The Impact of a Blended Learning Course in ADHD On Teacher Knowledge and Self-Efficacy, and Improved Teaching Practices: Some Preliminary Findings

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Abstract

Background: Lack of in-service teacher knowledge of ADHD is a well-known issue, with significant impacts on teachers, students and families. Nonetheless, the benefits of ADHD courses for Australian teachers and students are yet to be established. Online Training (OLT) offers a blended learning course in ADHD and, in the past two years, over 2,000 teachers Australia-wide have completed it. While, anecdotally, the course appears to have a major impact on teacher outcomes, no current research exists demonstrating any translational benefits.

Aim: The current study aimed to provide a preliminary evaluation of the impact of OLT’s blended learning course ‘Understanding ADHD’ on teachers’ perceived knowledge, confidence and skills, and any changes in teaching practice.

Method: A retrospective, pre- and post-course design was adopted (N=2,111). A mixed methods approach was utilised, with statistical approaches including logistic regression and non-parametric analyses. Thematic analyses were undertaken on questionnaire data for a random sample (n=100).

Results: Findings indicated significant pre-to post-course improvements in teacher’s perceived knowledge of ADHD, applied skills in supporting ADHD students, confidence in meeting the needs of ADHD students and positive changes in teaching practices.

Conclusion: Findings provide preliminary evidence for many important benefits of OLT’s ‘Understanding ADHD’ teacher course.

Keywords: Professional Development, Training, Evaluation, Efficacy, ADHD

1. Introduction

Lack of in-service teacher education in ADHD represents a major and pressing problem. The equivalent of at least one student in every Australian Kindergarten to Year 12 classroom receives an ADHD diagnosis [1]. ADHD students are predominantly occupying mainstream settings and are expected to engage in undifferentiated regular classroom learning. Lack of in-service teacher knowledge of ADHD has major impacts on teachers, students and families and ADHD students have substantially lower achievement in reading, writing and numeracy [2]. Despite this, there is a lack of research on the efficacy of teacher education in ADHD, especially beyond improvements in teacher knowledge.

ADHD Australia (ADHDA)’s Critical Gaps Report on ADHD in Australian schools reported that "95% of parents believed teachers and school staff need specific ADHD training” [3]. ADHD students, by definition, have difficulty meeting the daily demands of school, which requires students to pay attention, self-regulate, and plan and organise their time and schoolwork; these executive functioning skills are frequently impaired in ADHD [1]. Without appropriate teacher knowledge and evidence-based accommodations for their needs, ADHD students experience major issues at school, including difficulty engaging in the learning process, stigmatisation, compromised relationships with teachers and peers, academic underachievement, suspensions, and early school drop-outs [4]. Many issues for children with ADHD start in primary school, with serious, cascading effects extending into adolescence and adulthood, and having lifelong implications.

ADHDA’s Critical Gaps Report also highlights that 1 in 3 children...
changed schools as a result of ADHD-related issues in 2019, 24% were suspended, 30% expelled and 56% of ADHD students received at least one detention. It is estimated that between 31 and 45 percent of ADHD students have a co-existing Specific Learning Disorder (SLD) in literacy/numeryc, which is 5 to 10 times the rate of SLD in the general population [5]. Due to social and academic struggles, 60-100% of children and adolescents with ADHD have a secondary mental health condition such as depression or anxiety and many have behavioural or conduct problems [1, 6]. We urgently need to engage teachers in effective ADHD education programs, to reduce the negative outcomes associated with ADHD.

It is widely accepted that developing the expertise and knowledge of teachers is one of the most fundamental measures to increase student achievement and facilitate more positive outcomes for those with ADHD [4]. Despite this, Australian pre-service teachers receive, on average, as little as 1 to 5 hours of training on children with special needs and many receive no training at all on ADHD. Moreover, 93% of Australian in-service teachers report that they would benefit from further professional learning in ADHD and 92% report they were not adequately trained at university to identify and support ADHD students [7].

Similarly, in their Disability Strategy document, the NSW Department of Education and Training (DET) acknowledged on p. 11 that “In short, there has been a gap between the promise of inclusive education and the ‘lived reality’ that some children and their families experience in NSW schools” [8]. This report also states on p. 18: “many NSW teachers report a lack of confidence in teaching children and young people with disability” and identifies the problem is increasing: “rising demand, as well as an increasing shortage of staff with specialist training mean our system is facing unprecedented pressures”. Similar sentiments are reflected in the Australian Institute for Teaching and School Leadership (AITSL)’s Inclusive Education Report [9]. Lack of teacher training in ADHD is a major contributing factor to poor outcomes for ADHD students.

Negative impacts also extend to teachers and families. The lack of ADHD teacher training leads to high rates of teacher burnout and teacher mental ill-health [10]. Likewise, parenting stress is higher for ADHD than for autism, and often leads to burn-out and parent mental ill-health [11].

Professional learning programs are now mandatory for Australian teachers, but training programs need to be properly evaluated and their evidence-base clearly documented. A recent systematic review was conducted on the efficacy of teacher training interventions (incorporating psychoeducation and/or behavioural techniques) for improving teacher knowledge of ADHD [12]. This review and meta-analysis included 29 studies in total (22 in the meta-analysis, and only one Australian study), and the conclusions drawn were that there was a strong evidence-base (large effect-sizes) for improving teacher knowledge, with inconsistent/limited evidence for their efficacy to improve teacher’s use of behaviour management strategies, or to reduce undesirable ADHD-type behaviours in the classroom. As Ward et al. point out, “Given the average child spends 13,000 hr in compulsory school education... it is critical to find effective interventions in schools to support children with ADHD”.

Understanding the effectiveness of ADHD professional training is compromised by: the varying quality of the training programs offered (e.g., with only some training including evidence-based strategies and delivery by experts); a variety of outcome measures and methodologies being utilised, and outcomes are often limited to teacher knowledge (not teacher self-efficacy, implementation of taught behavioural strategies or change in teachers’ perspectives and/or practices). Moreover, studies span across medical, educational and psychological sectors, there are very few randomised control studies, and many studies include single arm cohorts (e.g., single education jurisdictions).

Online Training (OLT) has been providing professional learning in Australia since 2008 across many education jurisdictions around Australia and overseas [13]. Education jurisdictions each hold licenses that enable them to provide tutored and open access courses to their employees. OLT’s courses are co-designed with expert practitioners and regularly updated with the latest evidence-based best practice. OLT’s tutored online courses are for schools and their staff supporting students with disability and special educational needs. OLT developed an ADHD course for teachers in 2021, with over 2,000 teachers now having completed the program.

The aim of the current study was to provide a preliminary evaluation of (and preliminary insights into) the impact of OLT’s blended learning course ‘Understanding Attention Deficit Hyperactivity Disorder’ (‘Understanding ADHD’) on teachers’ perceived knowledge, perceived confidence and skills, and any changes in teaching practice (and meeting ADHD student needs) using a retrospective, mixed methods approach. Findings may inform other teacher training, but the ultimate aim is for this preliminary work to inform the enhancement of OLT’s ‘Understanding ADHD’ program, and to design a prospective study looking at the translational and short-term and long-term impacts of the course for teachers, students and families.

Given the exploratory nature of the study, no a priori hypotheses were formulated.

2. Method
The current study evaluated OLT’s professional learning course ‘Understanding ADHD’ in a mixed method, retrospective study design. Pre- and post- course data included categorical ratings, answers to yes/no and open-ended questions, and other descriptors, which were analysed using a range of statistical approaches, including multi-level ordinal logistic regression, non-parametric tests and reflexive thematic analyses [14, 15].

2.1. Online Training’s Course ‘Understanding ADHD’
The ‘Understanding ADHD’ course content and learning objectives are described in detail on OLT’s website: https://aus.oltinternational.net/understanding-attention-deficit-hyperactivity-disorder, and are briefly described in Appendix A. The course is designed for those who work in schools with students, particularly teachers, school executives and support
staff. The target age range is compulsory education.

‘Understanding ADHD’ looks at the impact ADHD can have on a student’s life and shows how educators can make their classroom and practice more inclusive for these students. Educators learn how to further understand the needs of students with ADHD and develop a range of strategies to improve learning outcomes.

The course is offered in a learning cohort of up to 12 participants led by a tutor. The course runs over 8 to 10 weeks through a blended learning approach with individual online study supported by three tutor led group sessions, which altogether totals 20 hours. Tutor led sessions may be in person or online via a virtual platform.

Course requirements are set by the education jurisdiction but typically include:
- Attending tutor presentations and activities at three tutor led sessions: Understanding; Assessment and Interventions
- Completing study of online course content
- Completing three quizzes- one at the end of each course section
- Taking part in online forum topics- choosing at least 10 topics across the course
- Setting three SMART (specific, measurable, agreed, realistic, and time-based) goals and three corresponding interventions intended to achieve those goals
- Completing online pre and post course evaluation and feedback

2.2. Procedure
Following ethics approval from the Macquarie University Human Research Ethics Committee (#12679 and #12616), retrospective, de-identified pre- and post- course data was obtained from OLT for all educators who completed OLT’s ADHD teacher course between the period of 2 September 2020 and 10 May 2023 (N=2,111).

Pre- and post- course completion, all participants were asked to answer the following questions using four categorical options (None, Limited, Sound or Comprehensive for Pre/Post1 to Pre/Post3 and Not at all Confident, Somewhat Confident, Fairly Confident, Very Confident for Pre/Post4 and Pre/Post5):

- Pre1, then Post1: How do you rate your current level of knowledge and understanding of ADHD?
- Pre2, then Post2: How would you rate your current skills in assessing the needs of students with ADHD?
- Pre3, then Post3: How would you rate your current skills in planning and implementing interventions for students with ADHD?
- Pre4, then Post4: How confident do you feel in meeting the needs of students with ADHD; and
- Pre5, then Post5: Please indicate your current level of confidence in using a computer to study an online learning course?

Post course completion, the following questions were also asked of participants:

- Post6: How would you rate the online course content? (categorical response);
- Post7: How many tutors led sessions did you have? (numerical response required);
- Post8: How did you access the tutor led sessions? (categorical response);
- Post9: How did the tutor led sessions contribute to your learning? (open-ended question);
- Post10: Would you recommend this course to others? (yes / no response obtained); and
- Post11: Do you refer back to the course or make use of what you learned? (yes/no response obtained).

The following open-ended questions were not compulsory, and were answered at the beginning of the first tutorial session as part of the course forum topics open to the learning group (Intro 1 and 2) or at the end of the last tutorial session (Conc 1 and 2):

- Intro1: What has influenced you to do this course?;
- Intro2: (a) Share with the group what you hope to learn as a result of taking this OLT course on understanding ADHD. (b) How do you feel about blended learning with tutor group sessions and using the computer to learn? (c) What advantages do you think this method of learning may provide for you?;
- Conc1: We have all started this course from different starting points. Some may be very experienced and others new to working with students with ADHD. (a) Please share with the group three key things that you have learned (b) and explain what difference this has made to your attitudes, understanding and practice with the students you teach or support; and
- Conc2: (a) List three things you will take away from this course and implement in your classroom/ school/ practice. (c) Additionally, what will you share with your colleagues and school leaders?

