**Using Student-Centred Strategies to Teach Functional Daily Living Skills in Multiple Settings**

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British Columbia's educational system promotes inclusive education. This is where students with exceptionalities are "fully participating members of the community of learners" alongside their neurotypical peers (Government of British Columbia, 2006, para. 9). Neurodiverse students can include a range of students with a formal medical diagnosis or those with complex needs. This could include Autism Spectrum Disorder (ASD), Fetal Alcohol Spectrum Disorder (FASD), intellectual disabilities (e.g., dyslexia, dysphoria, or mild to severe intellectual disability), Down syndrome, or other complex needs. The British Columbian Ministry of Education further outlines inclusion as "the principle that all students are entitled to equitable access to learning, achievement, and the pursuit of excellence in all aspects of their educational programs" (Government of British Columbia, 2006, para. 9). For inclusion to happen within a school or a classroom, different supports and strategies are needed for students to fully participate in their community of learners.

Visuals and prompts are two strategies that are used within inclusive education, as seen in Figure 1 (Chiaro, 2020). Both are used to support inclusive learning within schools, as well as in

**Figure 1**

*Inclusive Strategies*
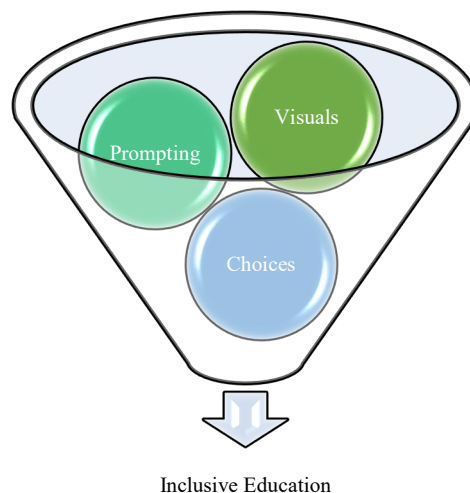


*Note:* Inclusive education includes using different strategies such as prompting, visuals, and choices, which allows the students to have a differentiated educational program.

other aspects of life, for students with exceptionalities. Visual aids are an instructional device

used to help students understand something more easily. These can include maps, charts, models, films, pictures, or slides. Visual aids come in static and dynamic formats. This can be further broken down into picture (static) and video (dynamic) formats. For example, picture formats can include maps, visual instructions, comic strips, or graphic organizers; while video formats can include YouTube, movies, or visual timers. Static pictures provide students with less sensory input and only key information, while dynamic videos provide students with more sensory input and extensive information. Prompting is using something to assist students by suggesting or explaining the next steps, something which was forgotten, or imperfectly learned. This can include natural, visual, verbal, gestural, or physical prompts (Brown, 2021; Mumford, 2022). An example of a visual prompt is a stop sign whereas a gestural prompt is using a gesture of pointing at something, such as an item on a menu. Both visual aids and prompting are widely used in all aspects of society, for people with and without exceptionalities, and help navigate certain aspects of life with ease.

**Visuals**

Using visual aids to support learning is not a new concept. Visual support strategies are used regularly in teaching practice because what is essential for a few students is good for all learners, whether in childhood or adulthood (Project Tomorrow, 2016). This principle is found within Universal Design for Learning (UDL) and other inclusive practices (Eredics, 2018; Rapp, 2018). Students vary in their learning styles, abilities, interests, and needs; hence UDLs encompass the needs of all students by building structures, systems, and strategies into educational practices with the idea that what is essential for some, is beneficial for all (Eredics, 2018; Rapp, 2018).

With increased access to technology, visuals are easier to access for both educators and students. Visual aids are multi-modal and mobile in nature as visuals can combine visual, verbal, and written formats that can be used in different settings, with personal devices (Graves et al., 2005; Project Tomorrow, 2016; Spencer, 2014; Van Laarhoven et al., 2009; Van Laarhoven et al., 2010; Wu et al., 2019). Multi-modal is defined as using different modalities or attributes such as visual, oral, and written formats. This idea was articulated in *Speak Up Project Tomorrow*'s large-scale research which described the shift in educational practices to include more visual technology such as videos, games, animations, and simulations because they provide higher interest in learning, increased enjoyment, and repetition (2016).

Furthermore, Spencer et al. (2014) outlined that autistic students benefit from visual aids because of its multi-modal nature and the ability for repetition. Students with autism or other exceptionalities need the multi-modal presentation of ideas – visuals incorporate the chosen amount of information, sensory input, and repetition needed for learners with complex needs.

Visuals can be used in multiple ways that improve learning for students, including flash cards for sight words or a visual shape of the day's schedule. The key to success with visuals for students with exceptionalities is that they can be learner specific. Visuals can easily be tailored to each individual student's needs and can be differentiated to support diverse needs within the classroom. Visuals provide access points for all learners to participate in classroom learning alongside their peers. Visuals are one of the strategies that is not only learner specific, but also beneficial for all students.

**Prompting**

Prompting is used in daily life – at home, school and in the community. Prompts happen all around us throughout our day, from understanding that a store is open when we read an open sign on a door (visual prompt), to barricades that guide a line at an amusement park (physical prompt). Prompting comes in a variety of formats including physical, model, verbal, gestural, visual, and natural prompts. For example, putting your hand in front of your child to prevent them from running across a busy street is a full physical prompt; while waving someone over across a room to come talk to you is a gestural prompt. Prompting begins with the most intrusive and works towards the least intrusive. This hierarchy is often referred to as most to least prompting, as illustrated in Figure 2. Students can move up the hierarchy of each prompt and

**Figure 2**

*Prompt Hierarchy: Most to Least Intrusive Prompts*
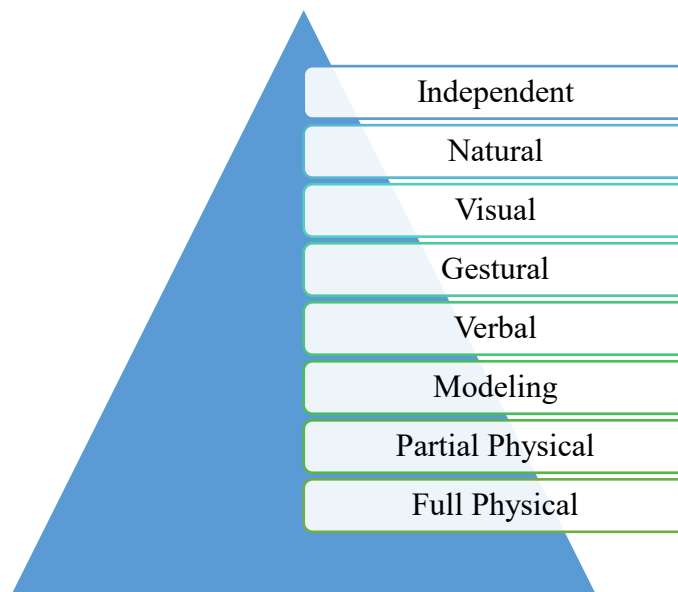


*Note:* Prompt hierarchy begins with the most intrusive prompts (full physical) and ends with the least intrusive prompts (natural). The goal of prompting is to fade towards independence, which is at the top of the prompt hierarchy indicating that no prompt is needed.

build towards independence. The importance of the prompt hierarchy is that the student is not

restricted to the most intrusive prompts but can move onto less intrusive prompts, which promotes independence (Mumford, 2022). Students with exceptionalities along with their families, want to do more things for themselves; and prompting is one of the tools available to support with skills-building for adulthood. It encourages independence through fading prompts. Prompting is also learner-specific as it focuses on meeting the students where they are; using the least intrusive prompt, which segways to independence where no prompt is needed. Prompting is one strategy that can be used within the educational setting as it is learner-specific and beneficial for all.

**Visual Prompts**

As an educator who works in the British Columbian educational system, seeing students succeed through their educational journey is key to my practice. Finding ways to bridge the gap for all students to succeed as active members of society, is one of my goals as an inclusive educator. Visuals and prompts are significant tools used within my teaching practice. One of the areas that is often focused on, in schools, is functional daily living skills. Functional daily living skills are adaptive skills used in one's daily life; for example, setting the table, doing the laundry, brushing your teeth, or crossing the street. Students with exceptionalities can struggle with these types of skills.

Neurodiverse students often need predictability and repetition to learn functional daily living skills because it improves their overall well-being by increasing independence, social opportunities, and confidence. Schools are one of the places where students with exceptionalities learn functional daily living skills through life skills programs. Life skills programs are programs that are provided outside the regular classroom schedule, like a pull-out group. One essential

factor of a life skills program is to build skills that are transferable to other settings such as the home or the community.

One of the challenges of life skills programs includes the struggle for educators to teach skills that are transferable to multiple settings. Sometimes, we see that para-professionals or teachers implementing these types of programs are not using the same strategy as the other teacher. This results in students needing to learn each strategy that each individual para-professional or teacher uses each time the skill is taught. This lack of regularity with the strategy is detrimental to neurodiverse students who thrive on predictability and routine. This problem of standardization is further amplified when students try to complete tasks in different settings, such as the home or in the community, because unpredictability presents itself within each setting.

When the strategy is standardized, it allows for certainty and consistency even when the setting presents the opposite. Transferability is the primary aim for their future as students who graduate from high school and go on to community day programs, group homes, or work experiences; as each skill is necessary in different environments. As setting changes throughout their lives, the strategy for teaching should stay the same. The purpose of this paper is to evaluate which one strategy can be used to teach functional daily living skills and be transferable to other settings.

Where more than one evidence-based strategy can be used, it is more effective as it uses more modalities. A student-centred or learner-centred approach is defined as focusing on the individual needs of students in planning, organizing, and delivering materials, programs, or strategies (Collins & O'Brien, 2011). Figure 3 shows which three strategies are student-centred

**Figure 3**

*Specific Student-Centred Strategies*
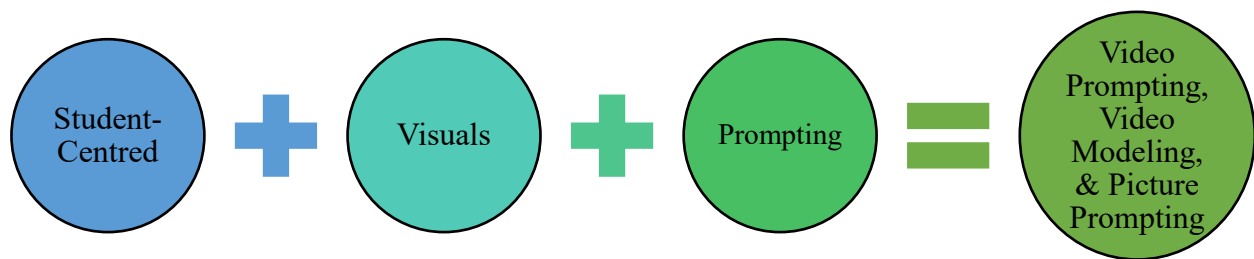


*Note:* When students remain at the centre of a strategy and combine more than one evidence-based tools, it results in the strategy being more effective. There are three strategies that are student-centred and include both visuals, and prompts. These strategies are video prompting, video modeling, and picture prompting.

with a combination of visuals and prompts. This is significant as the strategies are similar in nature and therefore can be compared for their effectiveness and their ability to be transferable. These strategies include video prompting, video modeling and picture prompting.

**Video prompting** is the use of short videos to demonstrate a step, then prompts the student to complete one step before moving onto the next.

**Video modeling** is the use of a short video to demonstrate the entire task, and then the student completes the entire task after the video has finished.

**Picture prompting** is the use of static pictures to demonstrate each step or the entire task.

As seen in Figure 4, the rest of this paper will focus on evaluating each strategy for its effectiveness on students with exceptionalities and its potential for transferability to other settings. Each chapter will grow in detail, beginning with the history and current movements in behavioural analysis, moving towards discussing research methods, results, and culminating in the discussion of which strategy I would choose to teach functional daily living skills at school.

**Figure 4**

*Capstone Project Outline*
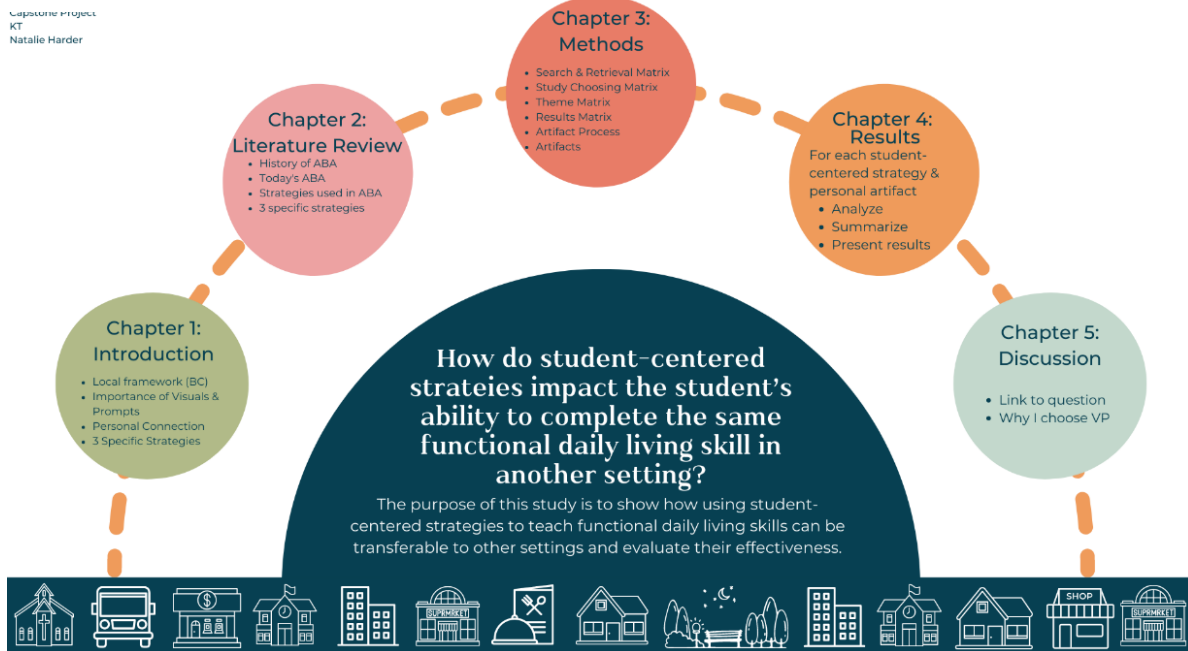


*Note:* This figure shows the outline of this research paper in more detail.

## Literature Review

In this chapter, the background theory behind visual prompting strategies will be discussed. Visual prompting can be found in many early educational theories including behaviourism and constructivism. For this paper, I chose behaviourism, which was foundational for Applied Behaviour Analysis (ABA). I chose this theory over constructivism because I use it regularly in my teaching practice. The literature review will include the history of Applied

Behaviour Analysis (ABA), today's ABA, and student-centred strategies. It will explore three specific student-centred strategies – video prompting, video modeling, and picture prompting. The literature review outline, pictured in Figure 5 demonstrates a focus, shows how the literature review focuses on these three strategies prevalent at home that are prevalently used at home, in

**Figure 5**

*Literature Review Outline*

| History of ABA | → | Today's ABA | → | Student-Centred Strategies | → | Video Prompting, Video Modeling, & Picture Prompts |
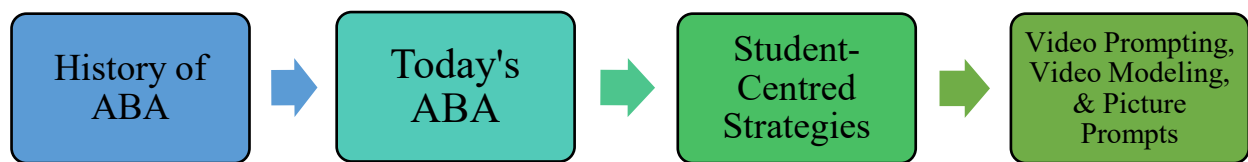
*Note:* The outline of literature review focuses on the history of visual prompting through these four sections.

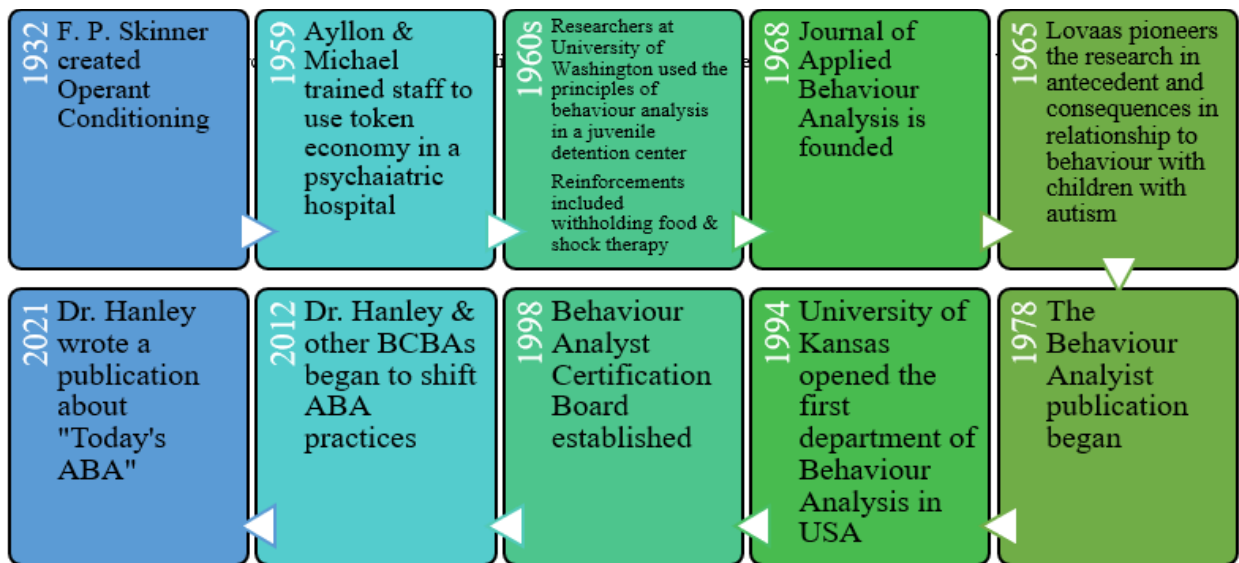the community, and at school programs. These strategies will also be discussed in future chapters in more detail.

**History of Applied Behaviour Analysis**

This section introduces the history of Applied Behaviour Analysis (ABA) as shown in Figure 6. ABA is a type of therapy, based on learning and behaviour, whose aim is to modify maladaptive behaviour (Autism Speaks, n.d.). The idea of researching behaviours began with F.P.

