistically significant (SD=16.4; $t=1.2$ $p>0.5$). Six of the ten young people whose Compass data was missing scored less than 85 on the CELF-4 CLS.

[Table 3 about here]

Associations between language and reading comprehension scores

Examination of the relationship between oral language skills (CELF-4 CLS) and reading skills (Compass Score) revealed a Pearson's r of 0.56 ($p < 0.05$). A composite score was computed by summing the CELF-4 CLS and TLC-E scaled scores, in order to derive a composite score that includes both structural and figurative language skills, as previously described by Snow and Powell (2011). When the analysis was repeated, using this composite score, the correlation increased to 0.65. These correlations suggest that oral language skills account for between 31.4% and 42.3% of the variance in reading comprehension scores on the Compass assessment tool.

Discussion

In this paper, we describe what we believe to be the first systematic examination of the oral language and reading comprehension skills of adolescents enrolled in FLPs. Our findings raise high levels of concern about previously unidentified and/or unsupported developmental language disorders in this sample. For example, just over half of our participants had CELF-4 Core Language Scores that were below average levels and a quarter had scores in the “low” or “very low” range, yet only six participants reported ever receiving SLP support. In addition to these findings of poor structural language skills, mean scores on measures of figurative language were also below expected levels across all measures, in particular on listening comprehension. These findings on standardised language measures were also reflected in participants' self-assessment of their everyday communication skills, which showed high levels of perceived difficulties with organising their conversational language skills in ways that would be judged as logical and easy to follow by communication partners, and difficulties following the language used by communication partners.

It is notable that Year 8 was the most common last full year level of mainstream schooling completed and that nine participants had not progressed beyond Year 6. Not

surprisingly, nearly half of participants for whom data were available had reading comprehension skills at primary school level. We also found significant correlations between oral language skills and reading comprehension skills. This is consistent with evidence that reading comprehension is highly reliant on a range of underlying oral language skills, most particularly phonemic awareness, phonics, vocabulary, comprehension, and fluency (Buckingham, Wheldall & Beaman, 2013; Catts, Sittner Bridges, Little & Tomblin, 2008; Nation, 2001; Konza, 2014; Snow, 2016; Snowling & Hulme, 2012). The association between oral language skills and reading comprehension strengthened when data from the TLC-E was added to the CELF-4 Core Language Score. This is consistent with the fact that in the secondary years, students need to draw not only on vocabulary and other structural language skills, but also on their inferencing skills, and ability to form and test hypotheses about non-literal interpretations of text (Nippold, 2007), along the lines of the inferencing requirements of the TLC-E subtests. That said, the association reported here between oral language and reading comprehension skills is cross-sectional, so no directionality can be assumed. While early oral language skills are vital for the transition to literacy (Konza, 2014; Snow, 2016), it is also true that reading itself becomes a key source of new vocabulary from the mid-primary years onwards, and "...youth who are active and proficient readers who are interested in a wide variety of topics develop substantially larger vocabularies than their peers who read with less skill and motivation" (Nippold, 2007, p. 26). FLP students with both low oral language skills and poor reading comprehension skills should have access therefore, to specialist assessment and evidence-based intervention services delivered by appropriately trained and skilled professionals (for example, SLPs, psychologists, specialist educators), in order for their language and literacy needs to be fully assessed and met. Accordingly, our findings contribute to the evidence-base supporting policy decisions regarding staffing profiles in FLP settings.

There is possibly a “vicious cycle” for students entering FLP settings, in that their academic skills may be so low as to divert staff attention from educational goals to what might loosely be termed “engagement” activities. In Response to Intervention (RTI) terms (Justice, 2006), FLP students can be said to be “Tier Four” in that they are no longer in the mainstream school setting, however, that does not obviate the need for accurate educational data as a basis for tailored interventions. Indeed, it is critical that the young people who are attending FLPs receive high quality, intensive instruction to improve their language, literacy, and life opportunities. Whilst a focus on engagement and wellbeing is laudable and understandable in terms of seeking to maintain the connection between these young people and education (Mills & McGregor, 2013), it may further cement their low educational attainment and divert valuable time and resources away from addressing the underlying weak core skills that are needed for curriculum engagement.

Young people have themselves been critical of the “activities approach” taken in some alternative educational settings, with many expressing a preference for individualised support to learn “stuff that does actually matter if you’re going to go for a job” (Graham et al., 2015, p. 250). Participants in this study aspired to enter a trade and saw functional literacy and numeracy skills as valuable assets that would help them achieve this goal. While the majority preferred the alternative setting due to its more relaxed atmosphere and supportive teachers (Graham et al., 2016), many also described the adjusted curriculum as “too easy” and not likely to lead to genuine further education or employment pathways. Some participants cited this concern as the reason they would like return to a mainstream school, even though nearly all considered the academic school curriculum to be too difficult and irrelevant to their career aspirations. Their preference for meaningful learning opportunities in an inclusive atmosphere speaks to the critical role that FLPs can and must play in supporting the future access and participation of young people in further education,

training and employment. This could be achieved through improvements in individualised support and interventions designed to improve students' language and literacy skills. SLP scope of practice with respect to language and literacy supports in schools is clearly relevant here (Serry et al., 2016), however we are not aware of any data indicating the extent to which such services are available in this sector.