Quantitative data was analysed using StataIC, Version 17. For all inferential test statistics, the significance level (p-value) was set to an adjusted level of .01 for main effects, given the large number of comparisons, to control for Type-I and Type-II error [16]. Bonferroni adjustments were automatically made for pairwise comparisons, so here the significance level was set to .05.

For qualitative data/thematic analyses, a random sample of 100 participants were chosen from the full data set using a computer-generated algorithm (CalculatorSoup®). Descriptive statistics on the full study sample and on the random sub-sample are described in the results section below (and the latter was representative of the larger cohort).

All qualitative data was categorised independently by at least two researchers (co-authors: HB, LS, ST, AH, & LB), and any disagreements were resolved by a third party (co-authors MP or LB) until a consensus was reached. All data was cross-checked and a reflective thematic analysis was then undertaken by the first author (MP), with the themes then cross-checked with the online software program ChatGPT [14, 15].
3. Results

3.1. Sample Descriptive

Data included 2,111 participants in total across 17 education jurisdictions, 23 geographical regions, 535 schools, and 667 learning cohorts. Figure 1 shows the number (percent) of tutor led sessions attended and indicates that the majority (77%) of educators completed the recommended three tutor led sessions as part of the course. Figure 2 shows the mode of attendance for tutor led sessions, and indicates that the majority (70%) of educators attended these sessions on-line.

![Number of Tutor Led Sessions Attended](image)

![How Tutor Led Sessions Were Accessed](image)

Figure 1: (a) The number of tutors led sessions attended by participants and (b) the mode of attendance for tutor led sessions (both shown as a percentage).

The full sample included the following breakdown of School Type: Primary Schools - 1,368 (65%); High Schools - 393 (18%); Kindergarten to Year 12 - 64 (3%); non-school based staff - 203 (10%), and 84 (4%) did not select the school type.

The breakdown of Roles for those that completed the course included: 172 (8%) non-school based staff; 207 (10%) disability/inclusion specialist and special school teachers; 78 (4%) middle level leader in school; 134 (6%) school leadership; 40 (2%) school psychologist, school counsellor or social worker; 850 (40%) primary school teacher; 146 (7%) secondary school teacher; 252 (12%) support teacher; and 44 (3%) other/role not specified.

For the random sample of 100 used for qualitative analyses, the sample included the following breakdown of School Type: Primary Schools - (56%); High Schools - (23%); Kindergarten to Year 12 - (3%); (14%) non-school based staff, and (4%) did not select the school type.

The breakdown of Roles for the random 100 sample for qualitative analyses included: (9%) non-school based staff; (8%) disability/inclusion specialist and special school teachers; (2%) middle level leader in school; (7%) school leadership; (3%) school psychologist, school counsellor or social worker; (39%) primary school teacher; (6%) secondary school teacher; (19%) support teacher; (5%) support assistant; and (2%) other/role not specified.

Appendix B provides pie charts that illustrate the breakdowns of School Type and Role for the entire sample and the sub-sample.

### 3.2. Comparison of Pre- and Post- Course Ratings

Table 1 shows results of Wilcoxon Signed Rank Tests (non-parametric test) comparing Pre- and Post- course ratings for the questions Pre/Post 1 to Pre/Post 5 on the entire study cohort (n = 2,111). Table 1 shows significant improvements in all ratings from pre- to post-course completion. Appendix C includes pie charts that illustrate these differences graphically.

<table>
<thead>
<tr>
<th>Rankings</th>
<th>Pre n (%)</th>
<th>Post n (%)</th>
<th>z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre 1 and Post 1 – How would you rate your current level of knowledge and understanding of ADHD?</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>2 (0.09)</td>
<td>0 (0)</td>
<td>-38.49</td>
<td>&lt;.001*</td>
</tr>
<tr>
<td>Limited</td>
<td>763 (36.14)</td>
<td>7 (0.33)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sound</td>
<td>1230 (58.27)</td>
<td>895 (42.40)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comprehensive</td>
<td>116 (5.50)</td>
<td>1209 (57.27)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **Pre 2 and Post 2 – How would you rate your current skills in assessing the needs of students with ADHD?** |
|------------------|-----------|------------|--------|--------|
| None             | 32 (1.49) | 0 (0)      | -38.40 | <.001* |
| Limited          | 963 (45.64)| 26 (1.24)  |        |        |
| Sound            | 1028 (48.70)| 1136 (53.81)|        |        |
| Comprehensive    | 88 (4.17) | 949 (44.95) |        |        |

| **Pre 3 and Post 3 – How would you rate your current skills in planning and implementing interventions for students with ADHD?** |
|------------------|-----------|------------|--------|--------|
Pre 4 and Post 4 – How confident do you feel in meeting the needs of students with ADHD?

<table>
<thead>
<tr>
<th></th>
<th>None</th>
<th>Limited</th>
<th>Sound</th>
<th>Comprehensive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>35 (1.66)</td>
<td>1003 (47.41)</td>
<td>986 (46.90)</td>
<td>85 (4.03)</td>
</tr>
<tr>
<td></td>
<td>0 (0)</td>
<td>24 (1.14)</td>
<td>1003 (47.54)</td>
<td>1082 (51.28)</td>
</tr>
</tbody>
</table>

Regression output tables are provided in the Supplementary Materials: Appendix D, Tables 1 to 9.

Pre 5 and Post 5 – Please indicate your current level of confidence in using a computer to study an on-line learning course?”

<table>
<thead>
<tr>
<th></th>
<th>None</th>
<th>Limited</th>
<th>Sound</th>
<th>Comprehensive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>110 (5.21)</td>
<td>1026 (48.60)</td>
<td>871 (41.26)</td>
<td>104 (4.93)</td>
</tr>
<tr>
<td></td>
<td>0 (0)</td>
<td>47 (2.30)</td>
<td>1006 (47.66)</td>
<td>1058 (50.04)</td>
</tr>
</tbody>
</table>

Note: * = Significant difference between groups at p < .01 level; ADHD = Attention Deficit Hyperactivity Disorder.

Table 1: Comparisons Between Pre- and Post- Course Ratings

3.3. Post-Training Evaluation Ratings

Figure 2 shows ratings on Post6 and indicates that the vast majority of educators found the quality of the course content to be excellent/high. In addition, 99% of educators said they would recommend the course to others (Post10), and 96% indicated that they refer back to the course content and/or make use of what they had learned (Post11).

3.4. Regression Analyses

Multilevel ordinal logistic regressions were undertaken to determine which variables predicted Pre and Post rating scores. To control for any confounding influences of sampling characteristics, relevant variables were nested within the model. Education jurisdiction was unable to be nested, as there were too few groups. However, the impact of education jurisdiction was tested and found to only account for up to 3% of the variance across the range of dependent variables. As such, it was not of concern that education jurisdiction could not be controlled for. School and Region were nested, and controlling for these variables significantly changed the model for some, but not all, dependent variables. Nonetheless, for consistency, these variables were nested within each model, regardless of whether or not doing so significantly changed the model.

Regressions were run on all Pre and Post ordinal variables, with relevant Pre and Post rankings, Post7 and Post8 responses (number and mode of tutor-led sessions), and participant variables (Role, School Type), set as independent variables. Regression output tables are provided in the Supplementary Materials: Appendix D, Tables 1 to 9.

Pre1: Participants’ Role, but not their School Type, significantly predicted their pre-rated knowledge of ADHD (Pre1). Specifically, Support Assistants had lower Pre1 ratings than Support Teachers, Non-Based School Staff, Disability Inclusion Specialists, Middle Level Leaders in School, and School Leadership (p < .05). Primary School Teachers had significantly poorer Pre1 ratings than Disability Inclusion Specialists, Middle Level Leaders in School, and School Leadership (see Appendix...


Post1: Results revealed that participants pre-rated ADHD knowledge (Pre1) and their pre-rated confidence using a computer to study (Pre5) predicted their post-rated knowledge of ADHD (Post1), with increased confidence and increased pre knowledge significantly associated with increased post knowledge. Their pre rated skills in accessing needs of ADHD students (Pre2), pre rated skills in implementing intervention (Pre3), pre rated confidence in meeting the needs of students with ADHD (Pre4; with an increase in Pre1-3 ratings significantly associated with an increase in Pre4 ratings). However, despite a significant main effect of Role, no pairwise comparisons were significant (see Appendix D, Table 4).

Post2: Participants pre rated skills in assessing the needs of ADHD students (Pre2) significantly predicted their post-rated skills in assessing the needs of ADHD students (Post2), with greater pre ratings significantly associated with greater post ratings. No other pre rated scores or participant variables predicted Post2 (see Appendix D, Table 6). Post3: Participants pre rated skills in implementing intervention significantly predicted their post-rated skills in planning and implementing intervention for students with ADHD (Post3). Again, with higher pre ratings predicting higher post ratings. Further, Role was found to significantly predict Post3. However, despite a significant main effect of Role, no significant pairwise comparisons were found. No other pre rated scores or participant variables predicted Post3 (see Appendix D, Table 7). Post4: Post-rated ADHD knowledge (Post1), post-rated skills in assessing ADHD students’ needs (Post2), and post-rated skills in implementing intervention (Post3) significantly predicted one’s post-rated confidence in meeting the needs of ADHD students (Post4), with higher post ratings significantly associated with higher post confidence. The only Pre score that significantly predicted Post4 was pre rated confidence (Pre4; with increased pre confidence significantly associated with increased post confidence). Confidence with computers, Role, School Type, and amount/number of tutor led sessions attended were not significant predictors (see Appendix D, Table 8). Post6: Post-rated ADHD knowledge (Post1) and post-rated skills in assessing ADHD students’ needs (Post2), but not post-rated skills in implementing intervention (Post3) or post confidence in meeting ADHD students’ needs (Post4), significantly predicted participant’s rating of the course content (Post6). Specifically, higher Post1 and Post2 scores were associated with significantly higher course ratings. The only Pre rating that significantly predicted course ratings (Post6) was pre rated skills in planning and implementing intervention for ADHD students (Pre3; with increased Pre3 scores significantly associated with decreased course ratings). No other participant characteristic (Role, School Type, or amount/method of attendance of tutor led sessions significantly predicted Post6) (see Appendix D, Table 9).

Of note, while Role predicted certain Pre and Post ranking scores (Pre1, Pre3, Pre4, and Post3), every role played a perceived benefit from the online course. Wilcoxon Signed Rank tests were completed comparing Pre rankings to Post rankings, broken down by each role. This analysis revealed that each role demonstrated significantly increased scores on all Post variables following the training (See Appendix E, Table 1).

3.5. Thematic Analyses on Open-Ended Questions

Thematic maps are displayed in Figures 3 to 9 below for the post-course open-ended questions (Post9, Post11, and Intro1-2 and Conc1-2), and these figures also show the percentage of participants who endorsed each subtheme. Figures 3 to 9 demonstrate that subthemes often reflected the sentiments of a broad range of educators. Illustrative quotes are provided in the Supplementary Material (Appendix F) for each subtheme across all open-ended questions.

What influenced educators to do the course and what did they hope to learn?