**Figure 6**

*History of ABA*



| 1932 | F. P. Skinner created Operant Conditioning | 1959 | Ayllon & Michael trained staff to use token economy in a psychaiatric hospital | 1960s | Researchers at University of Washington used the principles of behaviour analysis in a juvenile detention center. Reinforcements included withholding food & shock therapy | 1968 | Journal of Applied Behaviour Analysis is founded | 1965 | Lovaas pioneers the research in antecedent and consequences in relationship to behaviour with children with autism |
| 2021 | Dr. Hanley wrote a publication about "Today's ABA" | 2012 | Dr. Hanley & other BCBAs began to shift ABA practices | 1998 | Behaviour Analyst Certification Board established | 1994 | University of Kansas opened the first department of Behaviour Analysis in USA | 1978 | The Behaviour Analyst publication began |

*Note:* This figure details the history of behaviourism with a focus on ABA (Applied Behavior Analysis Programs Guide, 2022; Ayllon & Michael, 1959; Baer, 1993; Gilmore, 2019; Hanley, 2021; Larsson & Wright, 2011; Lovitt, 1993).

Skinner's work in behaviourism in 1932, when he developed the idea of operant conditioning, which is "where the consequence (outcome) of a response determine[s] the probability of it being repeated" (Gilmore, 2019; McLeod, 2018). Ayllon and Michael continued the work through training psychiatric nurses to use token economies; a reinforcing strategy where tokens are earned in exchange for preferred objects, activities, or another reinforcer, to control behaviour of their patients (Ayllon and Michael, 1959; Dalphonse, 2022).

During the 1960's, a group of researchers from the University of Washington including Baer, Bijou, Hopkins, Birmbrauer, Ripley, and Wolf, used the principles of behaviour analysis at a juvenile detention centre (Lovitt, 1993). The reinforcers included withholding food and administering shock therapy (Gilmore, 2019; Lovitt, 1993). In 1965, Lovass pioneered research in antecedents and consequences (outcomes) in relationship to behaviours, which is still used in the Antecedent, Behaviour, Consequence (ABC) charting today (Larsson & Wright, 2011).

Lovass' research included using children with autism as participants (Larsson & Wright, 2011). In 1968, the Journal of Applied Behaviour was founded and in 1978, the Behaviour Analyst publication was established (Gilmore, 2019). This began the publications of literature around the science of behaviour and interventions.

In 1994, the University of Kansas opened the first department of behaviour analysis in the United States (Baer, 1993; Gilmore, 2019). In 1998, the Behaviour Analyst Certification Board was established in the United States (Gilmore, 2019). Today, university departments in behaviour analysis are found around the world. This is significant, as behaviour analysts are certified and held to a specific standard.

Since 1998, ABA has begun to change. This was primarily because of Dr. Gregory Hanley. He began his research in 2012, looking at how ABA could become more compassionate, student-centred, and on earth the root or why of the behaviour (Mumford, 2022). In 2019, Dr. Hanley founded FTF Behavioural Consulting, to train other board-certified behaviour analysts (FTF Behavioural Consulting, 2022). Dr. Greg Hanley continues to build ABA into what is now called Today's ABA. Through the work of Dr. Hanley, today's ABA focuses first on "relationship building, [being] student-centred, [while maintaining] trauma-assumed care" and looking at the antecedent (environmental) changes, skill building, and allowing access to the student's preferred reinforcers and then, addressing [any] problem behaviour (Mumford, 2022, slide 9; Hanley, 2021). This is notable, as it focuses on the student first, rather than the behaviour. It is compassionate while decreasing problem behaviour for students or building new skills. Dr. Hanley continues to reshape ABA, and as a result, there has become a distinction in the field to separate the two approaches – the original ABA and today's ABA.

**Today's ABA**

Today's ABA focuses first on building relationships with the student, while keeping in mind trauma-assumed practices (Hanley, 2021; Mumford, 2022). It first focuses on the student and their preferences, then it addresses problem behaviour while continuing to look at the reasons behind the behaviour (Hanley, 2021; Mumford, 2022). Today's ABA can also be used in building new skills. The work of Dr. Hanley focuses on learning by listening, creating joy, and empowering while teaching, as illustrated in Figure 7 (Hanley, 2021).

**Figure 7**

*Today's ABA*
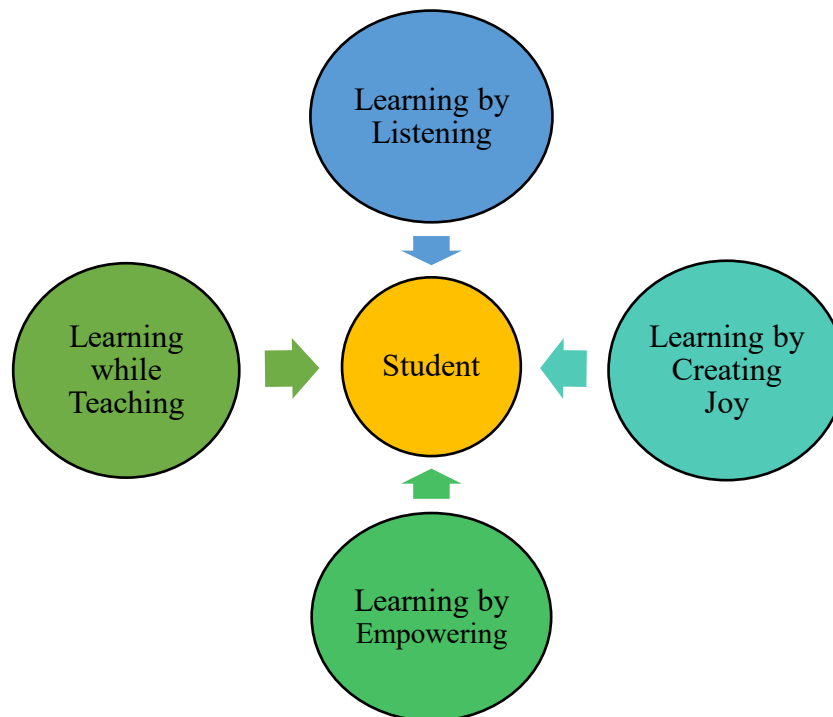


*Note:* This figure confirms that Today's ABA is student-centred as all four aspects point to the student, who is at the centre (Hanley, 2021).

Learning by listening aims to give students a voice. When interventions or strategies focus on listening to students, the adult learns about the student's likes and dislikes towards activities, objects, and environments (Hanley, 2021). Furthermore, the focus is on the person, not

the behaviour or diagnosis. It also allows for different forms of communication including verbal, vocalizations, signing, and Augmented Alternative Communication (AAC). Learning by creating joy focuses on ensuring that the student is Happy, Relaxed, and Engaged (HRE) in learning (Hanley, 2021; Mumford, 2022). School professionals can create joy for students by filling the space with many of the things a student loves, not restricting movement, and by being present for the student through removing dominance and responding to all forms of communication (Hanley, 2021). Notably, it allows the student to have their ideal situation, with their preferred activities, while being able to build connections and rapport with the adult. Learning by empowerment includes using natural and kind words while leading the student through changing or transitioning to something else or away from preferred things (Hanley, 2021). This is meaningful as it gives power to the student. It allows the adult to reinstate the HRE state when the student is uncomfortable or distressed. The student learns that they are empowered and do not need to escalate behaviours to get what they want. Learning while teaching creates less tension and enables positive receipt of interventions through slowing incorporating ambiguity as the student begins to build more flexibility. This has a significant impact on students, as they can learn to work through unpredictability while remaining at HRE. The focus is student-centred. Figure 7, illustrates how all aspects of today's ABA circle back to the student, resulting in the student being the focal point (Hanley, 2021). Today's ABA is student-centred and therefore allows the student to be themselves while celebrating who they are. It permits HRE state in students to as they learn alternative ways of responding or learn a new skill.

**Student-Centred Strategies**

Student-centred or learner-centred learning is defined as focusing on the individual needs of students in planning, organizing, and delivering materials, programs, or strategies (Collins &

O'Brien, 2011). Within student-centred learning "what the student does is more important in determining what is learned [rather] than what the teacher does," thus visual prompting falls into student-centred or learner-centred categories (Shuell, 1986; University of New South Wales, n.d., para. 2). This is significant as visual prompting attempts at removing the adult and focuses on student learning. The goal of student-centred learning is for students to be involved in developing their knowledge versus passively receiving the information (University of New South Wales, n.d.). Within the three specific student-centred strategies chosen for this research paper, there is the ability to remove the adult in part or during most of the learning, thus allowing the student to be at the centre. Students can be involved in creating strategy materials, which can support them as the focus of visual prompts. When interrogating the three different student-centred strategies that fall under the umbrella of visual prompting, this was key element. Further research is needed in perspective taking within each visual prompt as this is not discussed in the scope of this research paper. The three student-centred strategies chosen for this research paper are video prompting, video modeling, and picture prompting.

**Video Prompting, Video Modelling, and Picture Prompting**

The focus of the literature review is on the following three student-centred strategies: video prompting, video modeling, and picture prompting. All three strategies can be used for teaching specific skills or tasks. Before any of these strategies can be implemented, a task analysis needs to be completed. Task analysis is breaking down a task into individual steps. There are many different task analysis exemplars available; however, for this task analysis and data collection process (Black, n.d.) has been adapted. This research focuses on functional daily living skills as they are an important aspect of daily life for all students and adults. Functional

daily living skills are adaptive skills used in one's daily life; for example, washing your hands, setting the dinner table, or putting on deodorant.

Neurodiverse students experience difficulties with learning functional daily life skills. These students include students who have a formal diagnosis such as ASD, FASD, intellectual disabilities, Down's syndrome, or students with complex needs. To support students learning functional daily living skills, schools often provide life skills programs. These programs are implemented by a variety of professionals including teachers, case managers, youth workers, educational assistants or learning inclusion support workers. These programs happen outside the inclusive core classroom, usually in a pull-out group. The focus of this research is evaluating the use of video prompting, video modeling or picture prompting to learn functional daily living skills in multiple settings. It is further segmented into four distinct categories: participants, technology used, skills, and settings, as seen in Figure 8. This is outlined for each student-centred strategy.

**Figure 8**
*Research Categories*
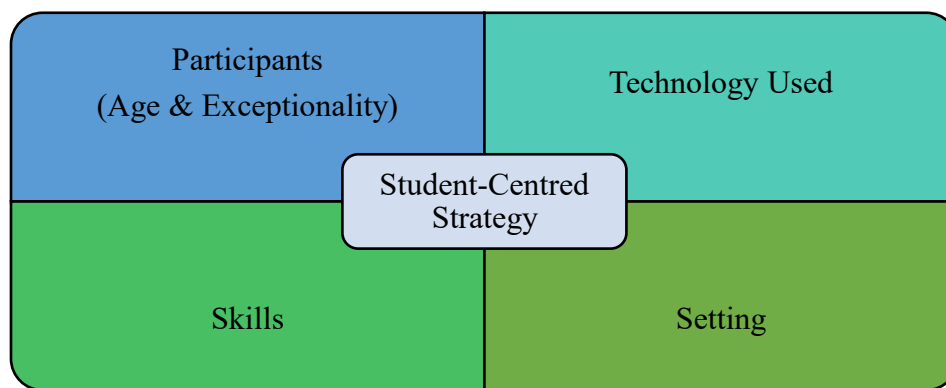


*Note:* This figure demonstrates the categories evaluated during the research of each student-centred strategy.

*Video Prompting*

Video prompting is the use of short videos to demonstrate a step, which then prompts the student to complete that specific step before moving onto the next. It uses one brief video for each step in the task. Researchers who used single-case or small-scale studies with students and adults to determine the effectiveness of video prompting is for learning a task, included: Cannella-Malone (2013; 2016; 2018), Carrera (2021), Gardner (2019), Graves (2005), Van Laarhoven (2009; 2010), Wu (2019), Yakubova (2021), and Yavuz (2019).

The demographics of the participants played a vital role in the effectiveness of each study that focused on high-school-aged or adult participants (Cannella-Malone et al., 2006; Cannella-Malone et al., 2013; Cannella-Malone et al., 2016; Cannella-Malone et al., 2018; Gardner et al., 2019; Graves et al., 2005; Mechling et al., 2008, Sigafoos et al., 2005; Van Laarhoven et al., 2009; Van Laarhoven et al., 2010; Wu et al., 2019; Yavuz et al., 2019). Their age is a significant factor because it shows the maturity of the participants and the potential to have previous exposure to a variety of functional daily living tasks and technology. To engage with video prompting technology, participants should be older than elementary-school-aged children. Yakubova et al. (2021) and Carrera et al. (2021) conducted their research with middle-school-aged children. There is a scarcity of research with elementary-school-aged children hence it is a wonder if video prompting can be used with younger children. Is there enough experience with technology to even use video prompting?

Participants within the targeted studies had a variety of diagnoses including intellectual disability (Cannella-Malone et al., 2006; Cannella-Malone et al., 2013; Cannella-Malone et al., 2016; Cannella-Malone et al., 2018; Mechling et al., 2008; Mechling et al., 2009; Sigafoos et al., 2005; Taber-Doughty et al., 2011; Van Laarhoven et al., 2009; Van Laarhoven et al., 2010; Wu et

al., 2019), ASD (Cannella-Malone et al., 2018; Carrera et al., 2021; Gardner et al., 2019; Mechling et al., 2008; Van Laarhoven et al., 2010; Yakubova et al., 2021; Yavuz et al., 2019), hard of hearing and/or deaf (Wu et al., 2019), organic brain tumor, schizophrenia, and bipolar disorder (Cannella-Malone et al., 2018). The diversity of exceptionalities represented in these studies provides evidence that video prompting might be effective within life skills programs, as it can be duplicated, learned, and transferred to variety of students in these programs at schools, their homes, and their communities.

Technology is a crucial factor for the successful implementation of video prompting. Within the research there was a variety of technology used. Due to the accessibility features of Apple products, researchers chose either iPhones or iPads, while other researchers utilized smart phones for technology (Cannella-Malone et al., 2013; Cannella-Malone et al., 2016; Goo et al., 2019; Van Laarhoven et al., 2009; Yakubova et al., 2021). The ease of using an iPhone or iPad allows portability and transfer to other settings.

Laptops were also used due to the accessibility within the school system as all schools had access to laptops for teachers and students (Carrera et al., 2021; Goo et al., 2019; Sigafoos et al., 2005; Van Laarhoven et al., 2010). Mechling et al. (2008) and Mechling et al. (2009) use portable DVD players. As technology continues to evolve, it is important to be cognizant of familiarity to students or participants. One study used VHS tapes and a VCR, which are outdated technology and unfamiliar to current school-aged participants (Graves et al., 2005).

Functional daily living skills are a crucial aspect of one's daily life. They are used by students from sunrise to sunset. This research was expanded beyond functional daily living tasks to check if video prompting could be used with a variety of tasks, first, making it generalizable and transferable. Alexander (2013) used video prompting to teach university students basic

computer tasks; while Cannella-Malone et al. (2016) taught leisure skills including art portfolios, basketball, darts, putting on nail polish, and puzzles with video prompts. Van Laarhoven et al. (2009) used video prompting within the community for job related skills such as cleaning a kennel at a veterinarian clinic. Carrera et al. (2021) also used video prompting to teach visual text messages to non-speaking students. This is crucial as it outlines the flexibility within the strategy to be used beyond functional daily living skills.

Within the skills category of functional daily living skills, researchers have used a variety of skills. Functional daily living skills fell into three categories: kitchen skills, domestic skills, and personal care skills. Kitchen skills included washing dishes, setting the table, making a beverage, loading a dishwasher, or preparing/cooking a meal or snack (Cannella-Malone et al., 2006; Cannella-Malone et al., 2013; Cannella-Malone et al., 2018, Mechling et al., 2008; Mechling et al., 2009; Sigafoos et al., 2005; Taber-Doughty et al, 2011; Van Laarhoven et al., 2010).

Domestic skills included vacuuming, putting away groceries, washing, drying, and folding laundry, cleaning a bathroom, mopping a floor, and washing a window (Cannella-Malone et al., 2006; Cannella-Malone et al., 2013; Cannella-Malone et al., 2018; Van Laarhoven et al., 2009; Wu et al., 2019, Yavuz et al., 2019). Personal care skills included flossing teeth and confirming a doctor's appointment (Yakubova et al., 2021). With regards to this research, video prompting has been proven to be an effective strategy for a variety of functional daily living skills, as well as other skills. The vital impact of video prompting is that students can learn how to use this strategy for many important tasks.

Functional daily living skills need to be transferable to a variety of settings. For example, a person does not just wash their hands at home, but also at school and within the community;

likewise, one opens a granola bar not only at school but also on a nature hike. Limited research has been conducted on using video prompting in multiple settings. Graves et al. (2005) used three separate locations including school, home, and a grandparents' home. Wu et al. (2019) also used two different settings including a special education classroom and school dorm room. The other researchers focused on one single setting, which demonstrates the need for more research into the transferability of video prompting for different settings.

*Video Modeling*

Video modeling is the use of one video to demonstrate the entire task, and then the student completes the entire task after the video has finished. Video modeling includes the entire task, hence the content plays longer than video prompting. The researchers who used single-case or small-scale studies with adults and all levels of school-aged children to determine how effective video modeling is for learning a task, include Cannella-Malone (2013), Cihak (2008), Kanfush (2019), Keen (2007), Taber-Doughty (2011), and Wertalik (2018).

Video modeling can be used with a variety of ages including elementary-school-aged students (Alzyoudi et al., 2015; Keen et al., 2007; Sancho et al., 2010), middle-school-aged students (Alberto et al., 2005), high-school-aged students (Cihak et al., 2008; Kanfush et al., 2019; Taber-Doughty et al., 2011; Wertalik et al., 2018), and adults (Cannella-Malone et al., 2013; Kanfush et al., 2019; Keen et al., 2007; Mechling et al., 2009). As less involvement is needed to navigate the technology because video modeling content is depicted in one video, it can be used with a variety of ages.

Like video prompting, participants in studies with video modeling represented various exceptionalities and complex needs. These include intellectual disabilities (Alberto et al., 2005;

Cannella-Malone et al., 2013; Mechling et al., 2009; Park et al., 2019; Taber-Doughty et al., 2011), ASD (Alzyoudi et al., 2015, Cihak et al., 2008; Hume et al., 2009; Keen et al., 2007; Sancho et al., 2010; Wertalik et al., 2018), Down syndrome, hard of hearing, visual impairments, attention deficit hyperactivity disorder (ADHD), speech impairments, and deficits with fine and gross motor skills (Kanfush et al., 2019). This is a significant factor, as it shows the diversity of students and participants with whom video modeling can be used.

Several types of technology were used in the research on video modeling. These included the use of a digital camera (Alberto et al., 2005; Cihak et al., 2008), video recorder (Kanfush et al., 2019; Mechling et al., 2009) and iPad (Wertalik et al., 2018). The technology used reflects the modern technology used at the time the studies were conducted. More recent studies use modern technology such as the iPad. Only one study mentioned software used for editing; this included iMovie on Apple devices (Kanfush et al., 2019). Two studies included the specific technology used to watch videos – like portable DVD players (Kanfush et al., 2019; Sancho et al., 2010). Keen's (2007) study used a non-profit organization to create a toilet training video. Additional technology was needed for video modeling than video prompting. Technology was used throughout the entire process, from material creation to instruction. The use of more complicated technology in video modeling impacted the effectiveness of using it as a strategy for teaching functional daily living skills.

Video modeling can be used for tasks that do not fall under basic functional daily living skills. Alberto et al.'s (2005) study used video modeling to teach withdrawing money from an ATM and purchasing items with a debit card. Alzyoudi et al. (2015) used it to teach social skills. Cihak et al. (2008) used video modeling to teach office tasks, including making packages, filling

first-aids kits, photocopying, and sending a fax. Finally, Sancho et al. (2010) used video modeling to teach imaginary play.

