Description of the child

*How the child is differently abled - Strengths of child*

Dave is very energetic and is performing at slightly below grade level in language skills, according to the Canadian Tests of Basic Skills and Woodcock Reading Mastery Tests. He is also within the average or low average range for the Wechsler Intelligence Scale for Children - 3rd Edition. Thus, Dave is doing well enough in the language skills department. Dave also seems to exhibit acceptable working memory, prior knowledge and language abilities.

*How the child is differently abled - Needs of child*

Dave “does not have the proper foundation of basic math concepts.”[[1]](#footnote-1) He also has been tested according to the Connors’ Rating Scale which showed that his “lack of attention is consistent in all settings.[[2]](#footnote-2)” However, there is no mention of an actual ADHD diagnosis even though both the classroom teacher and Dave’s guardians complained of lack of attention and distractible behaviour while completing the survey. Dave also taps when asked to perform desk-work and the tapping may be a way of coping with the stress or anxiety that he feels upon being given a challenging academic task. Dave seems to exhibit slow information processing. The Education for All publication states that “Many children with exceptionalities are slow in processing information. In general, they may have difficulty keeping up with the pace of language spoken and instructions delivered in the classroom.”[[3]](#footnote-3)

*Interests/talents*

Dave seems to be especially talented at produced rhythm, which was ignored as a possible interest or talent in Mr. Clark’s observation notes. Dave also seems to get along with friends during free time and recess, thus he is socially able to interact with his peers.

*Learning preferences*

Dave seems to benefit from the ability to take breaks in between desk-work. His distractibility and lack of attention may force such behaviour, but it is important to acknowledge that Dave benefits from and needs such fluidity in order to perform.

*Socio-cultural factors*

Dave lives with his grandparents, and has been to five different schools in the past three years. This indicates significant instability in at least the past three years, or between the ages of 6 and 9. This significant time of instability also coincides with his low performance. It seems that he was hitting his milestones until Grade 1, and sometime between grade 1 and 4, and between the corresponding ages of 6 and 9, the tumultuous socio-cultural environment caused him to start lagging behind academically. As will be seen in the developmental factors section, he seemed to be hitting his development milestones until the age of five, and his outbursts show that he began under-developing around the age of six.

*Developmental factors*

At age six, children are able to express themselves well through the usage of words[[4]](#footnote-4). Since Dave has frequent outbursts, it seems he struggles with this underdeveloped cognitive ability to express frustration or academic overwhelm he may feel and instead reacts with outbursts.

By age seven, children “become more aware of and sensitive to the feelings of others. This trait is called empathy.”[[5]](#footnote-5) It is clear that Dave has underdeveloped empathy, as is clear by his actions that “when students around him ask him to stop [tapping his pencil], he does it harder.”[[6]](#footnote-6) Another milestone children meet by age seven is that they “develop friendships, usually with other children of the same gender.”[[7]](#footnote-7) Since Dave is “very social with his friends during free time and at recess”[[8]](#footnote-8), he seems to have met this developmental milestone.

At age eight, children “have rapidly changing emotions [and] angry outbursts are common.”[[9]](#footnote-9) Thus Dave seems to be struggling with what many children his age struggle with and this is a positive sign that he is not lagging too far behind. But by age nine, children can “can control their anger most of the time.”[[10]](#footnote-10) The fact that Dave is unable to do so shows that he is not hitting the emotional and social development milestones for his age.

*Curriculum and instructional factors*

“The KeyMath 3 Diagnostic Assessment (KeyMath 3 DA) is a comprehensive, norm-referenced measure of essential mathematical concepts and skills. The items are grouped into 10 subtests that represent three general math content areas”[[11]](#footnote-11) His current grade standing is at grade level 1.2 in Basic Concepts, grade level 1.9 in Operations, and grade level 1.5 in Applications according to the Key Math test.

The Canadian Tests of Basic Skills is an assessment tool “that enable schools to identify student achievement in major curriculum areas including vocabulary, reading, language, mathematics, and science.[[12]](#footnote-12)” Dave is performing at the grade 1 level in Mathematics, and at the grade 3 level in English according to the Canadian Tests of Basic Skills.