“I hope this course provides me with more information about ADHD and how to implement effective strategies to support these students. Most of the time, students with ADHD are dismissed for being ‘misbehaved’ by adults who are not informed or educated about ADHD - so I hope to gain more information to provide to these adults, ultimately providing more opportunities for students with ADHD.”

“I hope to refresh my existing understanding of ADHD and develop new insights into assessment and support strategies to optimise students' engagement and participation in school activities.”

Common themes emerged across the two questions: Intro1: “What has influenced you to do this course?” and Intro2 (a): “Share with the group what you hope to learn as a result of taking this OLT course on understanding ADHD? ” (see thematic map in Figure 3 below). Many educators seemed inspired to do the course as a result of what they hoped to learn, and this desire included both knowledge and understanding of ADHD.
and applied skills in supporting ADHD students, as well as supporting teachers/schools and parents/families.

**Figure 3:** Thematic map and percent endorsement (n=65 and 50, respectively) for the questions Intro1 and Intro2 (a): “What has influenced you to do this course?” (% not bolded) and Intro2(a) “Share with the group what you hope to learn as a result of taking this OLT course on understanding ADHD?” (% bolded).

**Theme 1: Expand/increase knowledge and understanding of ADHD**

Many educators expressed a desire to gain a deeper understanding of ADHD, this both influenced them to do the course and was what they had hoped to learn (subtheme 1.1). Many were aware of the diversity associated with ADHD, in terms of how ADHD can present and the challenges associated with ADHD, and they expressed a desire to learn more about this diversity (subtheme 1.2). Some also spoke about their desire for research/evidence-based and up-to-date knowledge (subthemes 1.3 and 1.4), and some wanted to refresh their knowledge and skills (subtheme 1.5).

**Theme 2: Better support for students**

Many responses reflected a desire to be able to better support ADHD students (subtheme 2.1 and 2.2), setting them up for success (subtheme 2.2), identifying and meeting their needs (subtheme 2.3), and providing ADHD students with better access to learning (subtheme 2.4).

**Theme 3: Expand ADHD related skill set**

Many educators wanted to learn new strategies and interventions (subtheme 3.1), some said they wanted to be able to apply learned knowledge through changed teaching practices (subtheme 3.2), and some wanted access to new resources (subtheme 3.3).

**Theme 4: Better knowledge/support for teachers/schools and Theme 5: Better knowledge/support for families/parents**

Educators wanted to share knowledge/learned material with teachers/schools (subtheme 4.1) and with parents/families (subtheme 5.3), and they wanted to be better equipped to support teachers/schools (subtheme 4.2) and parents/families (subtheme 5.1), and to work more effectively with teachers (subtheme 4.3) and parents/families (subtheme 5.2) to support ADHD students.

**Theme 6: Personal and professional experiences with ADHD**

Some educators were inspired to learn more due to professional (subtheme 6.1) and/or personal (subtheme 6.3) connections with ADHD; some also noted a high number of ADHD students at their school or a perceived increased in the prevalence of the condition (subtheme 6.2).

**What did educators learn from the ‘Understanding ADHD’ course and what translational differences did the course make?**

“I have found this course very insightful and feel I have completed it with a much deeper understanding of what ADHD is and entails. The following are some key learnings I have discovered along the way; -ABC analysis and other forms of testing for ADHD for rich data on student behaviours -Effective strategies to assist students with ADHD in terms of learning and behaviour management -That what may work for one student with ADHD may not work at all for another student. Students with ADHD all function differently and as educators, we need to cater for their individual needs”

“not get angry but instead calmly redirecting or ignoring the behaviour and positively reinforcing good behaviour is good practice.”

Common themes emerged across the first and then the second part of the question Conc1:

*We have all started this course from different starting points.*
Some may be very experienced and others new to working with students with ADHD. (a) Please share with the group three key things that you have learned (b) and explain what difference this has made to your attitudes, understanding and practice with the students you teach or support. So, two separate thematic maps are provided for (a) in Figure 4 and (b) in Figure 5.

Figure 4: Thematic map and percent endorsement (n=22) for the question Conc1: (a) Please share with the group three key things that you have learned.

There were two key themes that emerged for Conc1(a): improved knowledge/skills and improved application of knowledge/learned skills. There was clear overlap between these themes (and subthemes) and those that emerged in terms of what inspired educators to complete the course and what they had hoped to learn (see Themes 1 and 2 and their subthemes 1.1 and 1.2 from Figure 4).

**Theme 1: Improved knowledge**

- **1.1 Increased knowledge/insight into ADHD** (64%)
  - ADHD students differ and we need to individually cater to their needs (50%)
  - How to identify signs of ADHD (9%)

**Theme 2: Improved application**

- **2.1 Use of strategies/interventions for supporting students** (64%)
  - More positive relationships with ADHD students (23%)
  - Use of screening tools to identify ADHD/potential ADHD (18%)

Some may be very experienced and others new to working with students with ADHD. (a) Please share with the group three key things that you have learned (b) and explain what difference this has made to your attitudes, understanding and practice with the students you teach or support. So, two separate thematic maps are provided for (a) in Figure 4 and (b) in Figure 5.

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**Theme 1: Improved knowledge**

Many educators spoke of increased knowledge/insight into ADHD (subtheme 1.1), and many also indicated a better understanding of the diversity of ADHD students and the need for individualised strategies, interventions and supports (subtheme 1.2). Some indicated improved knowledge of how to identify signs of ADHD (subtheme 1.3).

**Theme 2: Improved application**

Many educators indicated improved/increased use of strategies and interventions to assist ADHD students at school (subtheme 2.1), many spoke of improved relationships with the ADHD students they worked with following insights into the importance of establishing positive relationships (subtheme 2.2), and some spoke of now utilising ADHD screening tools (subtheme 2.3).

Figure 5 shows the thematic map for Conc1 (b).

“I have been more mindful to look for patterns of behaviour across the week and at the function or reasons for the behaviours. I have adjusted when I teach a few lessons and am using different strategies with some transitions across the week. I found learning to write SMART goals beneficial as I already was writing goals in learning and behaviour plans. My goals have improved as I am incorporating better measurable and time-based parts in goals. I found the case study videos interesting, hearing the perspectives of the students and how they feel about their learning and stressors. I have become more aware of the way I word feedback and the pace of work for certain students. The course has given me new insight which will be beneficial for supporting students.”
**Theme 1: Improved general teaching approach and practice**
The large majority of educators (68%) reported changing their approach to teaching and teaching practices after completing the course (Theme 1, Figure 5). Many also reported having more positive relationships with ADHD students in their classroom (subtheme 2.1) and more empathy and understanding (subtheme 2.2).

**Theme 3: Implementation of strategies and resources**
Educators also reported on utilisation of resources and learned strategies (subtheme 3.1), and use of SMART goals (subtheme 3.2).

**Theme 4: Improved practices with ADHD students**
Perhaps as a result of their increased knowledge and understanding, and application of learned skills, educators expressed being better able to meet the needs of ADHD students (subtheme 4.1), and they reported working more collaboratively with them (subtheme 4.2).

**Theme 5: Providing knowledge and support to teachers/schools and Theme 6: Working more collaboratively with parents/families**
Providing knowledge and support to teachers and working more collaboratively with parents/families in order to better support ADHD students were two other commonly endorsed responses (Themes 5 and 6).

Separate themes emerged for the different components of Conc2: (a) List three things you will take away from this course and implement in your classroom/ school/ practice. (b) Additionally, what will you share with your colleagues and school leaders?, so thematic maps are shown in Figure 6 for (a) and Figure 7 for (b).

**Figure 5:** Thematic map and percent endorsement (n=22) for the question Conc1: (b) and explain what difference this has made to your attitudes, understanding and practice with the students you teach or support.

**Figure 6:** Thematic map and percent endorsement (n=22) for the question Conc2: (a) List three things you will take away from this course and implement in your classroom/ school/ practice.
Answers to the first part of Conc2 showed more clearly, in particular, the focus of application of learned knowledge/skills as a result of the course (theme 1 of Conc1 in Figure 6).

Responses also reiterated themes and subthemes in Conc1 (see Figures 4 and 5) that a large majority of educators noted improved relationships with ADHD students (subtheme 2.2 of Figure 4 and subtheme 2.1 of Figure 5), as well as increased collaborations with teachers/schools (subtheme 2.1 of Figure 6) and parents/families (subtheme 2.3 of Figure 6), which are similar to themes 5 and 6 of Figure 4.

Some educators also reiterated a change in their approach to teaching practices as a result of the course (theme 3 from Conc2, see Figure 6) and similar to theme 1 from Conc1 (b), see Figure 5).

Figure 7 shows the thematic map for Conc2 (b): What will you share with your colleagues and school leaders?

Educators expressed that they shared or intended to share both knowledge learned from the course (theme 1, Figure 7) and strategies and skills learned in a more applied way (theme 2), and for the latter, some indicated ongoing development of SMART goals focused around ADHD students (subtheme 2.2), and use of screening tools (subtheme 2.3).

3.6. Perceived Advantages of the Blended Learning Format

“To date, I have provided a couple of teachers with screening tool. I need to check with them [on the] result and if and how they used it to start a conversation with parents. I also think having conversations with the teachers that we can’t always use the same approach or consequence for challenging/ inappropriate/ impulsive behaviours for all students. We can’t use a blanket, one size fits all approach and that this does not mean we are not being fair or that we are being inconsistent. I would like to brainstorm more with teachers around movement breaks.”

“Finally, having the screening tool is something that I can provide teachers when they start to talk about a student with particular behaviours, especially if they are being replicated in other classes too. I have already printed out for one teacher to complete next term so it will be interesting to see how it translates.”

Figure 8 shows the thematic map for the question Intro2: (b) How do you feel about blended learning with tutor group sessions and using the computer to learn? (c) What advantages do you think this method of learning may provide for you?
Educators seemed positive, overall, about the blended learning format (theme 1, Figure 8), with various statements that they: liked this format (subtheme 1.1); enjoy technology (subtheme 1.2); were comfortable with technology (subtheme 1.3) or some were comforted because they were already familiar with OLT’s learning model through completing other courses (subtheme 1.4).

Lifestyle advantages in using the blended learning format were noted (theme 2), such as its flexibility (subtheme 2.1); convenience (subtheme 2.2) and other noted advantages included balancing home/work life (subtheme 2.3), and self-paced learning (subtheme 2.4).

Other identified advantages related to the blended learning format itself, such as being able to refer back to the content (subtheme 3.1), interacting with colleagues and sharing experiences with them (subtheme 3.2), and in relation to the tutor-led sessions, supported learning, such as being able to ask questions and having the tutor available to clarify content or build on line content (subtheme 3.3).

3.7. Benefits of the Tutor Led Sessions
A thematic map for the question Post9: “How did the tutor led sessions contribute to your learning” is provided in Figure 9.

“It was great to be able to ask questions and share expertise, and learn from each other. When we had questions the tutor was able to answer effectively, point us in the right direction for further information, and facilitate collaborative and productive discussion”

“I really appreciated learning from my tutors expertise”
There is a pressing need for recent government enquiry into the increasing disruption in Australian school classrooms, where there is a pressing need for teacher education in ADHD that facilitates success in inclusive classrooms and in the provision of positive behaviour support [17].