Video modeling can also be used with a variety of functional daily living tasks including: kitchen skills such as setting a table or cooking a meal (Cannella-Malone et al., 2013; Kanfush et al., 2019; Mechling et al., 2009; Taber-Doughty et al., 2011), domestic skills such as putting away groceries (Cannella-Malone et al., 2013) or personal care skills such as toilet training, brushing teeth, washing the face, and applying deodorant (Keen et al., 2007; Wertalik et al., 2018). Video modeling uses only one video to show the entire task; hence tasks are shorter and less complex than when using video prompting. This is significant when choosing which student-centred strategy to use within school programs because one strategy might be best for specific tasks, over the other. This illustrates that video modeling is an effective strategy for simpler or shorter functional daily living skills due to the nature of the entire task being filmed in one video. This makes the video longer in length and challenging to remember.

Transferring between settings allows the strategy to be more effective. Only one research study has used multiple settings. Kanfush et al.'s (2019) study conducted the research at both school and home. This demonstrates the need for further research to be conducted with video modeling across multiple settings.

*Picture Prompting*

Picture prompting uses static pictures to demonstrate each step or an entire task. Prominent researchers in picture prompting include Alberto (2005), Alexander (2013), Brill (2011), Mechling (2008) and Mechling (2009). These researchers used single-case or small-scale research studies with school-aged participants, as well as adults. However, research on picture

prompting does not have the same diversity of participants as video prompting or video modeling.

Two researchers used school-aged participants from middle school and high school (Alberto et al., 2005; Mechling et al., 2008; Mechling et al., 2009). Brill (2011) did not state the age of the participants. Alexander (2013) used adult participants, who were university students. There was also less diversity regarding types of exceptionalities. Alberto et al.'s (2005) participants included participants with intellectual disabilities. Brill's (2011) participants had developmental disorders; but lacked further information about the type of developmental disorder. Mechling et al.'s (2008) and Mechling et al.'s (2009) studies used participants with ASD and intellectual disabilities. Alexander's (2013) study did not include participants with exceptionalities. Further research into picture prompting is recommended to ascertain if participant diversity is prevalent with picture prompting as is with video prompting and video modelling.

Due to the nature of picture prompting, different types of technology were leveraged. Researchers used photos either from the internet, a specific program (Board Maker) or a digital camera (Alberto et al., 2005; Alexander, 2013; Brill, 2011; Mechling et al., 2008; Mechling et al., 2009). The photos were organized on a laptop or computer into a Microsoft Word document that could be distributed and used in various setting. Mechling et al. (2008) and Mechling et al., (2009) also used a laminator to laminate the materials, as the study was conducted in a kitchen.

A lot of the existing literature on picture prompting presents a variety of skills being taught using picture prompting. However, only one study uses basic functional daily living skills within their research. Mechling et al.'s (2008) and Mechling et al.'s (2009) studies focuses on the functional daily living skill of cooking. Alberto et al.'s (2005) study uses community skills like

getting money from an ATM and purchasing items using a debit card. Alexander (2013) teaches computer tasks, and Brill (2011) uses picture prompting to teach different skills that are use in the 4-H clubs. This is crucial as it demonstrates a lack of research in the viability of picture prompting as a strategy to teach basic functional daily living skills, within life skills programs at schools.

There is a scarcity of research in picture prompting used, in multiple settings. In fact, there are only two settings used with picture prompting – community (Alberto et al., 2005; Brill, 2011) and school (Alexander, 2013; Mechling et al., 2008). The settings chosen by the researchers are common settings where tasks can be completed. However, the home setting was t included in the research, which is significant because the home is one of the primary settings for establishing functional daily living skills. Due to limited settings used within research studies, it is inconclusive if picture prompting can be used in more than one setting. Further research needs to be conducted on the transferability of picture prompting between settings.

**Conclusion**

The rest of the paper will focus on the three student-centred strategies: video prompting, video modeling, and picture prompting. Each strategy will be evaluated for its effectiveness of transfer to an alternate setting. Teachers and families want student-centred strategies that are transferable so that skills can be used in a variety of locations including the home, school, and community. As a result of its versatility, professionals and families can use the same strategy within different settings allowing for transferability. In conclusion, the literature review confirms the versatility of each student-centred strategy, as well as the transferability of both video prompting and video modeling; however more research needs to be conducted on the transferability of picture prompting.

*Video Prompting*

Video prompting is the use of short videos to demonstrate a step, then prompt the student to complete a step before moving onto the next. Through the work of Cannella-Malone et al., (2006; 2013; 2016; 2018), Carrera et al., (2021), Gardner et al., (2019), Graves et al., (2005), Van Laarhoven et al., (2009; 2010), Wu (2019), Yakubova et al., (2021), and Yavuz et al., (2019), video prompting can be used within a variety of settings due to its versatility. Video prompting is adaptable because of the ages, types of diagnoses or needs, technologies, and skills that can be applied. Due to the flexibility of video prompting, we can assert that it is transferable. Therefore, video prompting is a valid choice for teaching functional daily living skills, within a life skills program in educational setting and other settings.

*Video Modeling*

Video modeling is the use of one video to demonstrate the entire task, and then the student completes the entire task after the video has finished. The research from Cannella-Malone et al., (2013), Cihak (2008), Kanfush et al., (2019), Keen (2007), Mechling et al., (2009), Taber-Doughty et al., (2011), and Wertalik et al., (2018) show video modeling can be used to teach different skills due to its versatility and transferability. Similar to video prompting, video modeling is also adaptable because of the ages, types of diagnoses or needs, technologies, and skills that can be applied. Thus, video modeling is also transferable, making it a reasonable choice for teaching functional daily living skills within a life skills program at school.

*Picture Prompting*

Picture prompting uses static pictures to demonstrate each step, or the entire task. Through research by Alberto (2005), Alexander (2013), Brill (2011), and Mechling et al., (2008;

2009), picture prompting is the third student-centred strategy, that has been investigated for its versality in educational settings. Picture prompting is less versatile when compared to video prompting and video modeling; due to its lack of variety of ages, types of diagnoses or needs, technologies, and skills that can be applied. Through this research, transferability is not a focus in the investigation of picture prompting.

The literature review demonstrates that student-centred strategies are rooted in historical and current research, through ABA. It allows the building of skills which leads to independence. In the remainder chapters, it will discuss the research methods, results, and which student-centred strategy would be chosen to use within the educational setting and be transferable to other settings.

## Methods

Various angles and different perspectives were queried to ascertain the best style for recording videos for video modeling. As the researched process evolved, the research question changed. There was a significant discrepancy within the research around the ability to use the strategy in transferring skills to different settings.

### Matrices

The research review conducted in the organization evolved into four distinct matrices which will be presented in the following section.

**Figure 9**

*Matrix Process*



Search & Retrieval Matrix → Study Information Matrix → Literature Review Themes Matrix → Results Matrix
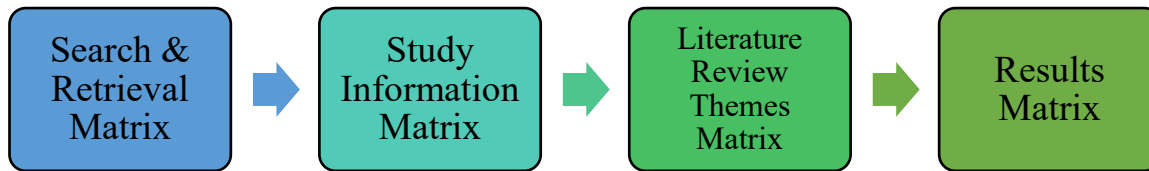
*Note:* This figure illustrates the process of data gathering and gleaning the information into the four different matrices.

*Search & Retrieval Information*

The selection of articles involved specific search and retrieval criteria which began with a search and retrieval table, Table 1, to organize the content and Table 2 was created to organize

**Table 1**

*Search & Retrieval Information Table*

| Author's Name | Peer-Reviewed | Search Engine Used | Type of Journal | Written in English | Date | Student-Centered Strategy |
|---|---|---|---|---|---|---|
| Cihak et al. | Y | ERIC | Journal of Special Education Technology | Y | 2008 | Video Modeling |
| Franzone et al. | N | Google Scholar | Not a Journal | Y | 2008 | Video Modeling |
| Gardner et al. *Susquehanna Univ Dept of Except Prog Penn State Univ* | Y | ERIC | Journal of Special Education Technology | Y | 2019 | Video Prompting |
| Graves et al. *Pub. Sch. Teacher Univ. of Kentucky* | Y | ERIC | Education and Training in Developmental Disabilities | Y | 2005 | Video Prompting |
| Goo et al. | Y | JSTOR | Education and Training in Developmental Disabilities | Y | 2019 | Portable Smart Devices |

*Note:* This table is a selection from the search and retrieval information table. It depicts the different categories used during the search and retrieval process.

the data into the search and retrieval matrix. The criteria included six aspects – specific search engines, peer-reviewed journals, journals focusing on education and/or exceptionality, written in the English language, published between two thousand and five and two thousand and twenty-two, and is focused on student-centred strategies i.e., video prompting, video modeling and picture prompts. The search engines that were engaged included JSTOR, ERIC, and Google

**Table 2**

*Search and Retrieval Matrix*

| Author's Name | Peer-Reviewed | Search Engine Used | Type of Journal | Written in English | Date | Video Prompting | Video Modeling | Picture Prompting | Other (non-ABA) |
|---|---|---|---|---|---|---|---|---|---|
| Cannella-Malone et al. (2016) *Using Video Prompting to Teach Leisure Skills to Students with Significant Disabilities* | * | * | * | * | * | * | | | |
| Cannella-Malone et al. (2018) *Examination of the Effects of Video Prompting across Different Types of Tasks* | * | * | * | * | * | * | | | |
| Carrera et al. (2021) *Teaching Adolescents with Autism to Text Message Requests Using Video Prompting* | * | * | * | * | * | * | | | |
| Caykaytar et al. (2009) *Effectiveness of Parent and Therapist Collaboration Program (PTCP) for Teaching Self-Care and Domestic Skills to Individuals with Autism* | * | * | * | * | * | | | * (included picture prompts) | * (PTCP) |

*Note:* From the search and retrieval information table, the information is put into the matrix for ease of exposure which articles met the research criteria.

Scholar. JSTOR and ERIC were chosen because they focus on the publication of educational research. The next search criterion was for peer reviewed journals because peer-reviewed journals have a higher rate of validity. Another consideration was the choice of journals that focused on education and/or exceptionalities which are relevant to the focus of this research paper; there were three journals containing such studies. The journals are *Education and Training in Developmental Disabilities Journal, Journal of Behavioural Education, and Journal of Special Education Technology*.

As educational settings continue to evolve through technology and knowledge, it is imperative that recent research studies are used; thus, the articles were chosen between two thousand and five and two thousand and twenty-two. The articles were all written in the English language and the topics included the three types of student-centred strategies in focus. As this research progressed, other areas of interest included-visual content, strategies, and support for all students through Universal Design for Learning (UDL).

*Study Information Matrix*

After the selection of articles, the study information matrix was used. A table was created

to orgainze all of the collected information. This can be seen in Table 3.  From there a matrix was

**Table 3**

*Study Information Table*

| Author's Name | Type of Study | Participant Age | Participant Exceptionality | Student-Centered Strategy with Technology | Settings | Functional Daily Living Skills | Results & Reasons |
|---|---|---|---|---|---|---|---|
| Cihak et al. (2008) *Does the Model Matter? Comparing Video Self-Modeling and Video Adult Modeling for Task Acquisition and Maintenance by Adolescents with Autism Spectrum Disorders* | Small Scale | School Aged (4) (High School) | ASD | Video Modeling | School | Office tasks (making packages, filing first aid kits, photocopying, sending a fax) | *Video Modeling* Attention to strategy Task Completion Reliance on Adults (-) Social Validity |
| Franzone et al. (2008) *Overview of video modeling* | Overview of Visual Supports | N/A | N/A | Video Modeling | N/A | N/A | *Video Modeling* Independence Social Validity |
| Gardner et al. (2019) *Results of a Video Prompting Intervention Package Impacting Dishwashing Skill Acquisition for Adolescents with Autism* | Small Scale | School Aged (4) High School Aged 14-19 | ASD | Video Prompting Gradual Guidance (iPad) | School | Dish washing | *Video Prompting with Gradual Guidance* Task completion Memory retention Enjoyment Social Validity Less Information (+) Transferability Less prompts |

*Note:* This table is a selection from the study information table. It depicts the different categories used during the selection of studies.

**Table 4**

*Study Information Matrix*

| Author's Name | Single Case Study Small Scale | School Aged | 1 or more Exceptionalities | Student-Centered Strategy | Multiple Settings | Functional Daily Living Skills | Results & Reasons |
|---|---|---|---|---|---|---|---|
| Cannella-Malone et al. (2016) *Using Video Prompting to Teach Leisure Skills to Students with Significant Disabilities* | * | * | * | * | | Leisure Skills | *Video Prompting* Enjoyment Task Completion Independence Transferability Cost (-/+) Reliance on Adults |
| Cannella-Malone et al. (2018) *Examination of the Effects of Video Prompting across Different Types of Tasks* | * | * | * | * | | * | *Video Prompting* Task completion More information (+) Enjoyment Less information (-) Reliance on Adults (+) Transferability |
| Carrera et al. (2021) *Teaching Adolescents with Autism to Text Message Requests Using Video Prompting* | * | * | * | * | | * | *Video Prompting* Task completion Enjoyment/Social Validity Cost (+) Attention on strategy Transferability Reliance on Adults (+) |

*Note:* This table is a selection from the study information matrix. It reveals which research articles met the study information criteria.

leveraged for selecting the studies used in this research paper, as seen in Table 4. The information was divided into seven categories: type of study, participant age, participant exceptionality, student-centred strategy with specific technology used, type of setting, functional daily living skill being taught, and results received.

The type of study included single-case studies (Van Laarhoven et al., 2009; Yakubova et al., 2021), small-scale studies (Alberto et al., 2005; Alzyoundi et al., 2015; Cannella-Malone et al., 2006; Cannella-Malone et al., 2013; Cannella-Malone et al., 2016; Cannella-Malone et al., 2018; Carrera et al., 2021; Cavkaytar et al., 2009; Chihak et al., 2008; Gardner et al., 2019; Graves et al., 2005; Kanfush et al., 2019; Keen et al., 2007; Mechling et al., 2008; Mechling et al., 2009; Sancho et al., 2010; Sigafoos et al., 2005; Taber-Doughty et al., 2011; Tee et al., 2005; Van Laarhoven et al., 2010; Wertalik et al., 2018; Wu et al., 2019; Yavuz et al., 2019) and large-scale studies (Alexander, 2013; Project Tomorrow, 2016). The participants' ages ranged from school aged participants to participants in adulthood. Participants were from three stages of educational learning: elementary (Alzyoudi et al., 2015; Keen et al., 2007; Sancho et al., 2010), middle (Alberto et al., 2005; Carrera et al., 2021; Kanfush et al., 2019; Yakubova et al., 2021), and high school (Cannella-Malone et al., 2006; Cannella-Malone et al., 2016; Cannella-Malone et al., 2018; Cihak et al., 2008; Gardner et al., 2019; Graves et al., 2005; Kanfush et al., 2019; Mechling et al., 2008; Wertalik et al., 2018; Wu et al., 2019; Yavuz et al., 2019).

The participants within the studies I researched were diverse including those with intellectual disabilities (Alberto et al., 2005; Cannella-Malone et al., 2006; Cannella-Malone et al., 2013; Cannella-Malone et al., 2016; Mechling et al., 2009; Taber-Doughty et al., 2011), Deafness (Wu et al., 2019), Down syndrome (Kanfush et al., 2019), and ASD (Alzyoudi et al., 2015; Carrera et al., 2021; Cavkaytar et al., 2009; Cihak et al., 2008; Gardner et al., 2019; Keen

et al., 2007; Mechling et al., 2008; Van Laarhoven et al., 2009; Van Laarhoven et al., 2010; Yakubova et al., 2021; Yavuz et al., 2019).

The research focused on three student-centred strategies: video prompting, video modeling, and picture prompting. Some studies compared one of these three to another strategy, when used by an organization or company. Within this section, various technologies were engaged. This is significant because the type of technology used was reflected in the results' section of each study, particularly around cost and reliance on adults. In lieu of this paper's research question, utilizing studies that applied more than one setting, was vital. Therefore, three settings were categorized – school, home, and community-based settings. This was of critical importance, as most of the studies did not include more than one setting.

*Literature Themes Matrix*

A Literature Review Matrix was created to explore three targeted strategies and this is visible in Table 5. It includes the three targeted strategies: video prompting, video modeling, and picture prompting. During this investigation of the three targeted strategies, other strategies were also noted. These were often used in comparison with one of the targeted student-centred strategies. The other strategies used were created by specific companies or organizations for

**Table 5**

*Literature Review Matrix*

| Author's Name | Video Prompting | Video Modeling | Picture Prompts |
|---|---|---|---|
| **Alberto et al.** (2005) *Use of static picture prompts versus video modeling during simulation instruction* | | * | * |
| **Alexander, K.P.** (2013) *The Usability of Print and Online Video Instructions.* | | | * |
| **Alzyoudi et al.** (2015) *The impact of video modelling on improving social skills in children with autism* | | * | |
| **BC Ministry of Education** (n.d.) *Student Supports* | | | |
| **Brill, M.P.** (2011) *Teaching the special needs learner: When words are not enough* | | | * |
| **Cannella-Malone et al.** (2006) *Comparing Video Prompting to Video Modeling for Teaching Daily Living Skills to Six Adults with Developmental Disabilities* | * | | |

*Note:* This table is a selection from the literature review matrix. This was used to organize the articles into the chosen student-centred strategies.

Researchers' investigations. The results of other strategies were often inconclusive, however the student-centred strategy had better results.

*Results Matrix*

The final matrix created organized all results from the numerous studies, as seen in Table 6. This matrix looked at all the explanations that impacted the use of the student-centred

**Table 6**

*Results Matrix*

| Author Date Article Title | ABA Strategy VP = Video Prompting PP = Picture Prompts VM = Video Modeling O = Other | Attention on Strategy (+/-) Motivation Enjoyment | Cost (-) Cost to producing the videos for video prompting | Social Validity (+) Social importance Social acceptance | Independence (+) Maintenance | Less Information (+/-) Static Visual Aid | Lowered Prompts (+) | Memory Retention (+) | More Information (+/-) Dynamic Visual Aid | Reliance on Adult (+/-) Creation Time Operation of Device Error Correction Less reliance | Task Completion (+) Accuracy | Transferability (+/-) Between settings After a period (time) Usability/availability to bring strategy to another setting | Other (+/-) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cannella-Malone et al. (2013) *Using Self-Directed Video Prompting to Teach Students with Intellectual Disabilities* | VP | * (-) | * | * | * | * (-) | * | | * | * (-/+) | * | * (-) | |
| Cannella-Malone et al. (2006) *Comparing Video Prompting to Video Modeling for Teaching Daily Living Skills to Six Adults with Developmental Disabilities* | VP VM | * | | * | | | | * | * (-) | | * | | * Previous Experience with Strategy |
| Carrera et al. (2021) *Teaching Adolescents with Autism to Text Message Requests Using Video Prompting* | VP | * | * (+) | * | | | | | * (-) | * (+) | * (+) | * | |

*Note:* This table is a selection from the results matrix. It depicts the different results found in the research studies.

strategies. The results or explanations were categorized as positive or negative. For example, cost was categorized into positive, or lower costs, and negative, or higher costs. These are important considerations to note when choosing the best student-centred strategies, which will be discussed in detail in Chapter Five.