The fact that Dave could complete the questions for the day of observation (i.e. March 12) shows that while he is struggling with mathematics, and has performed at a below-grade level on all his mathematical skills, he does in fact have the skills and the ability to complete the grade 4 work as assigned.

*Motivational factors*

It seems that Dave struggles with motivation, especially when he is unable to follow the instructions being given. Rather than asking for help, Dave responds with statements like “I hate math, I hate it!”[[13]](#footnote-13), thus being unable to self-regulate and communicate his discomfort in words.

*Classroom environment*

Dave struggles with classroom-wide instruction and is often unable to follow instructions and give attention to the educator during instruction delivery. He fidgets when given desk-work and is often leaving his seat for reasons such as sharpening his pencil or looking out of the window.

Differentiated learning

Differentiated learning consists of differentiated content, process, product, learning and evaluation[[14]](#footnote-14). The repertoire of strategies included within Universal Design of Learning are cooperative learning, project-based approach, problem-based approach and explicit instruction.

*Instructional accommodation*

By age nine, it is expected that children will “… often start having more anxiety from common stressful situations, such as school performance.”[[15]](#footnote-15) Thus, the educator can acknowledge this anxiety that Dave must feel, especially during mathematics lessons and encourage him to seek one-on-one assistance from the librarian, resource teacher or Educational Assistant. Encouraging Dave to step out of the classroom and study one-on-one with another staff member would address his teacher’s worries “that he [the teacher] has only a limited amount of time to spend focused solely on one student”[[16]](#footnote-16) while also enabling Dave to receive instruction more specific to his grade level (i.e. at grade 1 or grade 2 level in Mathematics, rather than at a grade 4 level).

“A child’s ability to exhibit self-regulatory behaviours is an important component of academic success (Zimmerman, 2000). Self-regulatory behaviours or executive functions are those cognitive processes that support strategic and goal-oriented behaviour. These cognitive processes can include both cognitive control functions (e.g., planning, organizing, monitoring) and emotional control (regulating emotional responses) (Gioia & Isquith, 2004).”[[17]](#footnote-17) Thus it is important to help Dave learn how to self-regulate, and some of the strategies mentioned in the Education for All publication are as follows: the teacher can use think-alouds to help Dave reason through the process; the teacher can provide a step-by-step checklist of key actions to perform in order to complete any given desk work; the educator can provide examples of finished work, especially for assessments in the subject of language; and the educator can help Dave “integrate new with prior knowledge” by employing teaching strategies such as KWL. Another strategy to improve performance in language arts would be to follow the guided model within the Gradual Release of Responsibility, as “Guided practice helps students understand and clarify task expectations and facilitates their ability to link new knowledge with existing concepts.”[[18]](#footnote-18)

Dave seems to need one-on-one support in mathematics, and providing this support may significantly help him recover from his sub-standard or below-grade performance in the Key Math test as well as in the mathematical skills section of the Canadian Tests of Basic Skills. One-on-one mathematical support can be phased out once Dave seems to have reached grade 4 level performance[[19]](#footnote-19).

*Environmental accommodation*

Providing Dave with a space where he is able to complete his desk work while engaged in tapping of feet, hands or pencil is an accommodation that should be offered to Dave. Enabling Dave to access one-on-one math help in a separate area where his peers are unable to observe his math performance or math lag would also help to address outbursts like “I hate math![[20]](#footnote-20)” Dave could also be given the option of adopting a bouncy ball as his seat, thus allowing him opportunity for movement while in his seat and decreasing the frequency of how often he leaves his seat to sharpen his pencil or look out of the window.

*Assessment accommodation*

Differentiated product also means allowing students the ability to demonstrate comprehension and learning through a variety of methods. Since it seems that Dave struggles with desk or paperwork, it would be recommended to allow Dave to convey mathematical understanding through modelling or in-person conversations or interviews.