Research on the translational impacts of teacher education in ADHD is scant, and has focused heavily on change in teacher knowledge, rather than measuring improvements in teacher self-efficacy, implementation of learned positive behaviour supports, or more positive learning outcomes for ADHD students [12].

The present study looked at the impact of OLT’s ‘Understanding ADHD’ blended learning course on teacher’s perceived knowledge, as well as their perceived self-efficacy, any perceived changes in their teaching practices, as well as perceived implementation of learned behavioural and classroom supports, and any perceived changes for ADHD students, in terms of having their needs met.

The study was somewhat unique, as OLT’s course spans across multiple education jurisdictions, include a large, nation-wide sample of educators, and provided an opportunity to also look at any impacts of school type (e.g., primary vs. high schools) and educator’s role (e.g., Mainstream or disability support) on pre- and post-course training outcomes and evaluations. Other strengths of the study included the ability to statistically control for influences of school region and school (and, therefore, ethos, the impact of COVID-19 lockdowns, and other confounding factors).

Both qualitative and quantitative analyses indicated that the majority of educators found the course beneficial and, overall, had positive views of OLT’s ‘Understanding ADHD’ course. Educators identified many advantages of the blended learning format and indicated many added benefits of the tutor-led sessions, such as supported learning and drawing on the group’s lived experience and expertise.
Perceived improvements were noted in teacher attitudes, their levels of understanding and compassion towards ADHD students, their perceived implementation of learned strategies and supports, and perceived outcomes for ADHD students (e.g., having their needs met) after completing the ADHD course.

Of note, while school type did not have a significant impact on findings, primary school teachers were substantially more likely to partake in the course than high school teachers, and most participants reported working in a Mainstream setting; the reasons for this could be explored in future studies.

Somewhat surprisingly, pre-rated confidence in using a computer for study was significantly related to post-course knowledge, but not other post-course ratings. This may be because knowledge (as opposed to application of skills and meeting ADHD student needs) requires a lot of reading, and access to resources on the computer.

Also, of note, Post1-3 ratings (reflecting perceived knowledge and also perceived skills in assessing the needs of ADHD students and planning and implementing interventions) related significantly to Post4 (perceived confidence in meeting the needs of ADHD students), suggesting a hierarchy in that all three of Post1-3 must be met (and indeed included in a training course), before educators believe that they can confidently and competently meet student needs.

Whilst regardless of role, all educators showed a significant increase from pre- to post- course ratings, findings suggested that select pre-course ratings differed significantly as a function of role, generally with those working in inclusion/disability or leadership roles having significantly higher base knowledge of ADHD (Pre1) and higher perceived skills in planning and implementing interventions (Pre3). Inclusion of those in disability/inclusion or leadership roles likely led to more enriched discussion and sharing of knowledge, experience and ideas in the tutor-led sessions, a benefit of the tutor-led sessions clearly appreciated by many course participants. Role was not significantly related to overall satisfaction with the course content or with post-course knowledge or self-efficacy, suggesting that all educators, regardless of their role or level of expertise in ADHD, tended to benefit from the course. Of note, those with higher Pre3 ratings were significantly less likely to recommend the course to others, which warrants further investigating.

Overall satisfaction with the course was significantly related to post-course perceived knowledge of ADHD (Post1) and perceived skills in assessing the needs of ADHD students (Post2). The above aligns with findings from the thematic analyses, which showed that the main incentives for completing the course and the main learning objectives were to increase general knowledge and applied skills in ADHD (e.g., implementation of strategies/ interventions) (as reflected in subthemes 1.1, 2.1 and 3.1 of Figure 3), and perhaps reflecting their post-course realisation of the need to collaborate and not to work in silos in order to be better support ADHD students and meet their needs (as reflected in theme 2, Figure 6).

This was a preliminary study, and there were a number of limitations. Firstly, the retrospective pre/post design was not optimal. Likewise, the risk of bias was high, with only participant responses measured, and no independent evaluation of pre/post changes. Moreover, long-term or maintenance effects were not investigated, so it is unclear whether any improvements noted were maintained over time. Future research should adopt a more optimal study design, include additional outcome measures, across informants, and measure maintenance of any improvements.

Despite these study limitations, there are demonstrable benefits of OLT’s ‘Understanding ADHD’ course, both for teachers themselves, in terms of their perceived knowledge and application of skills, self-efficacy and reflective/improved practices and for the perceived benefits to ADHD students themselves, including more positive relationships and having their learning needs met. Future studies should incorporate additional outcome measures, not only for teachers, but also looking at generalisable impacts on measured student, and potentially other staff/school and parent/family, outcomes.

Acknowledgement
This work was funded by an Enterprise Partnerships Scheme from Macquarie University, partnering with ADHD Australia and Online Training awarded to the first author.

References
students with disability.


### Supplementary Material

**Appendix A: OLT’s professional learning course ‘Understanding ADHD’**

For further details on the course content and learning objectives see OLT’s website: [https://aus.oltinternational.net/understanding-attention-deficit-hyperactivity-disorder](https://aus.oltinternational.net/understanding-attention-deficit-hyperactivity-disorder)

**Course content**

The course aims to develop the knowledge, understanding and skills of all those working with students with ADHD to support inclusive practice.

- **Understanding**
  - Learn about ADHD, including its distinguishing characteristics, its prevalence, and the behaviours that may arise from ADHD. Explore the possible causes of ADHD.

- **Assessment for Learning**
  - Understand the need for teachers to assess, and the range of informal assessments that can be carried out in schools. Learn how to assess individual needs arising from ADHD, assess environmental triggers and create three SMART goals specific to a student.

- **Interventions**
  - Explore a range of interventions and adjustments to meet the needs of students with ADHD, including behaviour, transitions, and social skills. Discover the seven ground rules for successful intervention and devise your interventions to match your SMART goals.

- **Case Studies**
  - View real examples that illustrate both the student voice, and how experienced teachers can address ADHD in the classroom.

**Learning objectives**

On successful completion of the course, participants will:

- know the definition of ADHD and its main characteristics and types
- be aware of the prevalence of ADHD in the population
- have some understanding of what causes ADHD
- understand the relationship between ADHD and cognition
- know the comorbidities which might accompany ADHD
- be aware of some of the current debates surrounding ADHD
- have a positive perspective on ADHD
- know what screening tools are relevant in assisting in identification
- understand the principles of assessment
- know how to carry out a behavioural assessment
- have identified three SMART goals for a student
- have an awareness and understanding of a range of strategies to maximise student engagement
- know how to use cues and prompts, rewards and sanctions
- know how to communicate effectively with students with ADHD, and how to develop their social skills
- understand the value of working collaboratively
- plan and implement a successful intervention strategy to meet the SMART goals they have identified.
Appendix B: Pie charts of Breakdown of School Type and Role for the Full Sample and Random Sub-Sample

a) School Type Full Sample
- Primary Schools: 65%
- High Schools: 18%
- Kindergarten to Year 12: 3%
- Non-School Based Staff: 10%
- School Type Not Selected: 4%

b) School Type Random Sample
- Primary Schools: 56%
- High Schools: 23%
- Kindergarten to Year 12: 3%
- Non-School Based Staff: 14%
- School Type Not Selected: 4%

c) School Role Full Sample
- Non-School Based Staff: 40%
- Disability/Inclusion Specialist and Special School Teacher: 12%
- Middle Level Leader: 7%
- School Leadership: 10%
- School Psychologist, School Counsellor or Social Worker: 6%
- Primary School Teacher: 4%
- Secondary School Teacher: 2%
- Support Teacher: 8%
- Support Assistant: 9%

d) School Role Random Sample
- Non-School Based Staff: 39%
- Disability/Inclusion Specialist and Special School Teacher: 19%
- Middle Level Leader: 6%
- School Leadership: 5%
- School Psychologist, School Counsellor or Social Worker: 8%
- Primary School Teacher: 2%
- Secondary School Teacher: 3%
- Support Teacher: 7%
- Support Assistant: 2%
- Other/Role Not Specified: 5%
Appendix C: Pie charts of Pre/Post 1 to Pre/Post 5 showing the significant improvements in ratings following course completion

a) Pre Rankings of Current Levels of Knowledge and Understanding of ADHD

- None: 0%
- Limited: 6%
- Sound: 36%
- Comprehensive: 58%

b) Post Rankings of Current Levels of Knowledge and Understanding of ADHD

- None: 0%
- Limited: 0%
- Sound: 43%
- Comprehensive: 57%

Figure 1: Pre 1 and Post 1 Rankings: “How would you rate your current level of knowledge and understanding of ADHD?”
Figure 1: Pre 1 and Post 1 Rankings: “How would you rate your current level of knowledge and understanding of ADHD?”

- Pre Rankings of Current Levels of Knowledge and Understanding of ADHD
  - None: 1%
  - Limited: 4%
  - Sound: 43%
  - Comprehensive: 57%

- Post Rankings of Current Levels of Knowledge and Understanding of ADHD
  - None: 0%
  - Limited: 1%
  - Sound: 46%
  - Comprehensive: 49%

Figure 2: Pre 2 and Post 2 Rankings: “How would you rate your current skills in assessing the needs of students with ADHD?”

- Pre Rankings of Current Skills in Assessing the Needs of Students with ADHD
  - None: 4%
  - Limited: 1%
  - Sound: 46%
  - Comprehensive: 49%

- Post Rankings of Current Skills in Assessing the Needs of Students with ADHD
  - None: 0%
  - Limited: 1%
  - Sound: 45%
  - Comprehensive: 54%

**Figure 2:** Pre 2 and Post 2 Rankings: “How would you rate your current skills in assessing the needs of students with ADHD?”
Figure 3: Pre 3 and Post 3 Rankings: “How would you rate your current skills in planning and implementing interventions for students with ADHD?”
Figure 4: Pre 4 and Post 4 Rankings: “How confident do you feel in meeting the needs of students with ADHD?”
**Figure 5:** Pre 5 and Post 5 Rankings: "Please indicate your current level of confidence in using a computer to study an on-line learning course?"

**Appendix D: Regression Tables**

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<td>Follow-up Contrasts</td>
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<td>Std. Error</td>
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### Appendix D, Table 1: Influences on ‘Pre’ Rated Knowledge and Understanding of ADHD (Pre1)

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<th>p</th>
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<td>48.898</td>
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Note: ADHD = Attention Deficit Hyperactivity Disorder.

### Appendix D, Table 2: Influences on ‘Pre’ Rated Skills in Assessing Needs of Students with ADHD (Pre2)

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<td>Skills in Assessing Needs of Students with ADHD</td>
<td>13.592</td>
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Follow-up Contrasts

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<td>Support Teacher vs. Support Assistant</td>
<td>2.428</td>
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<td>3.38</td>
<td>.039</td>
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Note: * Significant contrasts reported only. \( ^\text{b} \) Bonferroni adjusted. ADHD = Attention Deficit Hyperactivity Disorder.