The results were categorized into attention on strategy, cost, social validity, independence, amount of information, lowered prompts, memory retention, reliance on adults, task completion, transferability, and other. Attention on strategy included participant motivation and enjoyment during the intervention sessions. Cost included pricing of technology used and

cost of producing videos or pictures. Social validity included social importance and social acceptance of using each strategy. This is crucial as all three strategies aim to be socially acceptable for all students.

Independence was also evaluated to show what the participants could complete after the intervention was removed. The amount of information included in each visual prompt examined how much information was provided and if key information was omitted due to the nature of the visual prompt. Lowering prompts included less prompting, allowing the participants to receive less intrusive prompts such as natural prompts (Mumford, 2022). Not all the prompts are used within all three strategies. It is significant to note that all three student-centred strategies try to use the least intrusive prompts. Lowering prompts indicated that students did not need to follow all the steps on each trial or during maintenance, as prompts were not needed.

Memory retention indicated that students could remember steps without needing the strategy. Reliance on adults explored the need for adults to produce the strategy materials, prepare the materials for each task, and operate the technology. It is noteworthy that a level of reliance on adults was required for all three strategies. Task completion included if the participants could complete the task using the strategy. Transferability examined if the participants used the strategy in more than one setting or location. Finally, others interrogated other things that could impact the validity and generalizability of the study. This included personal situations, reinforcing distractions, previous experience with the strategy, familiarity with the materials or task, and collaboration with parents or home teams. The results of each strategy will be discussed in detail in Chapter Four.

**Artifact Process**

**Figure 10**

*Artifact Process*
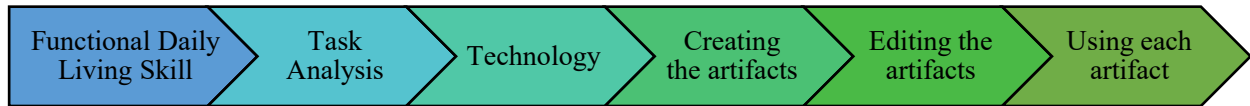


*Note:* This figure portrays the process of creating the artifacts for each student-centred strategy.

As part of the research process, an artifact was created for video prompting, video modeling, and picture prompting. The steps outlined in Figure 10, were the same for each artifact created. The next section will outline the process used for all three strategies as; the same process was used for each strategy.

*Functional Daily Living Skill*

The functional daily living task of setting a table was chosen to be used with all three student-centred strategies, this allowing comparisons to be made between the three strategies. Besides being an inclusion support teacher, I am a mother to two small children. Most parents want their children to learn basic skills such as personal care (showering or brushing teeth), kitchen skills (setting a table or making a snack), and domestic home skills (vacuuming or cleaning a toilet). Sometimes parents find it challenging to teach these skills at home to their own children. For example, teaching children how to set the table can be difficult. I have attempted to teach this skill through using a placemat template, see Figure 11, verbal instructions and copying a table setting to both my own children and my students. At my job as an inclusion support teacher, parents have asked me to teach their children how to set a table as they want their child

**Figure 11**

*Setting the Table Placemat*
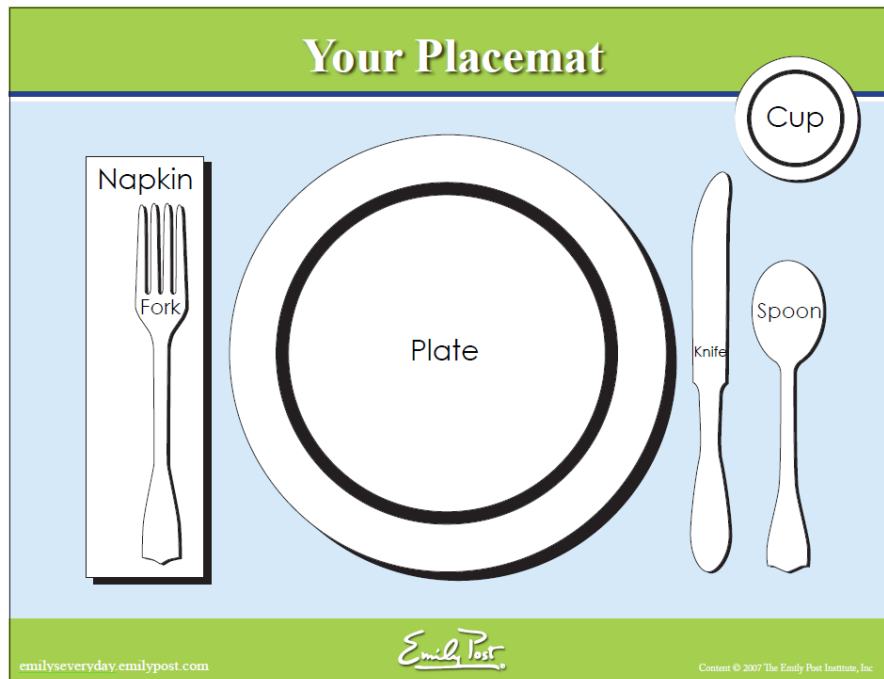


*Note:* This figure shows the strategy previously used when I taught setting the table in a life skills program at school.

to help around the house and contribute, just like their neurotypical siblings. Transferability from school to the home was at the forefront of learning to set the table, as the home was a primary setting. When discussing with parents, I leveraged strategies and resources that could be used both at school and at home; and could be transferred to another school or community program as the student grew into adulthood. This is the primary reason for conducting this research – to assist all parents who want their children to be active members of their families and gain independence.

*Task Analysis*

Before an artifact could be created, detailed analysis of the task of setting a table was necessary. Task analysis is breaking down a task into individual steps. For one to be able to

complete a task analysis, they must perform the task from beginning to end, and record the individual steps used to complete the task in the correct order. Many tasks are already broken into a task analysis, complete with data collection sheets. For this research, one such data collection sheet for setting the table was used as an exemplar for the one I created (Black, n.d.). A simple data collection sheet is available in Appendix 2, using a similar template from Diana Black through Pyramid Educational Consultants (n. d.), as seen in Figure 12. I used Black's (n.d.) template to create a data collection sheet for setting the table while trying it with my own family.

**Figure 12**

*Setting the Table Exemplar*

<table>
<tr><td colspan="2">Task Analysis Data Form</td><td colspan="3">Target Skill: <u>Setting table</u></td></tr>
<tr><td>Student:</td><td colspan="2">Teacher:</td><td colspan="2">Date:</td></tr>
<tr><td colspan="5">Behavior objective: Before meals, the student will set the table.<br>Functional association: Domain: Domestic     Function: independent living skills</td></tr>
<tr><td colspan="5">Current lesson status [acquisition, fluency, maintenance]: acquisition<br>*(trials/set; # data-points collected per week):* 2 data points per week<br>Target Criterion (specify type of data: %, frequency, rate, duration, etc.): 70% accuracy, 2 staff, 2 locations</td></tr>
<tr><td colspan="2">Current Stimulus Control: Prompting level varies between gestures and full physical prompts</td><td colspan="3">Long-term cue "Set table" as indicated on students picture schedule</td></tr>
<tr><td colspan="2">Discrete Trial format: No<br>*[maximum # per set]*</td><td colspan="3">Sequential format: Yes<br>Chained?: Backward Chain</td></tr>
<tr><td>One vs. Two person prompt?:<br>       One</td><td colspan="4">Prompt Strategy: Most to Least Prompt Hierarchy - FP, PP, G<br>*Pause interval (for hierarchy or delayed):*</td></tr>
<tr><td colspan="5">Error Correction: Backstep if not on the target step</td></tr>
<tr><td colspan="2">Natural or additional completion R+: natural: eats, praise</td><td colspan="3">2nd R+ (during task): praise ("Nice job setting the table.")</td></tr>
<tr><td colspan="2">Current 2nd R+ schedule: praise, 1:2 items set out</td><td colspan="3">Goal 2nd R+ schedule: praise, 1:7 items set out</td></tr>
<tr><td colspan="2">Generalization (stimulus factors):<br>*[people, place, materials, etc.]* Vary staff, location (e.g. classroom, kitchen, home), meals (e.g. breakfast, lunch, snack, dinner), type of plates and silverware</td><td colspan="3">Generalization (response factors):<br>*[rate, accuracy, magnitude, duration, supervision, etc.]* Vary number (maximum of 6) of place settings to be set, fade staff proximity, decrease time to set table</td></tr>
<tr><td colspan="5">Parametric details: All of the materials needed will be lined up on the counter. Staff will complete all of the steps of the task analysis except the last step. The student will be shown a picture of "set table" and then prompted to complete the target step. Use the prompt hierarchy for teaching this step. Once the student has 3 correct responses on the target step, add the second to the last step to the sequence. The student should complete the remaining step(s) independently. Indicate the prompt level required to complete the step.</td></tr>
<tr><td colspan="5" align="center">Task Analysis Data Collection</td></tr>
<tr><td>Steps</td><td colspan="4">Date:</td></tr>
<tr><td>1. Put placemat in front of chair #1</td><td></td><td></td><td></td><td></td></tr>
<tr><td>2. Put placemat in front of chair #2</td><td></td><td></td><td></td><td></td></tr>
<tr><td>3. Put plate/ bowl on placemat #1</td><td></td><td></td><td></td><td></td></tr>
<tr><td>4. Put plate/ bowl on placemat #2</td><td></td><td></td><td></td><td></td></tr>
<tr><td>5. Put napkin on placemat #1</td><td></td><td></td><td></td><td></td></tr>
<tr><td>6. Put napkin on placemat #2</td><td></td><td></td><td></td><td></td></tr>
<tr><td>7. Put fork on napkin #1</td><td></td><td></td><td></td><td></td></tr>
<tr><td>8. Put fork on napkin #2</td><td></td><td></td><td></td><td></td></tr>
<tr><td>9. Put knife to right of plate/bowl #1</td><td></td><td></td><td></td><td></td></tr>
<tr><td>10. Put knife to right of plate/bowl #2</td><td></td><td></td><td></td><td></td></tr>
<tr><td>11. Put spoon to right of knife #1</td><td></td><td></td><td></td><td></td></tr>
<tr><td>12. Put spoon to right of knife #2</td><td></td><td></td><td></td><td></td></tr>
<tr><td>13. Place cup above the plate/bowl #1</td><td></td><td></td><td></td><td></td></tr>
<tr><td>14. Place cup above the plate/bowl #2</td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="5" align="center">Total:</td></tr>
</table>

**Response key**

Correct = +
Incorrect = -
No response = nr

Date

**Prompt level key**
FP = full physical
PP = partial physical
M = model
G = gesture
PV = partial verbal
FV = full verbal

*Note:* This figure is the exemplar used to create both my task analysis and data collection sheets from Diana Black through Pyramid Educational Consultants, Inc. (n.d.).

*Technology*

The chosen technology for the purposes of this research was a Dell laptop and a personal iPhone 13. The iPhone 13 was used for taking videos for both video prompting and video modeling, as well as the pictures for the picture prompting strategy. The laptop was used for editing and creating each strategy's artifact. Microsoft Word and Video Editor on the laptop were

used for editing and creating each strategy's artifact. The app called "Kids to Do List" – free app on the iPhone 13, was also employed to create picture prompting, as some of the research included smart phone apps. I did not choose the apps mentioned in the studies, because they cost money and may have been expensive for schools and families.

*Creating the Artifacts*

The artifacts were created by filming in my house, which took place with my family as participants. To produce the video prompting and picture prompting, no additional help was needed as the materials could be produced by one person. However, two people were needed to create the video modeling because all steps in the task were included in one video. The portrait and natural light settings available on the iPhone 13 were effective in creating the photos for the picture prompting artifact. The iPhone 13 set to the video setting mode was the only feature required to create the artifacts for video modelling while the cinematic setting feature was required for video prompting. Different video settings were used due to the size of videos because video prompting videos lasted ten to twenty seconds whereas the video modelling video lasted two to four minutes. The size of the video was critical to using editing software.

*Editing the Artifacts*

The Dell laptop was used for editing the artifacts. Video prompting was edited specifically, through the Video Editor on the PC laptop. Written instructions were added to each video using the Video Editor software. Due to the length of the video for video modeling, the same software was inaccessible hence another adult was needed to edit the video. Microsoft Word was used to format and add written instructions for the picture prompting artifact. The choice to include written instructions with all three strategies to create a more inclusive artifact,

was important because displaying the information in more than one modality increases

understanding for the learners. The videos also included verbal instructions. No verbal

instructions were included with picture prompting because it used a paper format. All the

artifacts were uploaded onto YouTube and my website, https://nharder.weebly.com, allowing for

transferability between settings.

*Using the Artifacts*

The final part of the process used all three artifacts, with my family members as

participants. The subjects included a male in grade one, a female in grade three and a male in his

mid-forties, who are all neurotypical. They were required to set the table on three different days

using each artifact (one artifact per day). This was completed during the weekend, as it provided

more time for being home during meals. Each person completed the task for a different meal.

The results from using each artifact during this process is discussed in Chapter Four.

Each aspect of using the student-centred strategies can be found in the Appendices and

are also available on my website. It includes task analysis (Appendix 1), general data collection

sheet (Appendix 2), setting the table data collection sheet (Appendix 3), video prompting videos

(Appendix 4), video modeling video (Appendix 5), and picture prompting (Appendix 6). Each

aspect of the student-centred strategies can also be found on my website

https://nharder.weebly.com/ as demonstrated in Figure 13.

**Figure 13**

*Artifacts on Website*
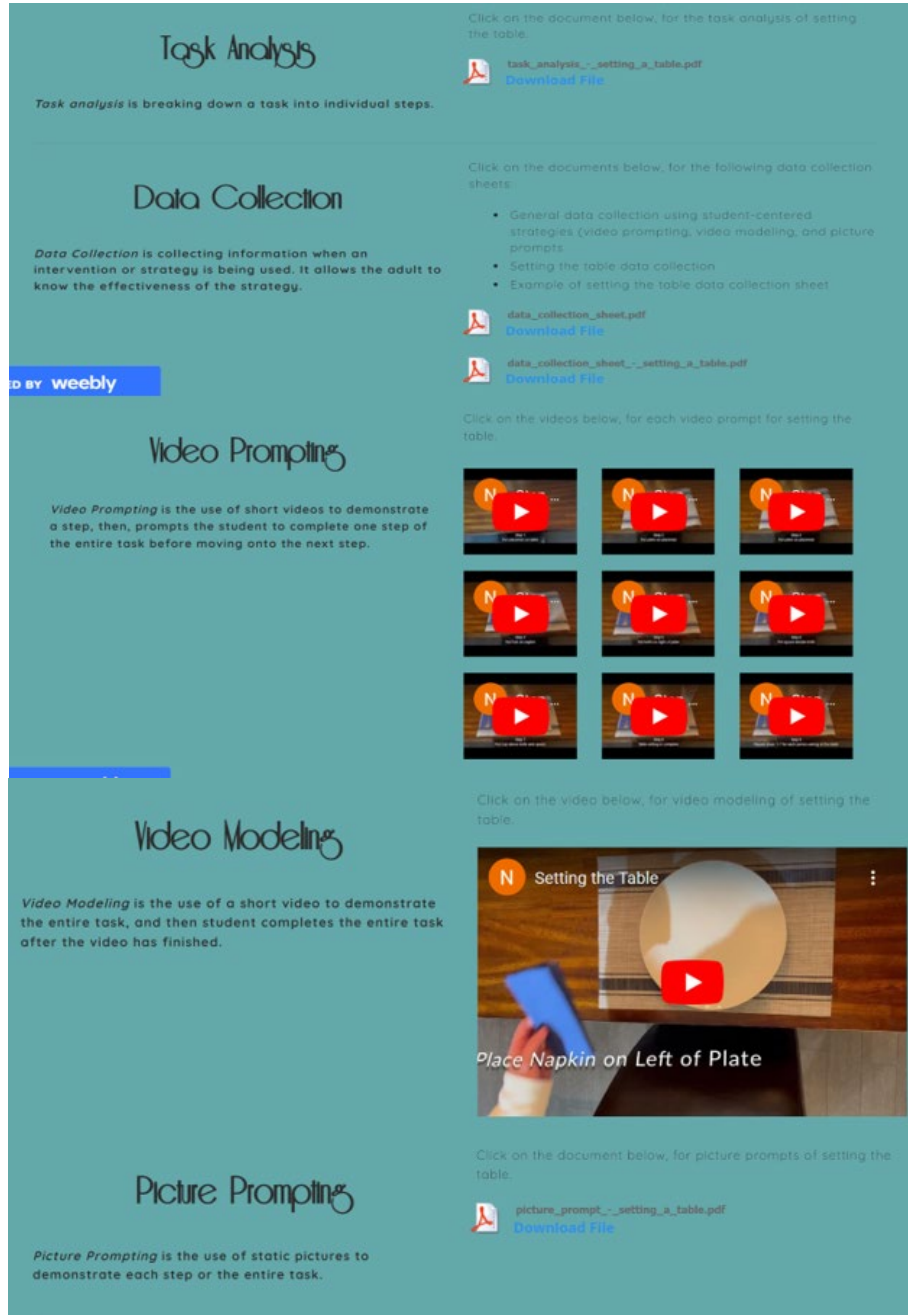


*Note:* The figure illustrates how the artifacts were uploaded on my personal website.

# Results

In Chapter 4, each student-centred strategy will be discussed, showing the results from research studies or literature, as well as my personal reflections on each artifact. When analyzing the results out of thirty-two research articles that met the current research criteria, fifteen studies chose video prompting, twelve chose video modeling, and five chose picture prompting as an effective strategy for teaching functional daily living skills. There were thirteen distinct reasons provided within the research studies as the rationale for choosing one of the student-centred strategies as seen in Figure 14. These included attention on strategy, cost, social validity, independence, amount of information, lowered prompts, memory retention, reliance on adults,

**Figure 14**

*Reasons for Effectiveness*
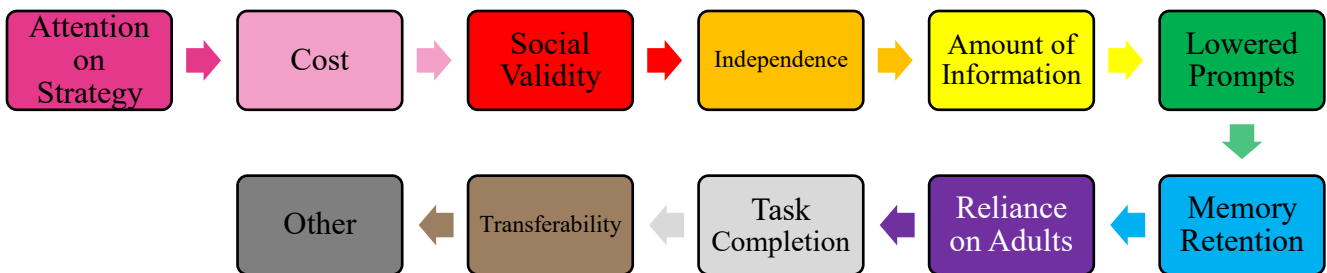


*Note:* This figure outlines the explanations provided during the research process for the effectiveness of using the student-centred strategies for teaching functional daily living skills in multiple settings.

task completion, transferability, in addition other reasons such as personal situation, reinforcing distractions, and familiarity of task or strategy.