As noted by Nation (2005), "...the relationship between reading comprehension and listening comprehension is very close, especially as children get older and reading comprehension becomes more constrained by knowledge and understanding, rather than basic word-level decoding" (p. 251). We do not know how many of our participants had difficulty with word-level decoding, as we did not assess reading at that level. Although FLP students are in the secondary years of education, however, "Tier Four" FLP intervention may, in part, need to be directed towards consolidation of word-level decoding skills. According to the Simple View of Reading model (Gough & Tunmer, 1986), reading comprehension, the ultimate aim of reading, is a product of word level decoding and oral language comprehension. This means that students with inaccurate or inefficient word-level reading skills may struggle to derive benefit from interventions targeting oral language growth, reading comprehension strategies, and/or building background knowledge, without simultaneously intervening at the word level. Future empirical evaluations of FLP students should therefore include measures of both word reading and comprehension skills to develop a more complete picture of their literacy strengths and weaknesses.

Our findings are consistent with previous reports of high rates of language disorders in vulnerable adolescents, most particularly those at more extreme points in the so-called "school-to-prison pipeline", such as youth offenders. Research in Australia has shown that between 38% (Snow et al., 2015) and 52% (Snow & Powell, 2011) of young males in youth justice (community and custodial settings) have previously-undiagnosed language disorders.

In some overseas jurisdictions, such as the UK, rates of language disorder in youth justice settings exceeding 60% have been reported (Bryan, Freer, & Furlong, 2007). Our findings also correspond with research conducted with young people attending special schools for disruptive behaviour in New South Wales (James, 2016). Significant differences were found between these students and their age, sex, and SES-matched mainstream school peers on narrative and structural language and social communication skills. James also found that some areas of language and communication skills were negatively correlated with measures of behaviour, pointing to a complex relationship between the two.

As noted by previous researchers (Beitchman & Brownlie, 2014; Snow et al. 2015), undiagnosed language disorders tend to “masquerade” as rudeness, disinterest, and low motivation to engage, all of which are also consistent with externalising mental health problems. If interpreted as such by teachers however, it is expected that these behaviours would result in approbation and disciplinary penalties, consistent with the fact that 40% of the current sample had experienced suspensions and/or exclusions in mainstream settings on behavioural grounds. The language profiles of the young people in this study suggest that they would be ill-equipped to manage verbal complexity, ambiguity, and lack of clarity in the context of interpersonal communication and would either withdraw or respond in ways that are judged as inappropriate by others, including teachers. Teacher professional development in mainstream school settings regarding the prevalence and sometimes masked manifestations of language disorders in school-aged populations may improve staff confidence and skills in responding to the behaviours and needs of students whose language disorders may be undiagnosed, but still interfering with both academic and social aspects of school success. In addition to capacity-building of staff, direct SLP service-provision to address both structural and discourse-level oral language skills should also be developed and evaluated, along the lines of emerging SLP evidence with related populations (Snow & Woodward, 2016).

Limitations

This study was small in scale, so its findings need to be replicated with a larger, more representative sample. As noted above, future researchers should employ reading measures that assess word-level decoding skills, as we were not able to ascertain the extent to which poor reading scores reflect underlying difficulties at this level. This distinction has important implications for the types of interventions that are offered to at-risk students, both in mainstream education and FLPs.

Our inability to collect reading data on 20% of the sample was disappointing and highlights the importance of relying on researcher-controlled measures, rather than measures that are administered by schools. There are indications in our data that those for whom this measure was not available may have found it even more difficult than their FLP peers. It is vital that accurate data are collected on all students, so that the true extent of their difficulties is known and can be confidently tracked over time and in response to intervention. Future researchers should also assess writing skills, at both spelling and discourse levels.

The gender breakdown of this sample was atypical, as it comprised 60% females, where it is generally reported that males are over-represented in FLPs (Clark et al., 2010; Wilson et al., 2011). Given the evidence that vulnerable young females display language difficulties at a lower prevalence than their male counterparts (see Snow et al., 2015), our findings may under-estimate the extent of language and reading comprehension difficulties in FLP settings.

Conclusion

Adolescents in FLPs are at high risk of presenting with language disorders and these difficulties are significantly associated with poor reading comprehension skills. As expected on the basis of previous literature, complex behavioural, mental health, and neurodevelopmental disorders are over-represented in this population. Our findings support

the need for access to speech-language pathology services for adolescents in FLPs, to (i) strengthen receptive and expressive oral language skills, and (ii) ensure that the contribution made by weak underlying oral language skills to poor reading comprehension can be ameliorated through timely diagnostic assessments and targeted interventions aimed at strengthening academic retention and achievement.

Table 1

*CELF-4 Core Language Standard Scores and Test of Language Competence (Expanded)**Scores*

CELF-4 CLS Range		%
Above Average	≥115	0
Range		
Average Range	86-114	48
Borderline Range	78-85	28
Low Range	71-77	6
Very Low Range	≤70	18
TLC-E subtest	Mean (SD)	
Ambiguous	8.2 (2.6)	
Sentences		
Listening	6.8 (2.6)	
Comprehension		
Figurative Language	7.1 (2.7)	

Table 2

*Scores on La Trobe Communication Questionnaire Domains**

Domain	Median	Min.	Max.	Range
Domain 1 – Quantity	11	7	19	12
Domain 2 – Quality	4	2	7	5
Domain 3 – Relation	6	3	10	7
Domain 4 – Manner	15	9	23	14
Domain 5 - Cognitive Communication	19	10	29	19

*Scores are median total values for each domain, where higher scores reflect greater levels of self-reported difficulty.

Table 3

Scores on Compass Reading Assessment

Schooling Level Equivalent	% (n=40)
Lower primary (6-7 years old)	2.5
Middle primary (8-9 years old)	5.0
Upper primary/lower secondary (10-12 years old)	40.0
Middle secondary and above (Above 12 years old)	52.5

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