### Appendix D, Table 3: Influences on ‘Pre’ Rated Skills in Planning and Implementing Interventions for Students with ADHD (Pre3)

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<th>z</th>
<th>Adjusted p</th>
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<td>Support Teacher vs. School Leadership</td>
<td>0.270</td>
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Note: * Significant contrasts reported only. \( ^\text{b} \) Bonferroni adjusted. ADHD = Attention Deficit Hyperactivity Disorder.
### Appendix D, Table 4: Influences on ‘Pre’ Rated Confidence in Meeting Needs of Students with ADHD (Pre4)

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Follow-up Contrasts

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**Note:** ADHD = Attention Deficit Hyperactivity Disorder.

### Appendix D, Table 5: Influences on ‘Post’ Rated Knowledge and Understanding of ADHD (Post1)

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**Note:** ADHD = Attention Deficit Hyperactivity Disorder.
Appendix D, Table 6: Influences on ‘Post’ Rated Skills in Assessing Needs of Students with ADHD

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**Main Effects**

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**‘Pre’ Ratings**

| Knowledge and Understanding of ADHD | 1.351 | 0.245 | 1.66 | .097 |
| Skills in Assessing Needs of Students with ADHD | 1.534 | 0.275 | 2.38 | .017 |
| Skills in Planning and Implementing Interventions for Students with ADHD | 1.956 | 0.354 | 3.71 | <.001 |
| Confidence in Meeting Needs of Students with ADHD | 1.293 | 0.168 | 1.97 | .049 |

| Level of confidence in using a computer to study an online learning course | 1.306 | 0.150 | 2.32 | .020 |

<table>
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<tr>
<th>‘Post’ Ratings</th>
</tr>
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<tbody>
<tr>
<td>Number of tutor led sessions attended</td>
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<td>How tutor led sessions were accessed</td>
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</table>

Follow-up Contrasts*$^b$

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<th>Std. Error</th>
<th>z</th>
<th>p</th>
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<tbody>
<tr>
<td>No Significant Contrasts</td>
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Note: * Significant contrasts reported only. $^b$ Bonferroni adjusted. ADHD = Attention Deficit Hyperactivity Disorder.

Appendix D, Table 7: Influences on ‘Post’ Rated Skills in Planning and Implementing Interventions Students with ADHD

<table>
<thead>
<tr>
<th>Overall Model</th>
<th>Wald x² (df)</th>
<th>p x²</th>
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<tbody>
<tr>
<td></td>
<td>254.47 (24)</td>
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**Main Effects**

<table>
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<th>x² (df)</th>
<th>p x²</th>
</tr>
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<td>15.83 (10)</td>
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<tr>
<td>School Type</td>
<td>2.32 (4)</td>
<td>.6774</td>
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</table>

**‘Pre’ Ratings**

| Knowledge and Understanding of ADHD | 0.614 | 0.124 | -2.41 | .016 |
| Skills in Assessing Needs of Students with ADHD | 1.230 | 0.248 | 1.03 | .304 |
| Skills in Planning and Implementing Interventions for Students with ADHD | 1.457 | 0.295 | 1.86 | .062 |
| Confidence in Meeting Needs of Students with ADHD | 1.952 | 0.288 | 4.54 | <.001 |
| Level of confidence in using a computer to study an online learning course | 0.975 | 0.125 | -0.20 | .841 |

<table>
<thead>
<tr>
<th>‘Post’ Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of tutor led sessions attended</td>
</tr>
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<td>How tutor led sessions were accessed</td>
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</tbody>
</table>

Note: $^*$ Significant contrasts reported only. $^b$ Bonferroni adjusted. ADHD = Attention Deficit Hyperactivity Disorder.
### Appendix D, Table 8: Influences on ‘Post’ Rated Confidence in Meeting Needs of Students with ADHD

<table>
<thead>
<tr>
<th></th>
<th>Wald $x^2$ (df)</th>
<th>$p$ $x^2$</th>
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<td>Main Effects</td>
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<td></td>
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<tr>
<td>School Role</td>
<td>6.14 (10)</td>
<td>.8037</td>
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<tr>
<td>School Type</td>
<td>1.17 (4)</td>
<td>.8834</td>
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</table>

#### ‘Pre’ Ratings

<table>
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<tr>
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<th>Odds Ratio</th>
<th>Std. Error</th>
<th>z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge and Understanding of ADHD</td>
<td>0.719</td>
<td>0.128</td>
<td>-1.85</td>
<td>.065</td>
</tr>
<tr>
<td>Confidence in Meeting Needs of Students with ADHD</td>
<td>0.951</td>
<td>0.140</td>
<td>-0.34</td>
<td>.734</td>
</tr>
<tr>
<td>Level of confidence in using a computer to study an online learning course</td>
<td>1.032</td>
<td>0.144</td>
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<td>.823</td>
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#### ‘Post’ Ratings

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<th>Std. Error</th>
<th>z</th>
<th>p</th>
</tr>
</thead>
<tbody>
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<td>0.407</td>
<td>2.81</td>
<td>.005</td>
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<tr>
<td>Skills in Planning and Implementing Interventions for Students with ADHD</td>
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<td>0.151</td>
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<td>Level of confidence in using a computer to study an online learning course</td>
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<td>2.43</td>
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<td>Number of tutor led sessions attended</td>
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<td>.865</td>
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<td>How tutor led sessions were accessed</td>
<td>0.910</td>
<td>0.136</td>
<td>-0.63</td>
<td>.528</td>
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**Note:** ADHD = Attention Deficit Hyperactivity Disorder.

### Appendix D, Table 9: Rating of the Online Course Content
Appendix E: Pre/Post Rating Comparisons by Role

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<th>Rankings</th>
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<th>Post n (%)</th>
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<tr>
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<td></td>
</tr>
<tr>
<td>None</td>
<td>1 (0.58)</td>
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<tr>
<td>Limited</td>
<td>63 (36.84)</td>
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<tr>
<td>Sound</td>
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<td>64 (37.43)</td>
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</tr>
<tr>
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<tr>
<td>Disability Inclusion Teacher</td>
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<tr>
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<td>Sound</td>
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<td></td>
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<td>Limited</td>
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### Secondary Teacher

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<td>391 (46.00)</td>
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### Primary Teacher

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<tr>
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<td>71 (48.63)</td>
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### Support Teacher

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<td>0 (0)</td>
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<tr>
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## Pre 2 and Post 2 – How would you rate your current skills in assessing the needs of students with ADHD?

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<th>Comprehensive</th>
<th>None</th>
<th>Limited</th>
<th>Sound</th>
<th>Comprehensive</th>
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</thead>
<tbody>
<tr>
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<td>66 (31.88)</td>
<td>18 (8.70)</td>
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<td>18 (23.08)</td>
<td>55 (70.51)</td>
<td>4 (5.13)</td>
<td>1 (0.75)</td>
<td>40 (29.85)</td>
<td>82 (61.19)</td>
<td>11 (8.21)</td>
<td>0 (0)</td>
<td>10 (25.00)</td>
</tr>
<tr>
<td>Disability Inclusion Specialist / Special School Teacher</td>
<td>85 (49.71)</td>
<td>4 (1.17)</td>
<td>88 (51.46)</td>
<td>7 (4.09)</td>
<td>66 (31.88)</td>
<td>18 (8.70)</td>
<td>1 (1.28)</td>
<td>18 (23.08)</td>
<td>55 (70.51)</td>
<td>4 (5.13)</td>
<td>1 (0.75)</td>
<td>40 (29.85)</td>
<td>82 (61.19)</td>
<td>11 (8.21)</td>
<td>0 (0)</td>
<td>10 (25.00)</td>
</tr>
<tr>
<td>Middle Level Leader in School</td>
<td>85 (49.71)</td>
<td>4 (1.17)</td>
<td>88 (51.46)</td>
<td>7 (4.09)</td>
<td>66 (31.88)</td>
<td>18 (8.70)</td>
<td>1 (1.28)</td>
<td>18 (23.08)</td>
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<tr>
<td>School Leadership</td>
<td>85 (49.71)</td>
<td>4 (1.17)</td>
<td>88 (51.46)</td>
<td>7 (4.09)</td>
<td>66 (31.88)</td>
<td>18 (8.70)</td>
<td>1 (1.28)</td>
<td>18 (23.08)</td>
<td>55 (70.51)</td>
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<td>82 (61.19)</td>
<td>11 (8.21)</td>
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<td>10 (25.00)</td>
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<tr>
<td>School Psychologist / Counsellor / Social Worker</td>
<td>85 (49.71)</td>
<td>4 (1.17)</td>
<td>88 (51.46)</td>
<td>7 (4.09)</td>
<td>66 (31.88)</td>
<td>18 (8.70)</td>
<td>1 (1.28)</td>
<td>18 (23.08)</td>
<td>55 (70.51)</td>
<td>4 (5.13)</td>
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<td>88 (51.46)</td>
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<td>66 (31.88)</td>
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<td>18 (23.08)</td>
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<td>4 (5.13)</td>
<td>1 (0.75)</td>
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<td>4 (1.17)</td>
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<td>66 (31.88)</td>
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<td>18 (23.08)</td>
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<td>1 (0.75)</td>
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<td>82 (61.19)</td>
<td>11 (8.21)</td>
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<td>10 (25.00)</td>
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</tbody>
</table>

**Significance Levels:**
- $<.001*$ indicates statistical significance.

**Statistical Differences:**
- The differences between roles are statistically significant with p-values less than .001*.
### Pre 3 and Post 3 – How would you rate your current skills in planning and implementing interventions for students with ADHD?

<table>
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<th>Limited</th>
<th>Sound</th>
<th>Comprehensive</th>
<th>None</th>
<th>Limited</th>
<th>Sound</th>
<th>Comprehensive</th>
<th>None</th>
<th>Limited</th>
<th>Sound</th>
<th>Comprehensive</th>
</tr>
</thead>
<tbody>
<tr>
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<td>3 (1.19)</td>
<td>109 (43.25)</td>
<td>8 (3.17)</td>
<td>13 (1.53)</td>
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<td>509 (8.94)</td>
<td>333 (39.18)</td>
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<tr>
<td><strong>Support Teacher</strong></td>
<td>62 (33.70)</td>
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<td>-13.40</td>
<td>&lt;.001*</td>
<td>69 (47.26)</td>
<td>121 (48.02)</td>
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<td>62 (33.70)</td>
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<td>62 (33.70)</td>
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<td>&lt;.001*</td>
<td>69 (47.26)</td>
<td>121 (48.02)</td>
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<td>&lt;.001*</td>
<td>62 (33.70)</td>
<td>0 (0)</td>
<td>-13.40</td>
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</table>

**Note:** The table shows the distribution of responses for Pre 3 and Post 3 assessments among different roles in a school setting. The ratings range from None to Comprehensive, with limited skills being intermediate. The values in parentheses indicate the percentage of respondents in each category.
### Pre 3 and Post 3 – How would you rate your current skills in planning and implementing interventions for students with ADHD?

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### Pre 4 and Post 4 – How confident do you feel in meeting the needs of students with ADHD?