When reflecting on my teaching practice over the last five years, one situation came to mind. Student A's mom came to me about wanting to find alternative education for her child to teach functional daily living skills as she believed it was too difficult to teach these in the mainstream school system. Through conversation, the main skills included setting a table,

making a snack or sandwich, and washing dishes. Making education meaningful for Student A was important and we worked to create hands-on learning. I used picture prompting to support Student A's learning, but due to COVID, we were unable to complete the program we created. Transferability from school to home was at the forefront of the program we created. We wanted strategies and resources that could be used both at school and at home and could be transferred to another school or community program.

I previously taught functional daily living skills through my school's life skills program. This was a challenge as I did not realize the complicated nature of most tasks. I often took steps for granted, missed steps or did not properly task analyze. My research was enhanced when I decided to create each strategy, where I learned first-hand that task analysis is the most difficult part of creating such resources. I have created all three strategies in my teaching practice before, but I do not believe I handled any of them correctly, due to improper task analysis or not providing enough information during each video or for each picture. This research has shown the possibilities and challenges of these strategies, and I look forward to including them in my teaching practice in the future.

**All Three Strategies**

**Figure 15**

*Common Result Reasons*
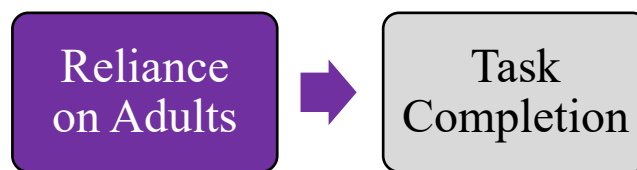


*Note:* This figure illustrates the common result reasons for all three student-centred strategies.

There were some commonalities among all three student-centred strategies. These included reliance on adults and task completion, as seen in Figure 15. Reliance on adults was a negative reason present in twenty out of thirty-two research studies. It also presented as a negative reason within literature reviews, and other studies outside my criteria that were reviewed. Adults are necessary to produce each picture or video and edit the resource for all three student-centred strategies (Cannella-Malone et al., 2013; Cannella-Malone et al., 2016; Carrera et al., 2021; Cihak et al., 2008; Mechling et al., 2008; Mechling et al., 2009; Sigafoos et al., 2005; Van Laarhoven et al., 2010; Wu et al., 2019; Yakubova et al., 2021; Yavuz et al., 2019). As neurodiverse students are learning the skills, they must rely on an adult to create the tool needed to learn the task; it is unrealistic to expect the participants to create strategy materials.

However, there are opportunities to include students when applicable. Involving students in the creation of the strategy aids is student-centred, as the student is a part of the process. However, Cihak et al. (2008) noted that it increases the time and effort on the adult to do so and therefore does not often include students in the creation of the strategy visuals. In the cases with video prompting and video modelling, adults also aided with running the videos with technology, as the skills did not focus on how to use technology, but rather focused on the functional daily living tasks.

Twenty-five out of thirty-two research studies resulted in task completion when using one of the student-centred strategies (Alberto et al., 2005; Alexander, 2013; Alzyoudi et al, 2015; Cannella-Malone et al., 2006; Cannella-Malone et al., 2013; Cannella-Malone et al., 2016; Cannella-Malone et al., 2018; Carrera et al., 2021; Cavkaytar et al., 2009; Cihak et al., 2008; Gardner et al., 2019; Graves et al., 2005; Kanfush et al., 2019; Keen et al., 2007; Mechling et al., 2008; Mechling et al., 2009; Sigafoos et al., 2005; Taber-Doughty et al., 2011; Tee et al., 2005;

Van Laarhoven et al., 2009; Van Laarhoven et al., 2010; Wertalik et al., 2018; Wu et al., 2019; Yakubova et al., 2021; Yavuz et al., 2019). This is significant because each specific strategy was found to be effective in supporting participants to complete the task; hence, they can be evaluated equally. It is important to note that although all three strategies allowed participants to complete tasks during the intervention stage, it did not always lead to independence during the maintenance stage, within the studies. The rest of Chapter 4 discusses each reason for the specific student-centred strategy.

**Video Prompting**

Video prompting is the use of short videos to demonstrate a step in a task, then prompts the student to complete one step before moving onto the next step in the task. Video prompting presented nine reasons for its effectiveness. As seen in Figure 16, the remainder of this section on video prompting will outline each reason in detail.

**Figure 16**

*Results for Video Prompting*
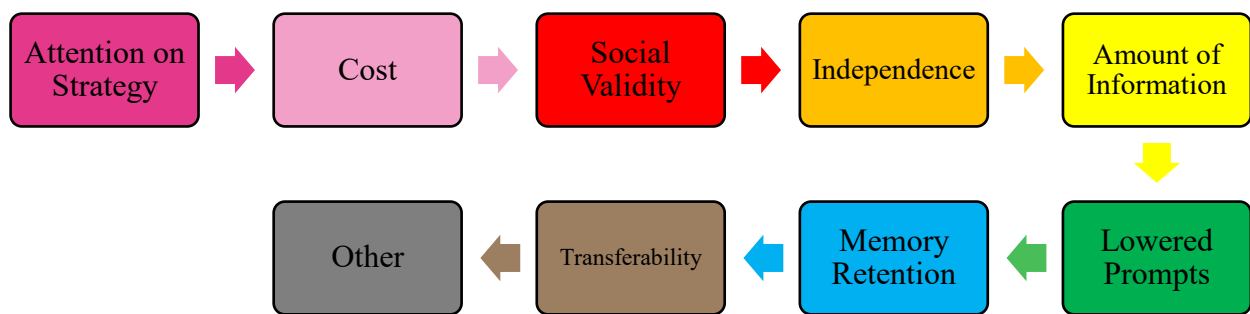


*Note:* This figure depicts the explanations for effectiveness for using video prompting to teach functional daily living skills in multiple settings.

Within nine studies, attention on the strategy was outlined as a reason for the effectiveness of video prompting. Attention was defined as motivation to complete the task and enjoyment during

intervention. Cannella-Malone et al.'s (2013; 2016) and Sigafoos et al.'s (2005) studies indicated that participants enjoyed the videos and it held their attention due to the dynamic nature of videos and as a result, video prompting provided more engagement within the environment. Whereas Carrera et al.'s (2021) study revealed that using video prompting was more socially acceptable and therefore the participants found it more motivating. Gardner et al.'s (2005) study proposed that using video prompting was considered novel to the participants and therefore held their attention. This outlines that the dynamic nature of videos creates motivation and attention on the prompts, to build independence and task completion for students with exceptionalities.

Cost was outlined as both a negative (high cost) and positive (low cost) within the literature reviewed. In Cannella-Malone et al.'s (2016) study, cost was both positive and negative. Cannella-Malone et al. (2016) chose to use an iPhone, which had high initial costs, but most people have a cell phone that can take videos; therefore, it would incur no additional cost to those individuals. Carrera et al.'s (2021) study indicated that cost was low and therefore a positive reason for choosing video prompting. Carrera (2021) chose a laptop, provided by the school. As the cost of the laptop does not come from the personal accounts of the staff but is provided by the school district, the cost is none to the individual teacher.

In both Sigafoos et al. (2005), Van Laarhoven et al.'s (2009), Van Laarhoven et al.'s (2010) studies, cost was negative because the technology used was expensive. Sigafoos et al. (2005), Van Laarhoven et al., (2009), and Van Laarhoven et al. (2010) chose to use a laptop, which has higher costs than an iPad or tablet. Cost can be a deciding factor for choosing video prompting.

Social validity was defined as being socially acceptable and socially important. Co-workers, family, and friends when interviewed in Van Laarhoven et al.'s (2009) research study, felt using a hand-held device with the video prompts was acceptable within the community

setting. The use of technology and watching videos is considered a socially acceptable activity amongst both neurodiverse and neurotypical students; as most students are on their devices watching videos, it allowed for social conversations to happen around the videos (Cannella-Malone et al., 2016). As students with exceptionalities do not want to stand out from their neurotypical peers, using video prompting on a hand-held device makes it more socially acceptable.

Independence was outlined in seven research studies. This was surprising as it was lower than expected for the effectiveness of using video prompting. It was tracked during the maintenance portion of the studies. The *First Peoples Principles of Learning* state that learning takes time and patience, this stands true within video prompting (Chrona, 2019; *First Peoples Principles of Learning,* n.d.). Due to the nature of varying disabilities and needs, many students would continue to use the intervention long past what was able to be accomplished within the study period or at certain times in the school year (Cannella-Malone et al., 2016; Chrona, 2019; *First Peoples Principles of Learning,* n.d.).

Independence comes in stages; for example, one participant from Cannella-Malone et al.'s (2013) study began unwrapping the cord of a vacuum before the video prompt had finished for that step in the task. This is worth noting because students can self-fade steps towards greater independence and as video prompting is broken down into videos for each step of a task, fading one step is easily done. Sigafoos et al.'s (2005), Van Laarhoven et al.'s (2009), and Van Laarhoven et al.'s (2010) studies completely took away the intervention, and two out of three participants could maintain eighty to one hundred percent when completing the steps in the task. Learning the task step by step instead of in its entirety, enabled such success (Sigafoos et al., 2005; Van Laarhoven et al., 2009; Van Laarhoven et al., 2010).

Independence is further outlined by stating that video prompting falls closer to least intrusive prompts in the prompt hierarchy, as seen in Figure 2, and therefore it is easier to build independence when the prompt is not needed (Wu et al., 2019). Finally, video prompting builds more independence because it takes the adult out of the intervention (Yakubova et al., 2021). Students are not relying on adults for instruction, but rather watching a video, hence making it easier to fade out support in the future. Therefore, video prompting builds independence in various ways.

The amount of information given plays a role in the effectiveness of video prompting. Video prompting is a dynamic visual which automatically incorporates more information than a static visual. Five studies outlined the importance of the amount of information being used within the student-centred strategy (Cannella-Malone et al., 2013; Carrera et al., 2021; Gardner et al., 2019; Mechling et al., 2008; Sigafoos et al., 2005). The amount of information was seen as both a positive and negative within these studies. Because video prompting came with both verbal, visual, and written instructions students were able to use their strengths to follow the type of instruction from which they learned best (Cannella-Malone et al., 2013). When comparing video prompting with video modeling, video prompting has less information in each video thus making it easier to follow (Sigafoos et al., 2005). The amount of information given matters when choosing an appropriate student-centred strategy to teach functional daily living skills.

Lowering prompts differs from independence as it fades the prompts no longer needed in small stages, while building towards independence. Four studies noted the ability to lower the prompts as a reason to choose video prompting over other student-centred strategies (Cannella-Malone et al., 2013; Gardner et al, 2019; Sigafoos et al., 2005; Van Laarhoven et al., 2009; Van Laarhoven et al., 2010). Video prompting easily fades the prompt, because you can only use the

videos of the steps that are not yet learned (Gardner et al., 2019; Sigafoos et al., 2005; Van Laarhoven et al., 2009). This is significant because prompt fading is built naturally into video prompting and no additional work needs to be done to fade the prompts. It allows for differentiation of the prompts, thus allowing video prompting to be more student centred.

Memory retention is the ability to remember tasks. This was noted in six studies as an important reason to choose video prompting (Cannella-Malone et al., 2006; Gardner et al., 2019; Mechling et al., 2008; Wu et al., 2019; Yakubova et al., 2021; Yavuz et al., 2019). Due to the fact that video prompting gives information through short videos and then allows the student to practice the step, it results in quicker muscle memory (Gardner et al., 2019; Mechling et al., 2008; Wu et al., 2019; Yakubova et al., 2021; Yavuz et al., 2019). When students learn things in smaller, more manageable chunks, they can engage the memory of completing those tasks faster and for a longer amount of time.

Transferability of functional daily living skills is vital for students with exceptionalities because such skills are used in a variety of settings. 10 out of 15 studies on video prompting highlighted that it can be transferred between settings (Cannella-Malone et al., 2016; Cannella-Malone et al., 2018; Carrera et al., 2021; Gardner et al., 2019; Graves et al., 2005; Van Laarhoven et al., 2009; Van Laarhoven et al., 2010; Wu et al., 2019; Yakubova et al. 2021; Yavuz et al., 2019). These skills are often taught in school but used daily in the home, hence transferability of strategies to more than one setting is key. Although transferability was presented in 10 articles, this was low because I was searching for transferability between settings.

All 10 articles observed that video prompting could be used for transferability of knowledge between settings, but much depended on the choice of technology used (Cannella-

Malone et al., 2016; Cannella-Malone et al., 2018; Carrera et al., 2021; Gardner et al., 2019; Graves et al., 2005; Van Laarhoven et al., 2009; Van Laarhoven et al., 2010; Wu et al., 2019; Yakubova et al. 2021; Yavuz et al., 2019). Handheld devices such as smart phones, iPads, or tablets were better choices for transferability than a laptop (Van Laarhoven et al., 2009; Van Laarhoven et al., 2010). Transferability is key when looking at functional daily living skills because most of those skills are used outside of school yet taught within the school system.

There are other explanations for the effectiveness of video prompting that did not fit under one of the previously discussed results i.e., cost, social validity, or transferability. These explanations include previous experience with video prompting (Cannella-Malone et al., 2006; Van Laarhoven et al., 2010), does not fit every student (Mechling et al., 2008), or personal factors such as death of a family member or mental illness such as depression (Sigafoos et al., 2005). These additional reasons can impact the effectiveness of video prompting both positively and negatively.

**Video Modeling**

Video modeling is the use of a short video to demonstrate the entire task, and then the student completes the entire task after the video has finished. Research-based literature on this outlined seven out of nine explanations, thus showing that video modeling is an effective strategy. None of the articles outlined either cost or lowering prompts as a reason for video modeling's effectiveness as a student-centred strategy to teach functional daily living skills. One reason for not including lowering prompts is that through video modeling there is only one prompt and if the video modeling was removed, then full independence would be established. As seen in Figure 17, the remainder of this section on video modeling will outline each reason in detail.

**Figure 17**

*Results for Video Modeling*
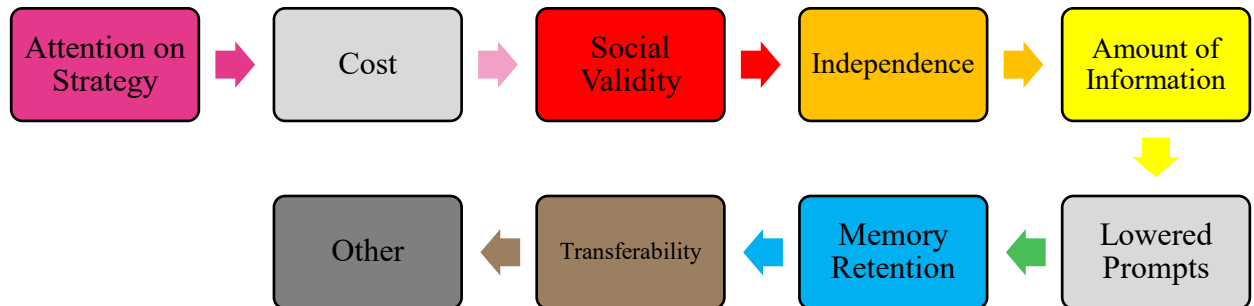


*Note:* This figure depicts the explanations for effectiveness for using video modeling to teach functional daily living skills in multiple settings. The light grey boxes depict the results that were excluded from video modeling.

Attention to the video modeling strategy was outlined in five studies. Participants were motivated to attend the intervention sessions because they enjoyed watching video modeling in action (Alzyoudi et al., 2015; Cihak et al., 2008; Mechling et al., 2009). It is noteworthy, for future research, that the different perspectives taken in video modeling (self, other, or point-of-view) impacted attention to the video. Participants particularly liked seeing themselves in the videos, from the perspective of self (Cihak et al., 2008; Mason et al., 2013; Sancho et al., 2005). It also functioned as a reinforcement for learning the task (Alzyoudi et al., 2015). Individual learning preferences impacted both positively and negatively on participants' attention to the video models (Mechling et al., 2009). This is vital because while one strategy might work best for one student, it may not work for another. There is a no-one-size-fits-all strategy.

Social validity is the bedrock of social acceptance. This is important for many students with exceptionalities because they do not want to appear different. Three studies outlined social validity as a reason for choosing video modeling (Alzyoudi et al., 2015; Taber-Doughty et al., 2011; Wertalik et al., 2018). They argued if teachers and paraprofessionals felt this strategy

would be socially accepted by their peers. Since video technology is accessed through technology and in video format, both teachers and paraprofessionals felt it would be acceptable among their neurotypical peers (Alzyoudi et al., 2015; Taber-Doughty et al., 2011; Wertalik et al., 2018). It is key to show that using technology and video is more socially acceptable than pictures, by their peers.

Independence was outlined as a positive reason for video modeling within four research studies. This was surprising because the main goal of learning functional daily living skills is increased independence, and therefore should be a reason for the effectiveness of a strategy. However, the *First Peoples Principles of Learning* explain that learning takes time and patience (Chrona, 2019; First *Peoples Principles of Learning,* n.d.). Though full independence was not established within the research study, more independence through independent steps within the task was accomplished (Keen et al., 2007; Mechling et al., 2009; Taber-Doughty et al., 2011). Cihak et al. (2008) mentioned that while using video modeling, students began and finished their task quicker as they only watched one video. With more time, more independence might be established.

The amount of information in each video was described within the research articles as both positive and negative. Positively, more information was provided within video modeling as compared to static pictures found in picture prompting (Alzyoudi et al., 2015; Keen et al., 2007; Taber-Doughty et al., 2011). Multi-model stimuli through video can use students' strengths towards their learning. For example, students with ASD could have strengths in visual processing and learning because their strength of visual processing is more beneficial than traditional teaching methods (Alzyoudi et al., 2015). However, it was also negative, because it provided too much information at one time, making it difficult to remember each step of the task once

participants had finished watching the entire task video. Although none of the research articles outlined this negative impact, when I evaluated my artifacts with my own family, this came up as reason for it being less effective.

Memory retention was outlined in Kanfush et al.'s (2019) study when discussing the effectiveness of video modeling. During the maintenance portion, which took place six weeks from intervention, Kanfush et al.'s (2019) study showed that skill acquisition was established for some, but not all steps within the task. This is significant as video modeling does not retain the same memory as the other two student-centred strategies. This is due to the amount of information given in one video rather than segmenting by steps in separate videos or separate pictures.