“Children who have difficulties in math may struggle with this very basic level of arithmetic and continue to use slower counting strategies to ensure accuracy at the single-digit level. Difficulties with fluency of basic arithmetic leave these children with fewer cognitive resources to devote to calculating solutions to multi-digit problems or to other types of math problem solving.”[[21]](#footnote-21) Thus, a recommendation is made to allow calculators to Dave for assessment purposes, while he continues to work on building up his fluency of basic arithmetic.

Plan of action for working with student

Since at around the age of ten, children want to have a best friend[[22]](#footnote-22), introducing Dave to group work during mathematics class and encouraging him to collaborate with a good friend in his mathematics homework may help address his motivation during mathematics lessons.

His underdeveloped empathy may also cause a high incidence of outbursts, and asking him to consider how his actions make others feel would be a good way to start building this trait of empathy. In the same vein, Dave’s outbursts may demonstrate a lacking in the interpersonal and intrapersonal intelligence structures[[23]](#footnote-23) thus giving us an opportunity to further work on this weakness through therapy and one-on-one counselling time during which the educator, therapist or psychologist tries to mirror back to Dave how his actions make others feel and how he can better self-regulate at times of stress and anxiety. Ongoing grief counselling with social workers would also be encouraged so that Dave can work through the trauma or trigger which caused him to change five schools in three years.

Even though there is no mention of testing Dave’s interest in music, his tapping may indicate a natural ability to gravitate towards an art such as drumming. Gardner postulated in 1983 that there are multiple intelligences and that there are at least eight separate intelligence structures[[24]](#footnote-24). One of these intelligences is musical, described as the “ability to produce and appreciate rhythm, pitch, and timbre; appreciation of the forms of musical expressiveness.” Thus it would be recommended to undergo further testing or training so that Dave may be able to further refine this in-built attraction to and desire to produce rhythm.

Since both the teacher and grand parents reported that they are “trying to adopt to his constant energy[[25]](#footnote-25)”, putting Dave in an extra-curricular sport would be a great idea through which he can expend his energy and also build on his bodily-kinesthetic intelligence structure[[26]](#footnote-26). A conversation also needs to be conducted with the gym teacher, as to identify opportunities for involvement and growth during in-school sports.

*Behavioural monitoring/tracking*

Dave may benefit from a tracking sheet, where the teacher tracks visibly how many times Dave has an outburst in class. This way, Dave will be able to visibly see how he is performing. If he is able to see that by decreasing his outbursts, he gets positive reinforcement (such as stickers or another treat), than he may have greater motivation to self-regulate.

*Tips to keep guardians involved*

Asking the grandparents to fill out the Connors’ Rating Scale is a good start to getting the guardians involved. Following this, conducting a quarterly review of the outbursts chart with the grandparents could lead to a positive feedback loop for Dave both at home and at school. Another way to keep in touch with the guardians is to use an agenda to communicate daily when and why Dave experienced an outburst in class.

*Tips to monitor student growth*

After a year worth of special attention and tutoring by the librarian or Educational Assistant, Dave should undergo the Key Math test one more time to see if he has positively recovered from his significantly below-grade performance mentioned earlier.

Conducting a quarterly review of the behaviour monitoring chart with the grandparents, and conducting a semi-annual review of Dave’s progress in mathematics would provide formative notes through which the teacher can continue to tweak the action steps. It would also be recommended to follow up on Dave’s special sports and music lessons on a quarterly basis, as to confirm that he is in fact benefiting from these augmented learning opportunities.

Conclusion

While Dave seems to have a few weaknesses and recurrent behaviour problems, I am confident that if the right steps are taken than Dave can recover from his academic lag and weaknesses, while also decreasing the frequency of his disruptive or negative behaviours.

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2. Dave’s Case Study [↑](#footnote-ref-2)
3. Education for All, 2005, p. 38 [↑](#footnote-ref-3)
4. Milestones for 6-Year-Olds [↑](#footnote-ref-4)
5. Milestones for 7-Year-Olds [↑](#footnote-ref-5)
6. Dave’s Case Study [↑](#footnote-ref-6)
7. Milestones for 7-Year-Olds [↑](#footnote-ref-7)
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26. Edmunds, 2015, p. 194 [↑](#footnote-ref-26)