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<th>Post 4</th>
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<td></td>
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<td></td>
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<td>69 (40.35)</td>
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<td>Very confident</td>
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<tr>
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<td>Very confident</td>
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<td>1 (0.75)</td>
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<td></td>
<td>Very confident</td>
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### Appendix E, Table 1: Comparisons Between Pre and Post Rating Scores Broken down by Role

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<tr>
<th>Role</th>
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<td>12.22</td>
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<td>Confident</td>
</tr>
<tr>
<td>Fairly</td>
<td>Very</td>
<td>Confident</td>
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</table>

**Note:** * Significant difference between groups at .01 level; ADHD = Attention Deficit Hyperactivity Disorder.
Appendix F: Example Quotes for Thematic Analysis

Example quotes for the thematic analyses arising from the questions: Intro1 “What has influenced you to do this course?” (not bolded) and Intro2 (a) “Share with the group what you hope to learn as a result of taking this OLT course on understanding ADHD?” (bolded)

• Theme 1: Expand/increase knowledge and understanding of ADHD

Subtheme 1.1: General increase in understanding (45 & 60%)

“I hope this course enables me to deepen my understanding of ADHD”

“I would love to develop a deeper understanding of how these children operate.”

“I hope this course provides me with more information about ADHD and how to implement effective strategies to support these students. Most of the time, students with ADHD are dismissed for being 'misbehaved' by adults whom are not informed or educated about ADHD - so I hope to gain more information to provide to these adults, ultimately providing more opportunities for students with ADHD.”

Subtheme 1.2: Understand varied characteristics/presentations of ADHD (12 & 14%)

“I hope to gain a better understanding of the different types of ADHD and the behaviours associated with it.”

“I am really interested in refreshing and consolidating my understanding of ADHD. In particular, I hope to learn about how ADHD can present differently in males and females and then apply that knowledge to the Learning and Support Team.”

“I hope to learn how best to cater for the range of students we have with ADHD and the different challenges they present within their learning as not all students have the same challenges or will learn the same even though they may be diagnosed with the same type of ADHD. I would like to have a more in-depth look at how it underpins their learning and what roadblocks it can put in place for students retaining knowledge and how best we can break the roadblocks down when delivering content across all KLAs.”

“ADHD is so much more than being hyperactive and I look forward to increasing my knowledge and understanding of this disability”.

Subtheme 1.3: Access research/evidence-based findings (8 & 16%)

“I love learning about various disorders and the brain, and finding out the best way to help children and families with evidence based practice.”

“I am interested in gaining further insights into ADHD through sharing of current research and to gain further strategies to support all adults working with students with ADHD.”

“Overall, I hope to develop a deeper understanding of all aspects of ADHD so I can better support schools with evidenced-based strategies.”

“I am looking forward to really understanding ADHD from an informed perspective built on current research.”

“I am also keen to update myself on the current research, data and information around ADHD to support my work in schools.”

Subtheme 1.4: Stay up to date with knowledge (5 & 2%)

“I have taken the opportunity to undertake this OLT training to stay up to date with current knowledge and understandings around supporting students with ADHD in the learning context.”

“I am also keen to update myself on the current research, data and information around ADHD to support my work in schools.”

Subtheme 1.5: Refresh skills (5 & 8%)

“I have been teaching for almost thirty years…. I enrolled for this course as a refresher and to deepen my knowledge of ADHD and how to support students in the classroom.”

“I was interested in this course for a refresher on strategies to use within the classroom and extra support and information I could offer to parents.”

“I hope to refresh my existing understanding of ADHD and develop new insights into assessment and support strategies to optimise students' engagement and participation in school activities.”

• Theme 2: Better support for students

Subtheme 2.1: General support (45 & 42%)

“Looking forward to learning lots about ADHD and how to better support children with ADHD in the classroom.”

“I am hoping to learn more strategies to assist students both the classroom and the playground.”

“I hope to learn more about strategies I can employ to best help students with ADHD and how I can make them feel supported, heard and as though they are doing their very best.”

Subtheme 2.2 Set up ADHD students for success (9 & 12%)

“I hope to gain further knowledge around practical strategies to support children and young people with ADHD to improve outcomes.”

“I am hoping to be able to target my teaching and learning to children with ADHD to ensure they are achieving at the same
rate as other children in the classroom.”

Subtheme 2.3 Identify and meet students' needs (6 & 10%):

“I hope this course enables me to deepen my understanding of ADHD, as well as provide me with strategies to effectively cater for the needs of students with ADHD.”

“I have been teaching for a long time and hope to learn new ways to help meet the needs of my children in the classroom.”

“To gain more knowledge on how to accommodate the individual needs of all of my students in different settings.”

Subtheme 2.4: Provide ADHD students with better access to learning (6 & 16%)

“This year I have a student in my grade who has been recently been diagnosed with ADHD and is now currently on medication. I have enrolled myself in this course in order to gain a better understanding about strategies that I can implement in the classroom in order to better engage him in learning.”

“I am hoping to learn how to better support those students(that have a possible diagnosis of ADHD) in their learning in the classroom.”

• Theme 3: Expand ADHD related skill set

Subtheme 3.1: Learn new strategies/interventions (26 & 54%)

“I would like to build up some strategies while working with students who display ADHD behaviours.”

“I hope to gain a better understanding of ADHD and some fun and engaging strategies to help assist those students within my classroom.”

“I hope this course provides me with more information about ADHD and how to implement effective strategies to support these students.”

“I want to explore strategies and interventions that support learning for a ADHD student in class, in play and in general relationships.”

Subtheme 3.2: Amend teaching practice (8 & 8%)

“I’m particularly interested in practical strategies that I can share with classroom teachers to help them meet the learning and wellbeing needs of students with ADHD.”

“I am hoping to learn how to better support those students(that have a possible diagnosis of ADHD) in their learning in the classroom.”

Subtheme 3.3: Access new resources (6 & 6%)

“I would love to have more resources and knowledge around supporting staff, and then to be able to share this with them in training them.”

“I was very keen to complete this course as I have completed all others and find that the information and the resources provided can be very useful both while learning and as a reference point at later dates.”

“I love the OLT courses and the flexibility they offer for learning. It is always useful to be able to go back to them for resources to share with teachers and executive and also to promote them as research/evidence-based PL for schools to engage with.”

“My favourite thing is that you can refer back to all of the learnings at any time and be able to access them in the future.”

• Theme 4: Better knowledge/support for teachers/schools

Subtheme 4.1: Share knowledge with teachers/school (14 & 22%)

“I think sharing important and interesting information from this course with my Support Unit team would be beneficial for us as a whole unit.”

“I plan to share what I learn from this course with my colleagues”

“I am also keen to update myself on the current research, data and information around ADHD to support my work in schools. I am hoping to broaden my toolbox of strategies to share with schools as well.”

“I am really hoping to raise awareness and knowledge of ADHD for teachers in our school community, starting with a Professional Learning presentation in Term 4.”

Subtheme 4.2: Support teachers/schools (11 & 24%)

“I was interested in doing this course as we have quite a few students at school that have been recently diagnosed or are displaying symptoms of ADHD and I would like to learn how best I can support these students and their teachers.”
"I am hoping to gain strategies and more knowledge in ADHD to best support our students and teachers."

"I would like to be able to support teachers with deeper knowledge and understanding as well as being able to provide evidence-based strategies and interventions."

Subtheme 4.3: Work effectively with teachers to support ADHD students (6 & 8%)

"Being exposed to the most recent research and practical strategies around supporting students with ADHD will be great in both my teaching practice as well as when supporting teachers across the school."

"I find these courses always give me a great common language to use with teachers in communicating student profiles, needs, and strategies to support them."

- Theme 5: Better knowledge/support for families/parents

Subtheme 5.1: Support families/parents (9 & 2%)

"I was interested in this course for a refresher on strategies to use within the classroom and extra support and information I could offer to parents."

"In my setting we have a number of families who identify with this diagnosis and I feel the more staff know the more support we can offer and the better each child can be understood and catered for in our learning setting."

Subtheme 5.2: Work effectively with families/parents (5 & 2%)

"Another aspect is learning how to confidently approach parents and families when there is ignorance or being oblivious to a student who presents with ADHD type behaviours and get their support in home as well as at school."

Subtheme 5.3: Provide information to families (2 & 2%)

"I would really love to be exposed to more knowledge and strategies to support my teaching staff (SLSO), the children diagnosed with ADHD in my class and their families, as well as the rest of my class."

"I was interested in this course for a refresher on strategies to use within the classroom and extra support and information I could offer to parents."

"I also hope to learn some additional ways to support students with ADHD in the school environment so that I can share the information with teachers and families that I work with."

- Theme 6: Personal and professional experiences with ADHD

Subtheme 6.1: Have ADHD students in my class or have in the recent past (35 & 0%)

"I was interested in doing this course as we have quite a few students at school that have been recently diagnosed or are displaying symptoms of ADHD and I would like to learn how best I can support these students and their teachers."

"I would like to develop skills and strategies in planning and implementing strategies for the students in my class with an ADHD diagnosis."

"We have a number of students with ADHD and thought it would be a great idea to do some PD on it and hopefully implement some ideas from it into our classrooms and school."

Subtheme 6.2: High or increased prevalence of ADHD (8 & 0%)

"I focus on the K-2 students and she works with 3-6. We have around 900 students at XX so the main influence for doing this course is to learn more about ADHD so we can best cater for the growing amount of students diagnosed with this."

"We seem to be getting an increasing number of students diagnosed with ADHD and I want to assist class teachers with strategies to support these students."

Subtheme 6.3: Personal experience with ADHD (6 & 6%)

"It has taken me a very long time to develop my current understanding of ADHD, my son was diagnosed with ADHD & 'mild ASD' 4 years ago."

"I have taught a range of students with ADHD and have my own daughter with mild inattentive ADHD. So anything I can learn to further my understanding of the types is beneficial."

"I am hoping to further understand ADHD to help my own daughter (and myself) but also to be refreshed in the latest research and strategies on what works best for this students."

"I also hope it will give me some ideas for my own child."

Example quotes for the thematic analysis arising from the question Conc1: We have all started this course from different starting points. Some may be very experienced and others new to working with students with ADHD. (a) Please share with the group three key things that you have learned (b) and explain what difference this has made to your attitudes, understanding and practice with the students you teach or support.

Conc1 (a) Please share with the group three key things that you have learned Theme 1: Improved Knowledge

- Theme 1: Improved Knowledge

Subtheme 1.1: Increased knowledge/insight into ADHD (64%)

"The course provided me with a far better overall knowledge of ADHD."

"The science of ADHD is an interesting and even perhaps an
evolving challenge for students and adults. It was interesting that diet didn’t really have an impact on whether one has ADHD or not. Parental modelling does not appear to play a significant role in the onset of ADHD- I always thought it did. Hence I enjoyed reading the scientific information.”

“This has made a big different to my knowledge and understandings.”

Subtheme 1.2: ADHD students differ and we need to individually cater to their needs (50%)

“This course has really helped me to understand further that each student that is diagnosed with one or both forms of ADHD will present differently in your classroom and it is your role to make sure that you take them time to understand that specific child and their needs”

“Not all children with ADHD are the same and it is important to remember that a strategy with one student may not work for another.”

“I have worked with many students with ADHD over the years and by completing this course has made me realise that I have tended to pay more attention / designed more interventions for those students who have displayed the more traditional hyperactive symptoms of ADHD. This course has deepened my understanding that ADHD presents in different ways and is often linked to students with autism and anxiety.”