Transferability was mentioned in four studies out of 12 studies on video modeling (Alzyoudi et al., 2015; Kanfush et al., 2019; Keen et al., 2007; Mason et al., 2013). Many different facets of transferability appeared within the research studies. Mason et al. (2013) established that using specific technology allows the strategy to become portable. Whereas Kanfush et al. (2019) determined that transferability can be built without changing the setting but changing the materials. For example, using different utensils, measuring implements, or cookware compared to what is in the video; this would allow students to engage varied materials found in each kitchen setting. Keen et al. (2007) used different settings including home and school to evaluate the effectiveness of video modeling to teach toileting.

As students increased their ability to toilet independently, it shows the ability of video modeling to be used within two settings (Keen et al., 2007). This opens the potential of video modeling for transferability to multiple settings through looking at the variety of ways to differentiate the use of the strategy in building transferability.

Other reasons besides the above mentioned were outlined in both Alzyoudi et al. (2015) and Sancho et al.'s (2010) research studies. Alzyoudi et al. (2015) concluded that video modeling was reinforcing the skills each time the video was watched. Sancho et al. (2010) established that there was a familiarity with the task and therefore this could impact the results. Alzyoudi et al. (2015) also pointed out that video modeling was negatively distracting to the participants due to the length of the video. It is important to see there are both positive and negative additional explanations that can impact the effectiveness of using video modeling.

**Picture Prompting**

Picture prompting is the use of static pictures to demonstrate each step or the entire task. It is worth noting that attention on strategy, cost, lowered prompts, and transferability were not given as reasons for the effectiveness of picture prompting in any of the research studies I reviewed, (See Figure 18). There was no explanation why these were not highlighted as reasons, either positively or negatively, for the effectiveness of picture prompting.

**Figure 18**

*Results for Picture Prompting*
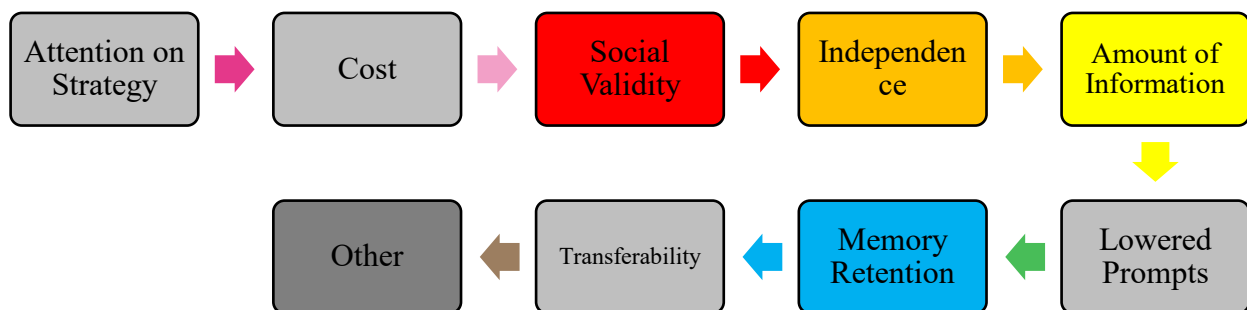


*Note:* This figure depicts the explanations for effectiveness for using picture prompting to teach functional daily living skills in multiple settings. The light grey boxes depict the results that were excluded from picture prompting.

Alexander's (2013) study showed that picture prompts were more effective for longer tasks as it was easier to find the information needed. This is socially important for students

because no one wants to spend a long time trying to find the information they need, and students want to complete the task quickly to move onto something more enjoyable. In addition, Mechling et al. (2008) described that independence is built through mimicking real life. Picture prompting allows pictures to be taken in real life settings and easily differentiated for each setting the task might take place within. Alberto et al. (2005) explains that picture prompting is effective at building independence.

The amount of information was significant for the effectiveness of picture prompting. It allows the adult to control the amount of information that is included in each picture. It does not include the background noise, movement, or distractions such as lighting (Alberto et al., 2005; Brill, 2011). Picture prompting uses less information, making it an effective tool. Similarly, memory retention was more effective when less information was provided (Alexander, 2013; Mechling et al., 2008; Mechling et al., 2009). Interestingly, Alexander (2013) argued that less information was a negative quality of picture prompting, as it did not provide all the key information needed to complete a more complex task. For example, during cooking activities picture prompting would exclude which way one turns the dial to heat the element on the stove; but video prompting, and video modeling would include that key information.

**Artifacts**

When evaluating all three student-centred strategies within my own family, nine of the 11 explanations found in research-based literature held true. Due to the factor of using my own family, I was unable to explore a few of the reasons presented in literature including transferability, as seen in Figure 19. The remainder of Chapter 4 will focus on a personal

**Figure 19**

*Results for Artifacts*
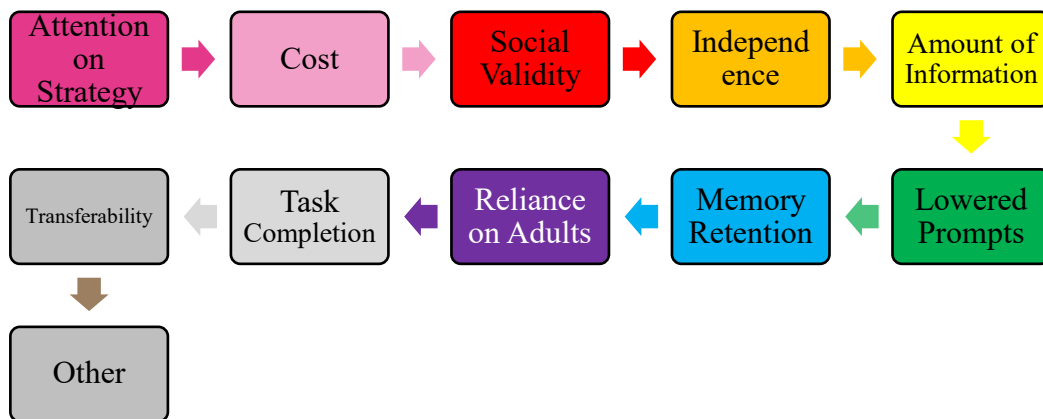


*Note:* This figure depicts the explanations for effectiveness of using the artifacts with my family. The light grey boxes depict the results that were exclude from my discussion with my family.

reflection of creating and using each student-centred strategy. I have divided this section into dynamic and static visual prompts because the reasons were similar between visual prompting and visual modeling. Visual prompting and visual modeling fall under dynamic visuals, while picture prompting falls under static visuals.

*Dynamic vs Static Prompting*

Attention to strategy was brought up within this study with my family. When trying the video prompting artifact at home with my family, I found that their attention on the short video prompts differed for each person. Two found they liked the ability to complete the step right afterwards through both video prompting and picture prompting, as their attention held due to the short nature of the video or picture; while another found that aspect distracting because they

were anticipating the next step, and therefore wanted to work ahead, and the video prompting did not permit this. This is key as different individuals found video prompting and picture prompting to be more attentive and more distracting. It shows the conflicting factors within the reason for each strategy.

However, when trying the video modelling artifact at home, video modelling was found to be the most distracting. Due to the video's length, as seen in Figure 20, less attention was given to

**Figure 20**

*Length of Video Modeling vs Video Prompting*
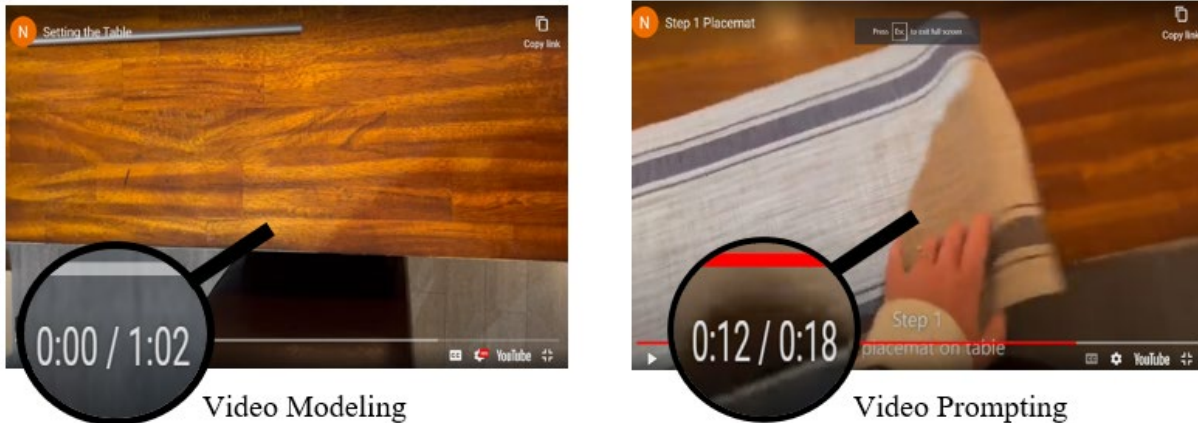


*Note:* This figure illustrates the different video lengths used in video modeling (1:02) and video prompting (0:18).

the video and my family wanted to begin completing the task while the video modeling video was still playing. They did not want to forget the steps. Finally, while testing picture prompting, their attention held because they had to read the instructions in addition to looking at the static pictures. This is worth noting, because the pictures were smaller making them more difficult to

see (See Figure 21). It used more academic skills including reading and information processing to complete the task.

**Figure 21**

*Size of Images and Text in Picture Prompting*
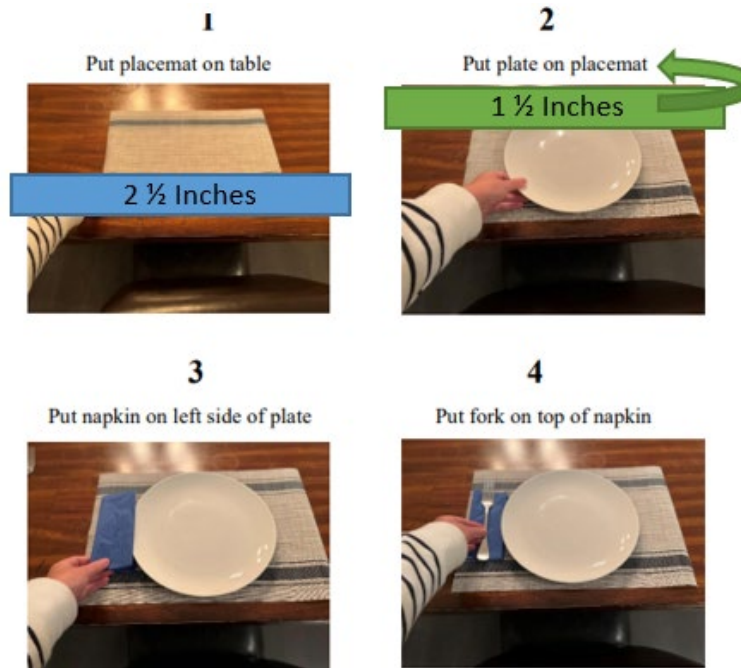


*Note:* This figure illustrates the size of text and images used in picture prompting.

Cost was something I considered. With many families I have worked with over the years, financial costs were a concern. Therefore, when I created my video prompting and video modeling artifacts, I used devices I previously purchased or borrowed, at no cost to myself. I chose to edit on my district-provided laptop, incurring no personal costs. I also opted to record videos on my personal iPhone. This was a device I had previously purchased and therefore did not experience any financial costs during the production of my artifact for video prompting or

video modeling. I selected a free app, as seen in Figure 22, on my iPhone instead of purchasing

**Figure 22**

*Free App for Picture Prompting*
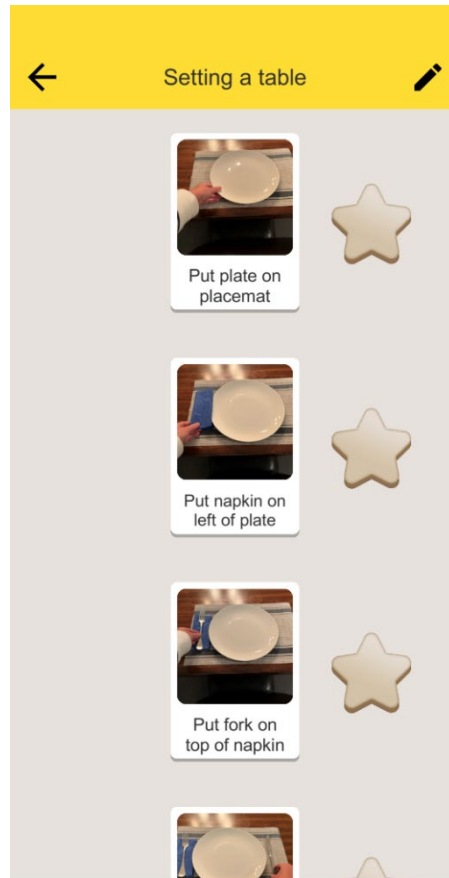


*Note:* This figure is a screen shot of "Kids to Do" free app found on the Apple iPhone. It was used as an example of picture prompting through an app on a smart phone.

the paid apps used in many research studies.

Since I already owned the technology used for making and editing the videos, there was no cost to me. I also used the same district-issued laptop to edit my picture prompting artifact and my personal iPhone to take the pictures, again at no additional cost. Within the school district where I work, students are provided with free Microsoft Office 365 accounts that can be accessed while they are a student within the district, and it also provides laptops to students who cannot provide their own. This would allow families, at no extra cost, to access technology to

watch videos if they do not own their own device. Picture prompting provides the least cost for families to transfer the strategy between settings because they can use the same static visual in multiple settings. This is vital for some families as technology is either not used in the home by choice or the financial burden may be too much.

Videos were considered more socially acceptable by my family in comparison to static pictures. I uploaded my videos to YouTube as well as my personal website, as seen in Figure 23.

**Figure 23**

*Social Media Sites with the Student-Centred Strategies*
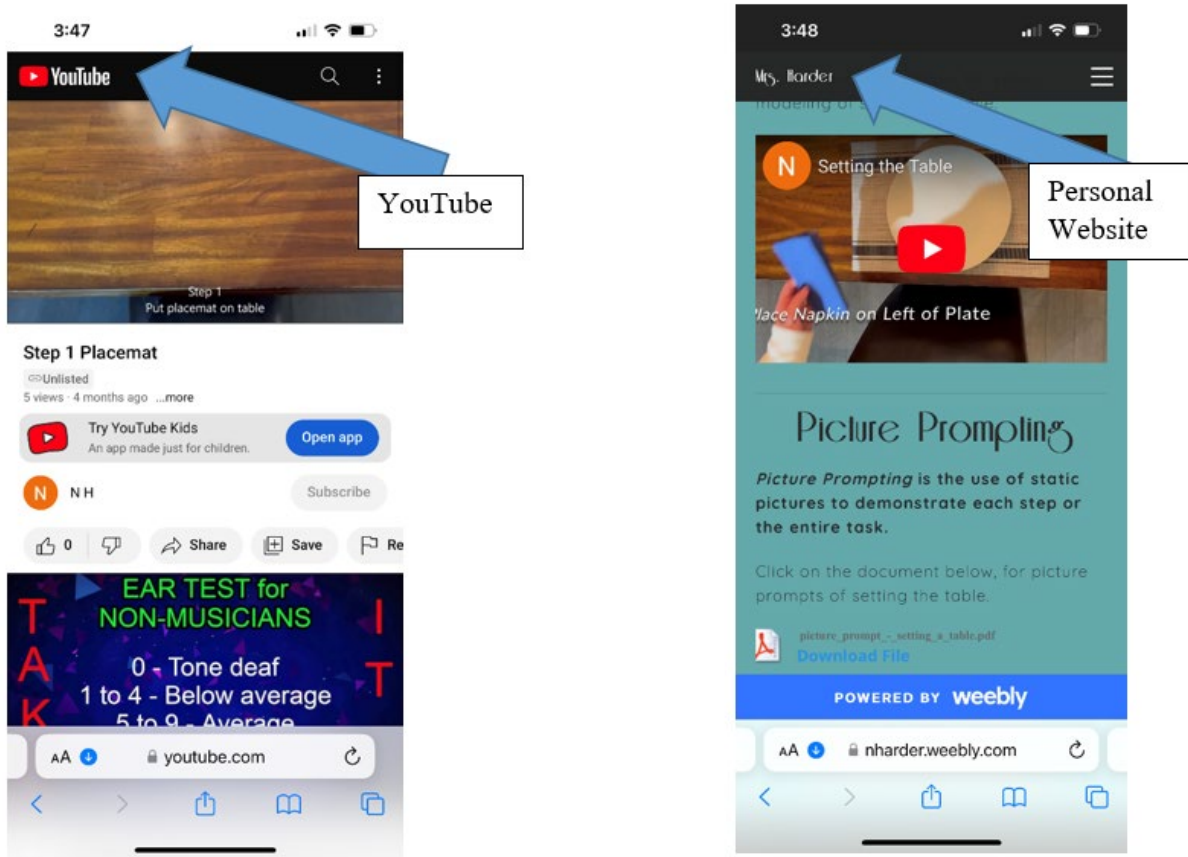


*Note:* This figure is screen shots of the artifacts being found on YouTube and my personal website. It shows the social validity of using social media as a platform for functional daily living skills.

Using social media sites like YouTube and Instagram permits the use of dynamic videos, found

in video prompting and video modeling, for learning tasks, as it is viewed as more socially acceptable. With the increase of technology being used within different settings, many older students (middle to high school) have a personal smart phone or iPad and watch videos through social media websites. Using their personal devices or school devices to watch dynamic videos to learn functional daily living skills would not appear out of the ordinary for students. This is significant because most neurodiverse students do not want to be singled out or appear different from their neurotypical peers. Using social media websites and apps on a personal device would be the same as their peers.

When evaluating the artifacts with my family, both my children (elementary-aged) pointed out that using dynamic videos would be seen as acceptable, in comparison to static-picture instructions. They also concluded that watching a video on You Tube or a website is more socially valid than viewing it on paper, because technology is such a big aspect of students' lives, as shown in Figure 24. It was also demonstrated that transferring the strategy to another setting would continue to be socially valid, as technology is used in most settings.

**Figure 24**

*Watching Functional Daily Livings Skills on YouTube*
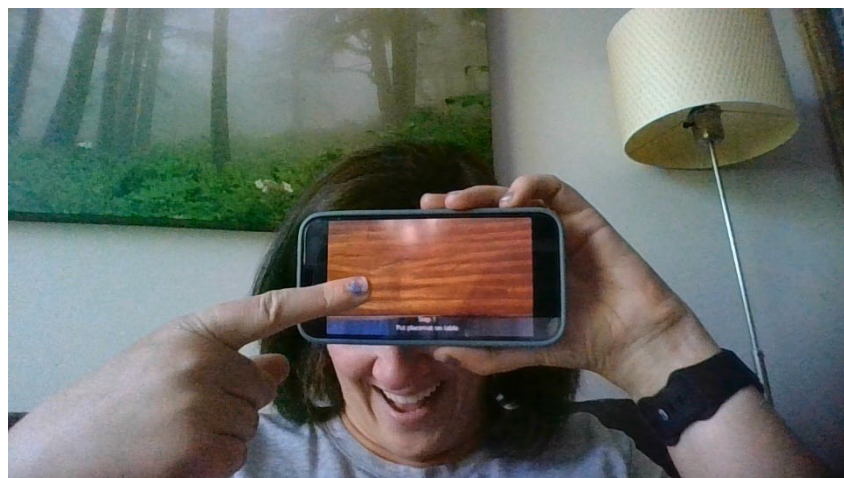


Note: This figure is a picture of me using the video for setting the table on their personal device through the platform of YouTube.