“I learnt that students with ADHD are all unique and have different needs, behaviours and aspirations. They each have different triggers, and react to these in a variety of ways. It is so important to really get to know these kids and build a supportive relationship with so that they feel comfortable to come to you when anxious, upset or overwhelmed.”

Subtheme 1.3: How to identify signs of ADHD (9%)

“I will now look for signs of ADHD in the future that I was not previously aware of before completing this course.”

“I have a much deeper understanding on the different forms of ADHD, not just hyperactivity. This understanding will help me to better identify these behaviours in the classroom.”

• Theme 2: Improved Application

Subtheme 2.1: Use of strategies/interventions for supporting students (64%)

“This course has helped me with setting goals that are achievable and realistic.”

“I have been more mindful to look for patterns of behaviour across the week and at the function or reasons for the behaviours. I have adjusted when I reach a few lessons and am using different strategies with some transitions across the week. I found learning to write SMART goals beneficial as I already was writing goals in learning and behaviour plans. My goals have improved as I am incorporating better measurable and time-based parts in goals.”

“using check in and outs, social scripts, playground cards, contracts and buddy systems”

Subtheme 2.2: More positive relationships with ADHD students (23%)

“I have learnt being positive when working with these students, staying calm intervention works differently for each student”

“The course highlighted the importance of positive relationships between teacher and students (with not only ADHD but all students), and ultimately without that positive relationship little success can be made in terms of effective learning (whether that be socially, emotionally, etc). I now have a better understanding and as a result, have more of an open mindset to ADHD and understand just how broad it can be. I think there is always opportunities to extend my knowledge in ADHD and it's something I'll always be interested in.”

“It is so important to really get to know these kids and build a supportive relationship with so that they feel comfortable to come to you when anxious, upset or overwhelmed.”

“We may not realise we are doing for these students count as interventions that the key to helping these students feel successful all boils down to building a relationship where the student feels valued and understood”

“... and established an open dialogue with the goal of assisting the child have positive daily experiences at school and ultimately growth within the social and academic learning. It has really shown me just how complex ADHD is within the classroom and that we need to make sure that we are catering for these students appropriately so that they feel safe, comfortable and valued within their learning space.”

“Spending 5 minutes with a student to learn more about them and what likes of theirs I can use to help them achieve their learning.”

Subtheme 2.3: Use of screening tools to identify ADHD/potential ADHD (18%)

“I learnt about the Childhood ADHD Screening Tool (CAST). I had not used this before, so it was interesting to explore this tool and think of how/if/when it would be of benefit for students in my learning context.”

“Finally, having the screening tool is something that I can provide teachers when they start to talk about a student with particular behaviours, especially if they are being replicated in other classes too. I have already printed out for one teacher to complete next term so it will be interesting to see how it translates.”
Conc1 (b) and explain what difference this has made to your attitudes, understanding and practice with the students you teach or support.

• Theme 1: Improved general teaching approach and practice

“It has really made me think about what I am teaching and how I am teaching it to ensure that my students’ needs are met to ensure they are receiving the most beneficial form of education, as well as (hopefully) overcoming some difficulties I myself face as a teacher as well as my specific target students may face when entering my classroom.”

• Theme 2: Shift in emotions and understanding

Subtheme 2.1: More positive relationships and greater compassion for ADHD students (36%)

“I feel I will take these insights into my own classroom to make me a more compassionate and understanding teacher.”

“That goals need to be VERY specific, short and focused that even the little things that we may not realise we are doing for these students count as interventions”

“I feel that this course has made me more compassionate to students who are struggling with ADHD - especially older students who may not want to take medication but still need assistance in managing their daily life.”

Subtheme 2.2 Better understanding of ADHD students and their perspectives (41%)

“I really loved the case studies and the videos from the 2 students who have ADHD. I found this really insightful and beneficial to hear their personal experiences and also see things from their point of view:”

“I have been teaching a looooong time and have spent a significant number of those years working with students who are diagnosed with ADHD and I found elements of this course confronting. The most confronting was my disregard for the frustration experienced by students who have ADHD. It was a wake -up call and reminded me of the need for a balanced approach... understanding the student's feelings, the positives for the student as well as a level of compliance in order for me to complete my lesson tasks. Greater understanding of where the student is coming from will be a goal for me in 2023.”

“It has given me insight into the complexities of older students and colleagues who may have difficulties in prioritising workloads and tasks and the struggles they may face with executive functioning skills.”

• Theme 3: Implementation of strategies and resources

Subtheme 3.1: Using resources/learned strategies (14%)

“I intend to share some of the professional handouts in the intervention sections with staff (tips for adjustments) that were really user friendly.”

“New strategies to implement.”

“I feel that learning these skills will help me in making adjustments for specific students and how to identify their needs more so.”

“The impact executive function plays on a day to day basis for children with ADHD. It must be so difficult to filter out the things that are unimportant at that point in time. The challenges a child with ADHD may have with holding instructions and then mentally moving through them, which is a constant demand in the classroom. The stress this could cause of not knowing what to do next, and having to ask someone. Need to look at what supports we can put in place to support this eg, visuals, checklists, planners. Developing teachers understanding of this and provide support to better cater for children’s needs. The social difficulties children with ADHD can face. I really appreciated listening to the case studies and videos that shared their experiences of living with ADHD. I would like to look at the social support we provide at school and make some changes like having a social skill group or structured peer play program. We still need to continue using check in and outs, social scripts, playground cards, contracts and buddy systems. This course will allow me to raise ideas on how to better support children socially to meet their needs.”

“I learnt about the ECO system and how it would be a very valuable tool when assessing the needs of a student with ADHD. This is a system I will be sharing with the LST and staff at our school, although we do parts of it I believe we could improve on our current planning system. Mainly involving more child and parent input”

Subtheme 3.2: Setting SMART goals (18%)

“This course has helped me with Setting goals that are achievable and realistic”.

“The refining of SMART goals and its implementation in a Kindergarten setting”.

“This course has helped me with Setting goals that are achievable and realistic.”

“I found learning to write SMART goals beneficial as I already was writing goals in learning and behaviour plans. My goals have improved as I am incorporating better measurable and time-based parts in goals.”

• Theme 4: Improved outcomes for ADHD students

Subtheme 4.1 Successfully meeting ADHD student’s needs (23%)

“I would like to look at the social support we provide at school and make some changes like having a social skill group or
structured peer play program. We still need to continue using check in and outs, social scripts, playground cards, contracts and buddy systems. This course will allow me to raise ideas on how to better support children socially to meet their needs.”

“I can do better in managing their learning.”

**Subtheme 4.2 Working more collaboratively with ADHD students (23%)**

“When working with students with ADHD it is so important to build relationships and find out what each child's niche is.”

“established an open dialogue with the goal of assisting the child have positive daily experiences at school and ultimately growth within the social and academic learning”

“I'd like to work more with the student's themselves, and communicate more frequently with them and what they need.”

**• Theme 5: Providing knowledge and support to teachers/schools (36%)**

“I also feel more equipped to support my colleagues with ideas and strategies in assisting students with ADHD and with talking with parents who have a child with ADHD. I often feel in my role that teachers want a 'fix' however this course has reinforced that there is no 'fix'. It is about working collaboratively with teacher and providing a range of strategies to work out what and it about upskilng and empowering teachers with a range of strategies and tools to try and reassuring my colleagues that just because something didn't work one day, doesn't mean it won't work.”

“I would have to say the video clips and reflections from students themselves have given me greater empathy and insight to what students with ADHD feel and experience every day. I am going to use these to start a conversation with staff. Students are not trying to be difficult. I also plan to discuss the purpose of having some consequences for particular behaviours when we know that they are not changing a behaviour so let's look more closely at what else could change or minimise a behaviour. I intend to share some of the professional handouts in the intervention sections with staff (tips for adjustments) that were really user friendly. Finally, having the screening tool is something that I can provide teachers when they start to talk about a student with particular behaviours, especially if they are being replicated in other classes too. I have already printed out for one teacher to complete next term so it will be interesting to see how it translates.”

**• Theme 6: Working more collaboratively with parents/families (23%)**

“Parents! Working with and checking in with parents is extremely important.”

“Mainly involving more child and parent input.”

“The course provided me with a far better overall knowledge of AD/HD and facilitated conversations with staff and leadership as to avenues to explore with certain students and families.”

“This course has really helped me to understand further that each student that is diagnosed with one or both forms of AD/HD will present differently in your classroom and it is your role to make sure that you take them time to understand that specific child and their needs as well as take the time to build a rapport with the parents/carer and established an open dialogue with the goal of assisting the child have positive daily experiences at school and ultimately growth within the social and academic learning.”

Example quotes for the thematic analysis arising from the question: Intro2 (b) How do you feel about blended learning with tutor group sessions and using the computer to learn? (c) What advantages do you think this method of learning may provide for you?

**• Theme 1: Positive Feelings**

**Subtheme 1.1: Like/love blended format (16%)**

“I very much enjoy the blended learning model”

“I love the OLT courses and the flexibility they offer for learning”

“I like the idea of completing the sessions online”

**Subtheme 1.2: Enjoy technology/on-line format (30%)**

“I enjoy technology even though sometimes it does not work in my favour. Haha”

**Subtheme 1.3 Confidence/comfortable with technology/on-line format (12%)**

“I am comfortable using technology to learn”

“I am also confident with technology and working online, it makes it easy and smooth for me”

“I am fairly confident with the online learning”

**Subtheme 1.4: Familiarity with OLT format/learning model (16%)**

“Having undertaken other OLT training courses I am familiar with the format and learning model”

“I have undertaken a couple of OLT courses in the past”

“This is my second OLT course. I LOVE these courses sooo much as they quick bits of learning at my own pace and plus I get to learn from a range of expert teachers working in my own school?”

**• Theme 2: Advantages for participant/their lifestyle**

**Subtheme 2.1: Flexibility (30%)**
"I am fine with learning on the computer and actually enjoy the flexibility this allows”

"I enjoy the flexibility of blended learning"

**Subtheme 2.2: Convenient/Practical (16%)**

"The advantage is that I can undertake the self-part component at a time that is convenient for me”

"I can work on it around my busy schedule”

"I have always found this blended method of learning the most easy to complete as it can be done in our available time and for me has been very successful and interactive”

"I like the idea of completing the sessions online as it allows for flexibility and less travelling at the end of the school day.”

**Subtheme 2.3: Work/family balance and time management (12%)**

"I think I will enjoy the blended learning environment as I can do most of the work at home”

"Flexible delivery of the course means I can better time manage my work & personal life commitments to engage with the course material & activities when I feel energised & motivated”

"The flexibility of being able to complete the rest of the course at a time convenient to me is awesome as I can work this around my family and my teaching timetable.”

**Subtheme 2.4: Self-paced learning (16%)**

"I love having the ability to be able to work on the content in my own time and can also be flexible in completing bit by bit”

"I very much enjoy the blended learning model. I think the self paced learning suits me”

"I love the blended learning model, it allows we to work at my pace”

• Theme 3: Advantages relating to program format

**Subtheme 3.1 Referring back to content/resources (20%)**

"I also like to be able to revisit pertinent OLT content over time”

"It also allows me to revisit areas we have covered and or download resources at all times, so the online learning platform is a great tool”

"This online format allows for great note taking for future reference, and I love that the course remains open and accessible even after I've completed it, in case I need to go back to check something”

**Subtheme 3.2 Interaction with colleagues and sharing experiences (24%)**

"Having the ability to bounce ideas off colleagues is rewarding”

"It is great to hear from colleagues in different settings”

"I enjoy blended learning as it is always good to meet other teachers and share experience and knowledge.”