Through reviewing the data collected during my study using all three student-centred strategies, all three members of my family were able to complete the entire task independently while using each specific strategy. I then asked them to complete the entire task at the next meal and they were able to complete the entire task without using the student-centred strategies. The hardest part was figuring out which side of the plate the utensils went on, especially as my husband grew up doing the exact opposite. Due to the dynamic nature of the video, my entire family was able to place the utensils on the correct side. This is noteworthy because in such a brief period, they could set the table. As we set the table daily, my family has been practicing without the student-centred strategies; as a result, they have all maintained independence on the skill of setting the table.

The amount of information contained in each video was queried when debriefing, using the artifacts with my own family. Since each video detailed a separate step during video prompting, it allowed time to complete each step, without being rushed. However, during video modeling, more information was provided once, and my family found this overwhelming. Both video prompting and video modeling presented too much information; and this was seen as a negative reason to use it. The idea of redundancy was raised; including visual, verbal, and written instruction that was considered distracting. They liked being able to read the instructions while watching the video but disliked the verbal instructions. This could easily be fixed through muting the video thus reducing redundancy to two instead of three. This is significant because they considered having more information as distracting, making it difficult to focus on remembering each step.

While picture prompting, with static pictures and the absence of verbal instructions, was found to be a good amount of information; they also found it less distracting because there was

no audio. My youngest, who is still learning to read, liked that with the pictures, one did not have to read but could review the pictures at any time or as many times as one wished, to complete the step or task. I did not find this to stand true within the literature review, due to individual's or participant's personal preferences and needs.

Similar to the amount of information, my family was able to reduce the prompts to none after using each student-centred strategy once. This shows the impact of using all three student-centred strategies as effective strategies because it worked well for my family after one viewing. However, video prompting and picture prompting allowed the ability for my family to review the step again if they missed something. Further research is needed to check the validity of this.

Memory retention was a primary reason when using the different student-centred strategies. Video prompting allowed for memory retention as it was segmented into individual steps, while video modeling was a struggle because they had to remember all the steps after the video finished. Since video prompting only shows one step and then the completion of the step instead of completing the entire task, less memory was needed. This would be particularly necessary for tasks that are more complicated. Picture prompting allowed for the positives of both. It shows the entire task while categorizing it into steps. This would be great for learners as it shows context while segmenting content. Picture prompting also allowed my family to learn at their own pace. Since they had all the instructions, they could complete the entire task quicker or slower depending on their needs. After trying all three student-centred strategies, my family was able to set the table properly, after one week.

Reliance on adults was key when evaluating my artifacts on my own family. To make each artifact, there was full reliance on an adult. I made each artifact alone or with support from another adult. Young children cannot be able to make their own student-centred strategy without

adult intervention. Another aspect of reliance on adults was setting up the videos to play. Students would not know where to find them unless they were easily accessible or taught where to find them. By uploading to YouTube and my website, students would be able to access these strategies from any device with access to the internet. My family was able to operate the videos with minimal reliance on an adult.

With each strategy, task completion was a success. My three family members were able to complete each task without needing additional prompts. This is significant because each student-centred strategy produces full task completion. In conclusion, all three student-centred strategies established both positive and negative reasons for choosing them. This shows the complexity of my research question, how do student-centred strategies impact the student's ability to complete the same functional daily living skill in another setting? The primary challenge within the research was transferability. There were other facets beyond just setting. This included transferability with people, settings, and materials. Much of the research did not include transferability between settings or the other facets. Therefore, further research needs to be conducted around the transferability of each student-centred strategy between different settings.

**Discussion**

One of the struggles with special education programs in schools is the wide variety of strategies that are available for professionals' use. Teachers and paraprofessionals have autonomy in their educational practice; hence the choice of strategy is left to their discretion, which can be different for each staff. This results in each professional implementing different strategies within special education programs. This is particularly true within programs that teach functional daily living skills. It is challenging for students because they are learning new daily living skills while

also learning new strategies. The purpose of this study is to evaluate which student-centred strategies could be used to teach functional daily living skills and be transferable to other settings. When the same strategy is used, it can be transferred not only between people but also places. This is significant because students go between more than one location and more than one person. My research question therefore investigates how student-centred strategies impact the student's ability to complete the same functional daily living skill in another setting.

There are strengths and weaknesses to each student-centred strategy. Depending on the task, each strategy could be applicable as the best choice. After completing my research, I examined a few considerations that I believed were most important for why I chose one strategy over the other two. This included ease of producing the materials, ease of transferability between settings, and ease of task completion and independence for the student as seen in Figure 25.

**Figure 25**

*Criteria for Evaluation of Choosing a Student-Centred Strategy*
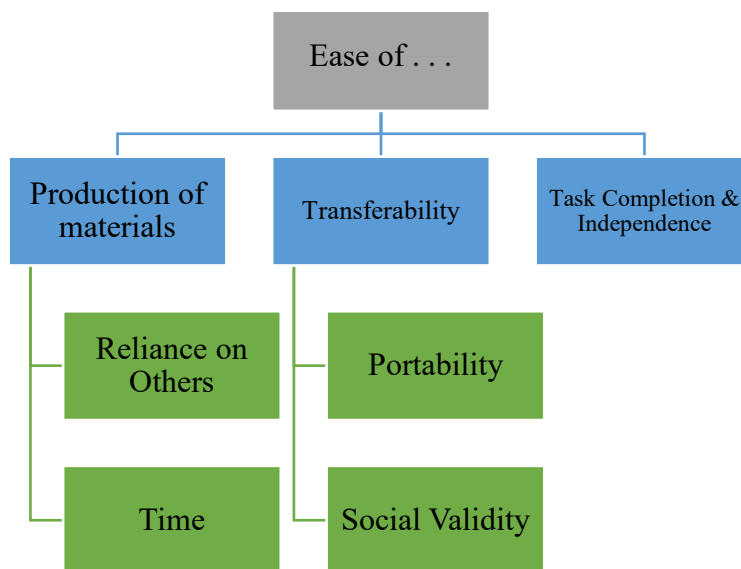


*Note:* This figure portrays the criteria used, when attaining the decision for which student-centred strategy I would use to teach functional daily living skills in multiple settings.
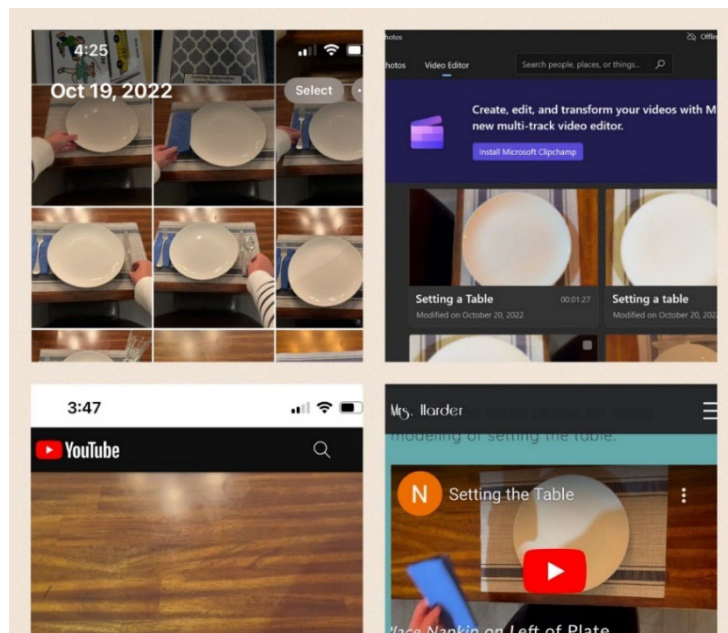
**Video Prompting**

Video prompting is the use of short videos to demonstrate a step, then prompting the student to complete one step before moving onto the next. Through my research and by completing my own artifact, video prompting videos were created without relying on another person (Cannella-Malone et al., 2018; Cannella-Malone et al., 2013; Carrera et al., 2021; Sigafoos et al., 2005). This is significant because it makes it easier for teachers to complete the videos quickly as they do not have to depend on another person for support.

However, this is dependent on the technology available, because some will be more difficult to use without relying on others. Time was another important aspect when evaluating each student-centred strategy. Teachers do not have a lot of extra time in their schedules to produce materials. Since video prompting videos need to be specific to each step, these do take more time than video modeling as it requires more videos to be produced and edited, as seen in Figure 26. Time consumed for creation, was not something highlighted within my research. This

**Figure 26**

*Video Prompting Process*



*Note:* This figure illustrates the process of creating the setting the table video prompting artifact.

is a considerable oversight of many research studies, yet I feel this could be especially important to teachers when choosing a strategy.

Transferability is key to building independence with regards to functional daily living skills. Daily living skills are not skills used solely in one setting, such as school; however, they are often taught within a school setting. For example, putting on deodorant is something that is done at home, but has been taught at school. Through technology, video prompting is very easily transferable (Cannella-Malone et al., 2016; Cannella-Malone et al., 2018; Carrera et al., 2021; Gardner et al., 2019; Graves et al., 2005; Park et al., 2019; Van Laarhoven et al., 2009; Van Laarhoven et al., 2010; Wu et al., 2019). Depending on how it is presented – whether through social media, YouTube, an app, or USB drive – it can be accessed with technology at any location. Portability is also a factor because a device is needed to view these videos.

The technology choices are vast including smart phones, tablets, or iPads; all of these are easily used within different settings (Cannella-Malone et al., 2013; Cannella-Malone et al., 2016; Gardner et al., 2019; Goo et al., 2019; Van Laarhoven et al., 2009; Van Laarhoven et al., 2010; Wu et al., 2019; Yakubova et al., 2021). For many students with exceptionalities, social acceptance is at the forefront. It is socially valid to use a handheld device in many different settings including school, home, and the community (Cannella-Malone et al., 2006; Cannella-Malone et al., 2013; Cannella-Malone et al., 2016; Carrera et al., 2021; Gardner et al., 2019; Graves et al., 2005; Sigafoos et al., 2010; Van Laarhoven et al., 2009).

Finally, the goal of using video prompting is to complete the task and to build independence for students around functional daily living skills. Every study within my research found that using video prompting produced more task completion than without video prompting (Cannella-Malone et al., 2006; Cannella-Malone et al., 2013; Cannella-Malone et al., 2016;

Cannella-Malone et al., 2018; Carrera et al., 2021; Gardener et al., 2019; Graves et al., 2005; Mechling et al., 2008; Park et al., 2019; Sigafoos et al., 2005; Van Laarhoven et al., 2009; Van Laarhoven et al., 2010; Wu et al., 2019; Yakubova et al., 2021; Yavuz et al., 2019). This was also true for the artifacts used within my own family. In fact, I found that my family has maintained those skills weeks after, without needing video prompts. Depending on the student's ability, the maintenance or length of time needed with video prompting will vary. It is advised that video prompting is used until maintenance is establish, because this will allow for more independence in a variety of settings (Cannella-Malone et al., 2013; Cannella-Malone et al., 2016; Graves et al., 2005; Sigafoos et al., 2005; Van Laarhoven et al., 2009; Van Laarhoven et al., 2010; Wu et al., 2019; Yakubova et al., 2021).

Since video prompting uses different videos for each step of the task, it is easier to fade the prompts towards independence as a student master a step. This is vital as it builds independence throughout the process by using the student-centred strategy, instead of waiting till the whole task is mastered. Video prompting provides more information through dynamic visuals than static visuals. For example, when showing how to turn on a stove, turning the dial in a specific direction is shown in dynamic visuals but not in static visuals. This is important to take this into cognizance when learning a new task.

**Video Modeling**

Video modeling is the use of a short video to demonstrate the entire task, and then the student completes the entire task after the video has finished playing. Due to the fact that video modeling uses only one video, more reliance on another person was needed (Alzyoudi et al., 2015; Cihak et al., 2008; Keen et al., 2007). I could not produce the video modeling artifact without relying on another adult. This is more challenging as it requires more people and more

time to produce each modeling video, as seen in Figure 27. The overall production of my video

modelling artifact was quicker because it was within one video (Cihak et al., 2008). However, it

**Figure 27**

*Video Modeling Process*
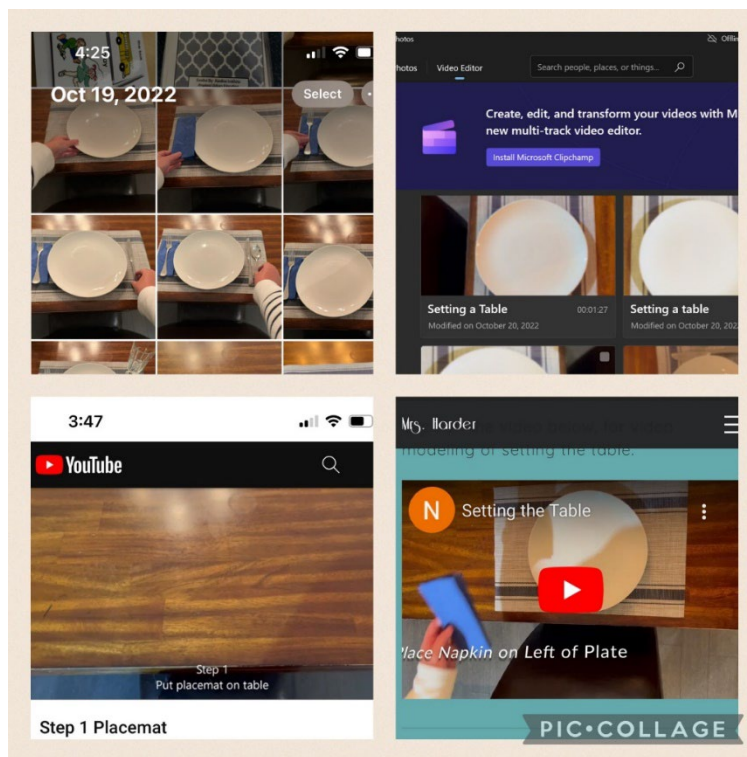


*Note:* This figure illustrates the process of creating the setting the table video modeling
artifact.

did take more than one attempt. This is key information because teachers may not have ample

time or access to another person who can support the creation of such videos. Depending on the

technology chosen, this could be easier. For example, if a laptop, tablet, or iPad is used, it can be

set up easily without reliance on another adult (Cannella-Malone et al., 2013; Kanfush et al.,

2019; Wertalik et al., 2019). The specific challenge occurs if the task involves moving around, as

videos are typically set to one viewpoint.

Similar to video prompting, transferability is attainable depending on the choice of

technology. Portability is also key with video modeling. Handheld devices such as tablets, iPads

and smart phones are key to making video modeling transferable between settings. Within my

research, portable DVD players or digital cameras were used more frequently, even though it was less transferable (Cihak et al., 2008; Kanfush et al., 2019; Mechling et al., 2008; Mechling et al., 2009). There seemed to be a disconnect between the technology chosen and video modeling, because DVD players and digital cameras are not typically considered modern technology. Since most research uses outdated technology, video modeling is less socially valid. It is more challenging for students to bring a portable DVD player with them to different settings and less socially acceptable too. With my artifact, I used my smart phone when creating and watching my video modeling product, making it more socially valid. I also uploaded my video to YouTube and my website, as seen in Figure 28; however other social media venues might be more applicable

**Figure 28**

*Functional Daily Living Skills on social media*
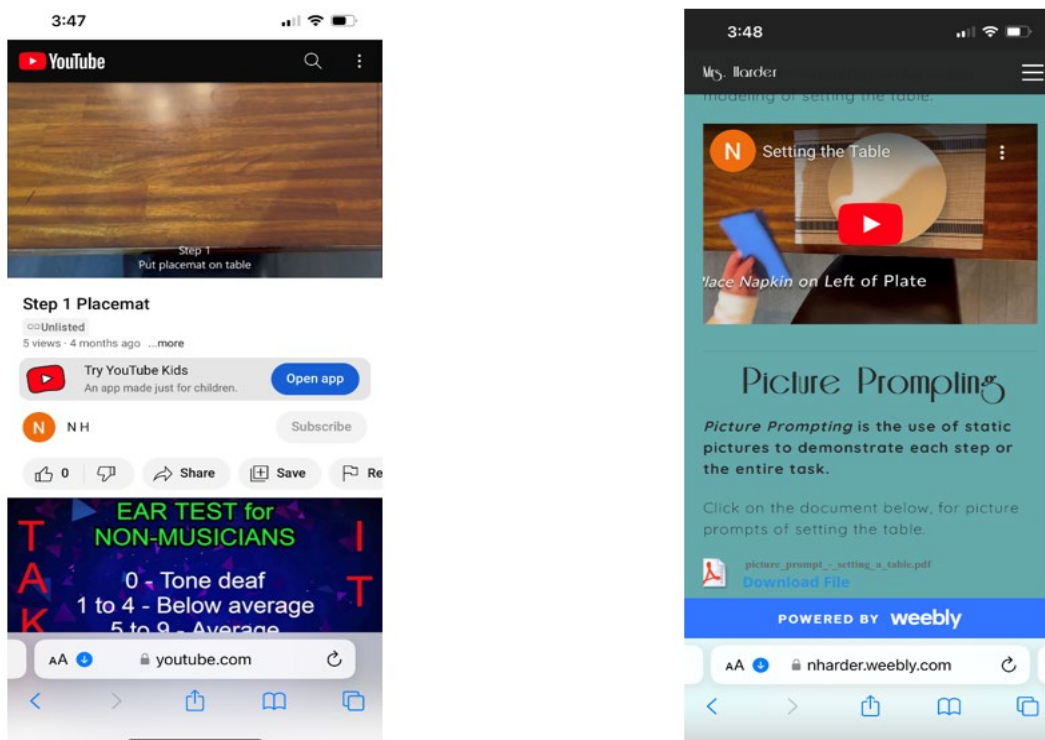


*Note:* This figure illustrates the importance of using relevant platforms to achieve social validity in different settings.

such as Tik Tok.