"I love the idea of learning collaboratively with other people who have similar experiences on here, listening to their stories and reading about their opinions”

**Subtheme 3.3 Supported learning with tutor and drawing on their expertise (12%)**

"I think the face to face sessions will allow people to ask questions and get clarification from any points brought up in the on-line learning”

"I enjoy blended learning, having a tutor at the front of the room to learn from”

Example quotes for the thematic analysis arising from the question Conc2: (a) List three things you will take away from this course and implement in your classroom/ school/ practice. (b) Additionally, what will you share with your colleagues and school leaders?

Example quotes for the thematic analysis arising from the question Conc2: (a) List three things you will take away from this course and implement in your classroom/ school/ practice.

• Theme 1: Implementation of learned strategies and interventions

**Subtheme 1.1: Behaviour analysis, management, and support (39%)**

“I will apply the ABC method to further analyse undesirable behaviours in the classroom, with a case by case approach with any student that may require intervention.”

“ABC analysis Functional behaviour assessment.”

**Subtheme 1.2: Generation of SMART goals (32%)**

“Incorporating SMART goals into behaviour plans”

“How to write SMART goals and the interventions to make them attainable.”

**Subtheme 1.3: Use of ADHD screening tools (25%)**

“The tools provided were very useful. I will use the CAST tool when supporting teachers.”
“Using screeners to recognise students who may display different types of symptoms of ADHD, and varying degrees of those symptoms”

Subtheme 1.4: Use of visual supports (21%)

“The use of a visual stop sign which the teacher can point to may be a good strategy to remind students to check their behaviour.”

“Greater use of visuals in the classroom – visual prompts, visual timetable”

Subtheme 1.5: Environmental modifications/adjustments (18%)

“Provide students with a space to calm down when feeling overwhelmed”

“Set up quiet spaces for students to regulate their emotions, calm themselves in readiness to move back into the classroom.”

Subtheme 1.6: Use of social stories/comic strips (11%)

“Effectiveness of comic strips to use comic strips conversations to teach & reinforce social skills as well as executive function. To include comic conversations in social stories for students with ADHD, ASD, MH & IM etc.”

“Use of comic strips”

“Use more social stories”

• Theme 2: Relationships and collaborations

Subtheme 2.1: Increased collaboration with teachers/schools (71%)

“Strategies I use and experience I will gain will be shared during staff meetings, and ad-hoc collaboration with faculty and across faculty staff members.”

“The idea that they [ADHD students] have the cognition issues and then are quite possibly lacking sleep, it allows me more understanding of how they are functioning throughout the day. This background information needs to be shared with classroom teachers in understanding and supporting students with ADHD, and allowing for their further difficulties that they may be facing.”

Subtheme 2.2: Establishing more positive relationships with ADHD students (18%)

“I found the information on creating a contract with the student to be very interesting, I feel it is a great opportunity to create a clear plan, whilst empowering the student to be part of the development.”

Subtheme 2.3: Increased parent/family collaboration (14%)

“Regular communication with parents to support children’s behaviour and learning is vital”

“I will also utilize my understanding of the disorder to communicate with parents and/or families moving forward.”

Theme 3: Changed teaching practices (11%)

“I will review my assessment procedures to ensure that they are inclusive for students with ADHD.”

“Teachers should ensure positive approaches are used and should keep setting targets and trialling different ways of teaching the student. There are many strategies and interventions that can be utilised with children with ADHD. It is a matter of determining the function and trialling the most suitable strategies. I always believe in building into the whole class teaching instead of segregating the student. The teacher needs to accommodate for the student as opposed to segregation and separate learning.”

Example quotes for the thematic analysis arising from the question Conc2: (b) Additionally, what will you share with your colleagues and school leaders?

• Theme 1: Shared knowledge

Subtheme 1.1: Knowledge/insight into ADHD (54%)

“I am really looking forward to sharing this course with my colleagues and network of schools. ADHD has been an area that we have needed to improve peoples’ knowledge and understanding of ADHD, in particular how it presents in the classroom and also ways they can better support these students.”

“Utilise knowledge and information from the course in meetings and when supporting CRT’s.”

“I will challenge staff to rethink their personal and sometimes inaccurate assumptions about students with ADHD, by directing them to this course and the information/readings within it.”

Subtheme 1.2: Details on the diversity of ADHD and common comorbidities (46%)

“Each child’s needs are unique and its not a "one size" fits all”

“Sharing information about ADHD as a disability with my school community and how it impacts executive functioning, how it looks in its varied presentations (especially the inattentive profile which is often not known about or understood).”

Subtheme 1.3: The importance of positive relationships with ADHD students and altered emotions/mindset (14%)

“I have been reminded of the importance of student supports to help them reach goals and the significance of needing to ensure we understanding the why of behaviour before deciding on consequents.”
“Discussing with staff the need to be calm and positive and build rapport with students. Most students who are struggling need to be affirmed. We need to be helping kids break the narrative of failure. I would like to be a part of helping more staff understand the internalised agony and stress that some of our students carry everyday. They need to be celebrated in their differences and it's our job to help them shine.”

Subtheme 1.4: How to identify signs of ADHD (11%)

“The difference in Hyperactivity and Inattentive and that a student may be both”

“That ADHD does not always present as hyperactivity and constant need to move. Whilst these students are more noticeable in the classroom, the student who quietly daydreams and has a million things going on in their head is also missing vital information for learning because they are unable to concentrate.”

“I will be sharing with our executive as we begin to plan our direction for PD in 2022, how relevant to our profession this course would be for all staff to participate in. The knowledge gained to help with understanding and how to identify certain behaviours or changes within students who are in their care, would be of great benefit.”

Subtheme 1.5: Resources (29%)

“Very keen to share this course and resources to schools in our network. I believe it will build on and consolidate support for a broad range of students.”

“I will support Learning and Support Coordinators and LaST Teachers to access the great tools and resources so that they can begin to support all teachers in theirs schools to accommodate and make appropriate adjustments and provisions for students with ADHD.”

• Theme 2: Shared skills

Subtheme 2.1: Strategies and interventions to support ADHD students (82%)

“I will encourage colleagues to use comic strips as an effective pedagogical strategy in their teaching & learning practice.”

“The Enquire, Consult and Observe framework is a useful way of outlining the steps that teachers may use to support them in the assessment of students.”

“Support staff to document evidence based school interventions and their degree of success (as well as resources needed to implement interventions)”

“I will encourage others to utilise more gestures and non-verbal cues with their students with ADHD.”

" Strategies to support students with ADHD, including social stories”

Subtheme 2.2: Use of SMART goals (14%)

“being able to set and plan SMART goals and interventions around them”

“How to write SMART goals and the interventions to make them attainable.”

Subtheme 2.3: Use of screening tools to identify ADHD/potential ADHD (9%)

“The importance of appropriate assessments and the range of questionnaires available to assist in identifying characteristics of ADHD.”

“The tools provided were very useful. I will use the CAST tool when supporting teachers.”

“I also had not seen the CAST tool before so I will be using this with schools who feel that a student may have ADHD.”

Example quotes for the thematic analysis arising from the question: Post9 “How did the tutor led sessions contribute to your learning”

• Theme 1: Sharing of ideas, experiences, knowledge, and perspectives

Subtheme 1.1: Networking and group discussion (28%)

“the collegial discussion was helpful and worthwhile”

“It has been great to talk to other professionals about key learnings from the course and to talk about particular examples”

“It was great to be included with such a broad group of people who willingly shared a wealth of knowledge. Often we have already exhausted ideas from our local tutor groups so it was really nice to be part of a bigger network”

“Allowed us to discuss and unpack the information together and share ideas”

Subtheme 1.2: Real life examples/case studies (16%)

“Having fantastic discussion and hearing other people’s ideas and stories”

“These sessions were an opportunity to share experiences and ideas with other staff members. It was also a time to get an insight to some of the students in our school.”

“The tutor led discussions, in particular the smart goals, enabled a look at real examples and how they could relate to specific students in the class.”

“The discussions from the sessions were really beneficial,
hearing different strategies and supports used for students across different settings.”

Subtheme 1.3 Affirming own practices/validation (2%)

“Discussions with contributions from other teachers was affirming for my own practice also”

“It was affirming to hear stories and share experiences, and this contributed immensely to my understanding and new learning.”

• Theme 2: Tutor guidance in learning and understanding

Subtheme 2.1: Supported learning and engagement (40%)

“She helped me navigate the pages and find the information that we needed”

“She [tutor] was able to provide additional information and support team members navigate the weekly tasks. She delivered the program in a professional and interesting way relevant to the work we do.”

“It gave me the opportunity to be guided into completing the requirements of the course that I was having difficulty with and allowed me to understand the course more by asking directly for help where necessary.”

“By explaining the slides and answering questions and being available over e mail”

“Gave great advice on completing the online training and also feedback. Gave good information before the online training to assist us complete tasks and keep on track. Sending out information/resources to support us in completing the course prior to the session.”

Subtheme 2.2 Provided consolidation of the learning content (21%)

“Consolidated what I had learnt in the online component. Clarified my understanding of implementing goals and adjustments correctly.”

“These sessions helped to develop our understanding of the content”

“The tutor was very informative and helpful. I found the tutor supportive and ensured that the content was easy to understand and follow.”

“Sessions were informative and engaging, valuable discussions also contributed to my developing understanding in the course.”

Subtheme 2.3: Expert knowledge of the tutor (12%)

“Our tutor is a fountain of knowledge and experience and has a broad perspective on the needs of students with ADHD and many other diagnoses. xx was a fantastic presenter and incredibly knowledgably.”

“The tutor was knowledgeable about the content and her empathy for students was obvious.”

Subtheme 2.4: Deeper understanding of content/reflective practice (8%)

“The sessions were extremely inclusive, calling on all participants to contribute and reflect on their professional practice”

“Through responses using feedback and initiating discussions within forums to encourage deep thinking on the topic.”

“The tutors facilitated at a great tempo, starting engaging discussions and promoting deeper thinking.”

• Theme 3: Tutor responsiveness and resourcefulness

Subtheme 3.1: Immediate feedback/answering of questions (20%)

“Having the opportunity to discuss ideas in real time, rather than waiting for forum posts and replies is a useful way to clarify points or develop understanding.”

“It was great to have explicit and immediate feedback on goal setting for example and I was able to transfer this learning immediately into drafting of effective SMART Goals in co-writing PLSPs back at school with parents and class teachers.”

“Having other students and the tutor present allowed for immediate, effective communication which avoided any unclear miscommunication”

Subtheme 3.2 Provided additional resources/tools/strategies (6%)

“It was good to be able to converse directly with the tutor about my specific needs at my school, so she could direct me in the right path for resources and other support.”

“She encouraged the group to draw on their knowledge and experience and provided valuable ideas and resources.”