In conclusion, the goal of video modeling is to complete the task and to build independence for neurodiverse students. Participants within the studies who used video modeling, improved their task (Cannella-Malone et al., 2006; Cihak et al., 2008; Kanfush et al., 2019; Keen et al., 2007; Mechling et al., 2009; Park et al., 2019; Wertalik et al., 2018). Through engagement with my artifact, I noticed video modeling was preferred for completing short tasks, such as setting the table; because my family did not have to wait for each video's step. Video modeling would be effective for simpler, shorter tasks over longer more complex tasks, since longer tasks require remembering a larger amount of information. This is notable when choosing to use video modeling as it could be ineffective for specific functional daily living tasks, such as showering, because it includes more steps. Video modeling contains more information through the use of dynamic visuals instead of static visuals. This is impactful because more information is present, and therefore steps are not easily missed with video modeling.
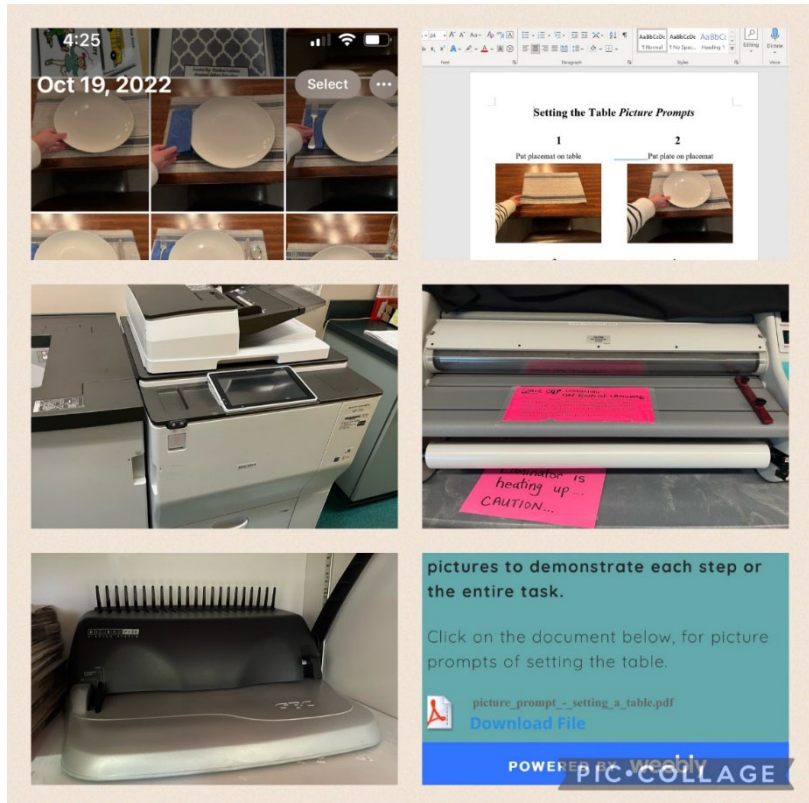
**Picture Prompting**

Picture prompting is the use of static pictures to demonstrate each step or the entire task. Through my research and by creating my artifacts, there was less reliance on another adult for picture prompting. When using static pictures, no other person was needed to produce each picture or edit the picture prompts (Alberto et al., 2005; Brill, 2011). When implementing picture prompting, no technology is used; therefore, teaching about a specific technology is unnecessary. This is vital because students do not need to rely on teachers or paraprofessionals to assist with using the student-centred strategy. On the other hand, picture prompting used technology for creation of the artifact, and took more time to produce because there were more steps contained in it. These steps include editing each picture, adding written instructions, formatting documents, printing, laminating, and binding together; to create the final picture prompting product. This

means more time engagement for teachers. This is significant to note because teachers do not have considerable time for the extra production steps in picture prompting, as seen in Figure 29.

**Figure 29**

*Picture Prompting Process*



*Note:* This figure depicts the process of creating the setting the table picture prompting artifact.

Transferability is key to enable transfer between settings for each functional daily living skill. Unfortunately, transferability was not included in the research studies for picture prompting. From my own experience, picture prompting is less portable because it is on paper. Furthermore, as each setting needs its own picture prompts, the pictures can easily get lost, or forgotten. In addition, it has less longevity as it can be damaged depending on the task for which it is used. For example, if picture prompting is used for a kitchen task, the paper could be damaged by water, food spillage, or hot surfaces. The challenge with this is that, it would have to be reproduced each time. Also, picture prompting is less socially valid because it is on paper. Students with exceptionalities want to fit in with their neurotypical peers, hence carrying a piece

of paper with picture prompts on it, does not fit with neurotypical behaviours. Students with exceptionalities would stand out in different settings if they used picture prompts.

Picture prompting is effective at task completion and building independence. In all picture prompting research that I studied, participants increased task completion using picture prompting (Alberto et al., 2005; Alexander, 2013; Mechling et al., 2008; Mechling et al., 2009). Due to the fact that picture prompting uses static visuals rather than the dynamic visuals found in video prompting or video modeling, participants depended on the strategy for longer. This threatened the goal of independence (Alexander, 2013; Brill, 2011; Mechling et al., 2009). This key information is left out when static visuals are used.

**Recommendations**

After conducting my research, making my own artifacts, and trying them at home with my own family, I decided on video prompting. Video prompting focused on students' strengths while allowing for the diversity of learners, within life skills programs. Video prompting also plays on students' strengths because it includes multi-modal attributes in each video, as seen in Figure 30. In addition, video prompting provides more information than static visuals provide. It includes dynamic visuals, written instructions, and verbal instructions. For example, students can customize their video prompts by muting the verbal instructions, if they learn best by reading.

**Figure 30**

*Multi-Model Aspects of Video Prompting*



*Note:* This figure illustrates the three modalities that occur through video prompting, thus making video prompting multi-modal.

Although this is the same for video modeling, video prompting also takes students' abilities into consideration.

Furthermore, video prompting accommodates the diversity of cognitive and developmental abilities in students with exceptionalities. It does this by segmenting each step into separate videos. Students can go as slow or as fast as they want, with video prompting. Students do not have to remember the entire task. They follow one step at a time; thus making it easier for students with diverse abilities. This leads to the building of independence, because individual video prompts can fade when students master an individual step. Through the prompt hierarchy towards independence, students can fade prompts in diverse ways by using video prompting. This can include fading the verbal prompts or fading an individual step prompt. This accommodates for a range of learners that are up-taking functional daily living skills. It also

provides prompts for only the steps needed, or only the steps the student is tackling on. Video

prompting not only promotes student strengths and supports their diversity; it also allows for

social acceptance.

Video prompting is a student-centred strategy that is both socially valid and transferable.

Video prompting can be easily published on platforms that are widely used and accepted by

students' peers. This includes YouTube, social media sites, and personal devices, as seen in

**Figure 31**

*Video Prompting on YouTube*
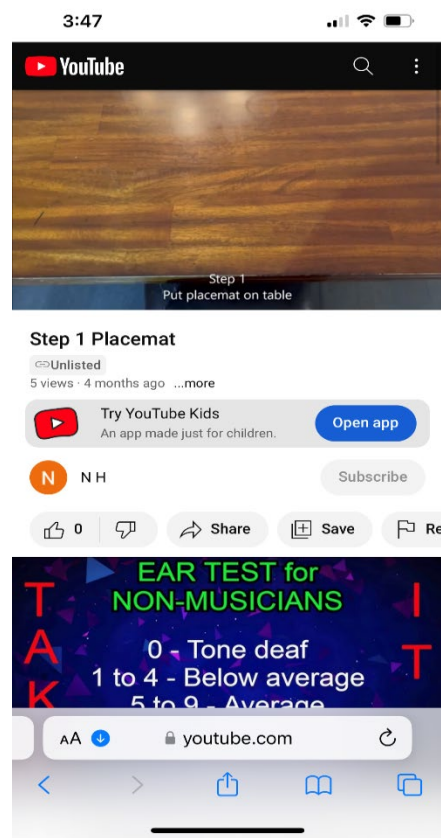


*Note:* This figure is a screen shot of the setting the table video prompting videos on YouTube
   on a personal smart phone.

Figure 31. This is socially valid amongst neurotypical peers. It is less intrusive than using picture

prompting; and stands true for video modeling too. Social validity plays a role in transferability.

If video prompting is socially valid when using technology and different online platforms, it could be easily transferred to different contexts and settings, as seen in Figure 32. Each picture

**Figure 32**

*Video Prompting using Cell Phone & Laptop*



*Note:* This figure's images include the home (left) and the school (right) illustrating the use of video prompting videos to set the table both in different settings and different types of technology.

shows a socially acceptable form of technology that can be used within different settings. It is more acceptable to use a smart phone while working at a grocery store than a book of picture prompts. Through these online platforms, it is easy to have the availability of video prompting in different settings, through Wi-Fi or downloading them onto a device. Students can easily bring a device to a store change room, their bedroom at home, or the school changeroom; to help complete the task of changing one's clothes.

Through technology, it is transferable to the parents or guardians too. Technology allows the video to be passed along to the parents or guardians – through a video sharing or streaming program, email, or on a USB – to ensure that the same strategy is deployed in a variety of settings.

From a teacher's perspective, video prompting is the easiest to produce. Before my research, I thought that picture prompting was the easiest to produce as I did not need to rely on

anyone for producing the materials. However, since making my own artifact, I have found video prompting as the easiest artifact to produce. Each video contains a single step, instead of the entire task. Each video was easier to produce, because I could set up the step and record, and video it without needing the next step. As I filmed all the videos from a student perspective, it was easy to hold my smart phone while using my other hand to complete the step. This was impossible with video modeling as I had to move to complete the entire task established in one video. Many times, I have to move away from my focal point of the table.

Time is important to teachers. Since each step is demonstrated in a single video, I made and edited each video when I had the time; instead of doing it all at once. This made the video editing process easier and shorter, as well. Though video sizes were heavy, I was able to use simple video editing software rather than needing more complicated software or assistance from another person. I produced the video prompting videos within a reasonable period.

**Limitations**

My research criteria excluded large-scale research; studies that used different skills such as academic tasks or social skills, including specific strategies produced by organizations or companies. It is worth to note that I did not include large-scale research; hence, it may not be statistically significant to existing research in the field. I limited my study to three student-centred strategies that stem from Applied Behaviour Analysis, while I excluded other strategies that did not fall into this behavioural approach to education. This could impact the validity of my study due to the challenge of research articles that do not meet my study's criteria. I did not conduct first-hand participant research with neurodiverse participants within a life skills program at school; hence, this could impact the generalizability of my study.

Another key limitation is the time it takes to create each strategy's materials. Many teachers may not want to invest the time in creating their own; however they would prefer to use already created materials. Finally, transferability was not found within each research study. This influences whether each student-centred strategy could be transferable between settings. Further research should be conducted on the transferability of each strategy to multiple settings.

**Implications for Inclusion**

There are many implications of using video prompting within inclusive settings. Video prompting could be brought to a variety of places that students frequent including the home, school, and community. This could also include school-based and community-based programs such as life and community skills, work experience, inclusive sports, day programs, or group homes; and it can be used at home with families as seen in Figure 33. Each picture in Figure 33 shows that video prompting is transferable between settings. These pictures highlighting video prompting were used by myself and my family, including our home, school, restaurant, and grandparents' home.

**Figure 33**

*Video Prompting Used in Different Settings: Home, School, Restaurant, Grandparents' Home*
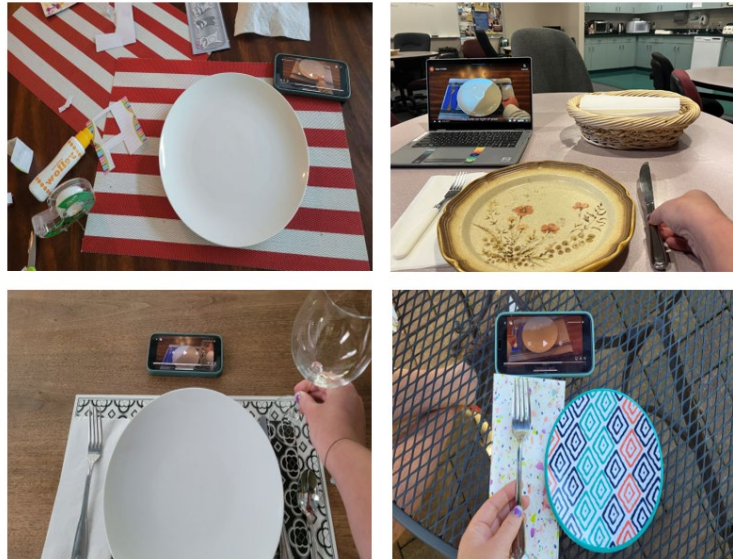


*Note:* This figure's images include home (top left), school (top right), restaurant (bottom left), and grandparent's home (bottom right). Each image depicts the use of video prompting in different settings and on different types of technology.

Video prompting can easily lead to greater independence through its ability to incorporate or fade different prompts. This is noteworthy as it builds confidence by each step, for students and allows for the celebration of small successes. Video prompting is student-centred because it plans for and acknowledges student strengths, their diversity, and provides opportunities to include them in the process of making the videos. All students have unique learning profiles; learn in diverse ways; and have different strengths. Therefore, students learn best through a variety of ways including visuals, written words, or auditory representation.

Video prompting incorporates all three of these learning styles or modalities. It is significant because video prompting celebrates student diversity, while planning for it. This allows video prompting to fall into the Universal Design for Learning, as it takes all students' needs into consideration. It also allows teachers to use the same videos who have exceptionalities while planning for their differences. Video prompting can also be used for a variety of tasks, for

example, functional daily living tasks, job skills, and leisure activities. Furthermore, video

prompting can be used for tasks that have both a large and small number of steps. Conclusively,

video prompting is my choice for student-centred strategies used within inclusive environments.

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**Appendices**

**Appendix 1**

*Task Analysis: Setting the Table*

# Task Analysis

## Setting the Table (1 place setting)

| Step | Task |
|------|------|
| 1 | Put placemat on table |
| 2 | Put plate on placemat |
| 3 | Put napkin on left of plate |
| 4 | Put fork on top of napkin |
| 5 | Put knife on right of plate |
| 6 | Put spoon beside knife |
| 7 | Put cup above knife and spoon |
| 8 | Table setting is complete |
| 9 | Repeat steps 1-7 for each person eating at the table |

**Appendix 2**

*Data Collection: General*

**Task Analysis Data Collection**          **Target Skill:** _____

| Student: | Teacher: | Date: |
|---|---|---|
| **Objective (Goal):** | | |
| **Teaching Methods:** (Circle one)<br><br>Video Prompting          Video Modelling          Picture Prompting | | |
| **Materials Needed:** | | |
| **Set-Up:**<br> • | | |

**Task Analysis Data Collection**

| Steps | Task | Date | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | |

**Prompt Levels Key**

| FP | Full physical prompt |
|---|---|
| PP | Partial physical prompt |
| M | Model |
| G | Gesture |
| PV | Partial verbal prompt |
| FV | Full verbal prompt |

**Response Key**

| + | Correct |
|---|---|
| - | Incorrect |
| NR | No response |

**Appendix 3**

*Data Collection: Setting the Table*

**Task Analysis Data Collection**                    **Target Skill:** *Setting a Table*

| Student: | Teacher: | Date: |
|---|---|---|
| **Objective (Goal):** To set a table setting for one person | | |
| **Teaching Methods:** | | |
| **Materials Needed:** | | |

| | | | | |
|---|---|---|---|---|
| Placemat | Knife | Cup | Videos (Prompt/Model) | Chair |
| Plate | Spoon | Napkin | Picture Prompt Sheet | |
| Bowl | Fork | iPad/Laptop | Table | |

**Set-Up:**
- Put placemat, plate/bowl, knife, fork, spoon, napkin on the counter
- Set-up technology for playing the video (if needed) & push play (if needed)

**Task Analysis Data Collection**

| | | **Date** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Steps** | **Task** | | | | | | | | | | | | |
| 1 | Put placemat on table | | | | | | | | | | | | |
| 2 | Put plate on placemat | | | | | | | | | | | | |
| 3 | Put napkin on left of plate | | | | | | | | | | | | |
| 4 | Put fork on top of napkin | | | | | | | | | | | | |
| 5 | Put knife on right of plate | | | | | | | | | | | | |
| 6 | Put spoon beside knife | | | | | | | | | | | | |
| 7 | Put cup above knife and spoon | | | | | | | | | | | | |
| 8 | Table setting is complete | | | | | | | | | | | | |
| 9 | Repeat steps 1-7 for each person eating at the table | | | | | | | | | | | | |

**Prompt Levels Key**

| FP | Full physical prompt |
|---|---|
| PP | Partial physical prompt |
| M | Model |
| G | Gesture |
| PV | Partial verbal prompt |
| FV | Full verbal prompt |

**Response Key**

| + | Correct |
|---|---|
| - | Incorrect |
| NR | No response |

# Appendix 4

*Video Prompting: Setting the Table*



Step 1
Put placemat on table



Step 2
Put plate on placemat



Step 3
Put napkin on left of plate



Step 4
Put fork on napkin



Step 5
Put knife on right of plate



Step 6
Put spoon beside knife

Step 7
Put cup above knife and spoon



Step 8
Table setting is complete



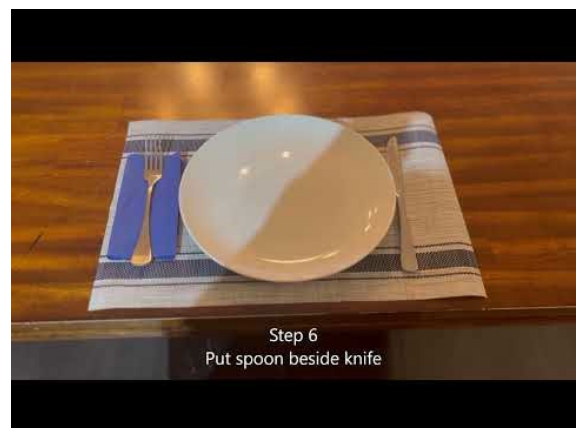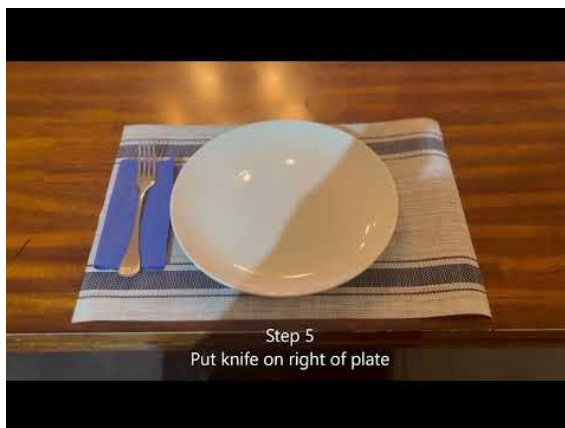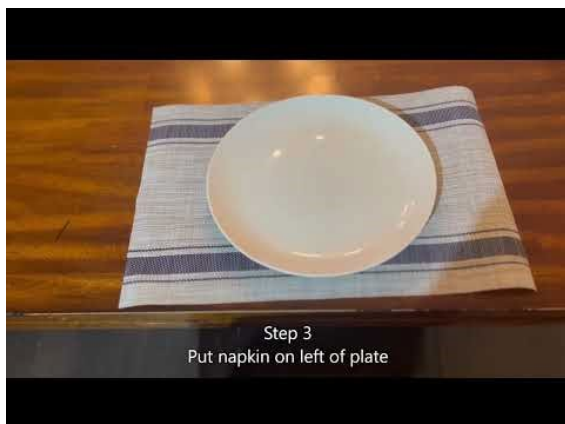Step 9
Repeat steps 1-7 for each person eating at the table

**Appendix 5**

*Video Modeling: Setting the Table*


Place Napkin on Left of Plate

*Picture Prompting: Setting the Table*

# Setting the Table *Picture Prompts*

## 1

### Put placemat on table



## 2

### Put plate on placemat



## 3

### Put napkin on left side of plate



## 4

### Put fork on top of napkin

# Setting the Table *Picture Prompts*

## 5

Put knife on right of plate



## 6

Put spoon beside knife



## 7

Put cup above knife and spoon



## 8

Table setting is complete!

# Setting the Table *Picture Prompts* 9

Repeat steps 1-7 for each person eating at the table