



## **“There’s an app for that.”: Clinical perspectives on the iPad as an intervention tool for children**

### **Researchers:**

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### **Research Summary**

Technology use in assessment and intervention in speech-language pathology is an area of rapid growth. Decisions about what type of device to use should be evidence based and take into account best practice principles within speech-language pathology. This study explored the benefits and limitations of the iPad as an intervention tool for children in speech-language pathology. Three groups of clinicians (students, new graduates, and experienced clinicians) discussed their beliefs about best practice principles in intervention and their views on uses of technology through initial and final focus groups. Ten themes emerged from the focus groups, including:

- *Reasons for using the iPad* (e.g., motivating, convenient, time saving, increased technology use, socially acceptable)
- *Positive features* (e.g., ease of use, small size and portability, pictures/videos, recording device, visual support)
- *Uses specific to speech-language pathology* (e.g., AAC device, articulation/phono therapy aid, reinforcement tool)
- *Potential uses* (e.g., home practice, administrative tool, individualization, classroom practice, supplement to other materials)
- *Limitations* (e.g., operating the device for those with disabilities/delays, fragility, cost, keypad)
- *Negative features* (e.g., lack of social interaction, too much technology use, potential misuse by parents/others, distracting)
- *Limitations of apps* (e.g., lack of flexibility, no trial period, limited effectiveness, feedback provided, engagement faded)
- *Benefits and uses* (e.g., education of parents and teachers, collaborated and mediated use)
- *Advice for app developers* (e.g., allow for flexibility/ individualization, involve SLPs in development, use evidence based info)
- *Strategies for successful use* (e.g., use: for a portion of treatment block, as reinforcement, for home practice, non-SLP apps)

The participants received instruction on the iPad and selected applications for use in the profession and evaluated those applications (apps) by examining how well the apps align with best practice principles using an “iPad Application Rating Sheet”. One key finding is that clinicians want to be able to individualize their therapy and therefore flexibility in the apps is a paramount feature.

The consensus of study participants on the iPad in speech-language pathology is that the device could have a positive impact on the field and has many uses that could be of benefit to SLPs, but apps must be improved to better reflect the unique needs of clinicians. It is recommended that clinicians critically evaluate apps on the basis of the best practice principles of speech-language pathology. These evaluations may be used to guide app developers in the development and improvement of apps for use in intervention.

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### **Best Practice Principles**

During initial focus groups, participants created a list of best practice principles for intervention with children in speech language pathology. This list was consistent with literature in the field. The principles are described below.

Engaging: The application is very fun, engaging, motivating, and reinforcing for the target population.

Focused: The application can focus on a specific skills or skills and allows for concentrated practice with that skill and adequate opportunities for practice.

Naturalistic: The application can expose the client to the target skills in a naturalistic communicative or social interaction that allows the skill to be generalized to different situations/environments.

Individualized: The application can be modified or adapted to meet the needs of individual clients. This includes incorporating family centred priorities into intervention, being culturally sensitive, and is modifiable for age, developmental/skill level and physical abilities.

Functional: The application can be used to teach functional skills so that it is similar to real-life situations, is curriculum based, fits in classroom and themes, and has meaning to the child.

Facilitative Context: The application provides a context that facilitates acquisition of the target skills or allows the clinician to incorporate facilitative cues. This includes being simple/clear, developmentally appropriate, age appropriate, allowing for appropriate scaffolding, having clear expectations, and specific feedback.

Meaningful Communication Partner: The application can incorporate interaction with a meaningful communication partner to ensure that it includes human interaction and is family/child centred.

Accountability: The application facilitates collection of outcome measures of client progress to facilitate the clinician in reporting and tracking progress.

Efficiency/Practical: The application is set up for efficient and easy application to the target group. This includes limited preparation time, organized, and modifiable to suite a variety of goals.

Evidence Based: The application is based on evidence or generally accepted theoretical or developmental principles.

Safe: The application poses no risks to the emotional or physical well-being of the target audience.

## Application Ratings

A rating sheet was developed to allow participants to reflect on how well each App fit best practice principles in speech-language pathology. Participants rated the presence or absence of each best practice principle for each app on a five point scale. Participants were asked the degree to which they agreed with a statement stating the presence of the best practice principle in the app.

### Participant ratings of how applications from the learning sessions matched Best Practice Principles

Application	Engaging	Facilitative Context	Functional	Naturalistic	Communication Partner	Individualized	Focused	Evidence/theory/dev. based	Accountability	Safe	Efficient/practical
Articulate It	3.57	3.76	3.44	2.30	3.20	3.17	4.43	3.14	4.51	4.28	4.23
Artix Pix/Phono Pix	4.21	3.85	3.55	2.44	3.30	3.96	4.54	3.85	4.33	4.36	4.32
Sunny Artic Test	3.07	3.5	2.5	1.5	3	4	5	3.43	4.16	3.83	3.15
Doodle Buddy	4.57	2.96	2.87	3.14	3.85	3.63	2.71	2.25	1.45	4.64	3.57
Speak it	3.29	3.46	4.07	3.64	4.09	3.88	3.55	3.38	2.08	4.06	3.88
Proloquo2Go	3.92	4.08	4.51	4.11	4.55	4.59	4.01	3.55	2.46	4.14	3.64
Tap Speak Sequence	3.66	3.66	4.07	3.27	3.52	4.18	3.67	3.19	2.18	4.28	3.53
WH Questions	3.27	2.84	3.29	2.61	3.10	2.41	3.84	2.87	3.52	3.87	3.67
iPractice Verbs	3.2	2.88	2.66	2.09	2.42	3.11	3.49	2.61	1.81	3.02	3.41
Going Places	4.03	3.78	4.45	3.64	3.16	2	3.5	3.65	1.84	4.10	3.96
Bob Book's Magic	4.33	4.34	4.45	3.42	3.34	3.82	4.451	3.92	1.92	4.37	4.19
Language Builder	3.60	4.02	3.81	3.28	3.53	3.4	3.88	3.07	2.35	4.24	3.87
Social Skills	3.80	3.58	4.25	3.47	3.18	3.85	3.99	3.58	1.88	4.25	3.62
Story Patch	4.75	4.15	4.36	4.06	4.26	4.82	4.08	3.52	2.31	4.44	4.07
Average App Rating	3.81	3.667	3.866	3.184	3.5	3.636	3.9	3.347	2.606	4.106	3.771

\*\* These ratings are from a 5 point scale, where 5 indicated agreement that a specific principle was present or that the app could be modified by the user to include that principle.

## Application Comments:

Participants were given the opportunity to comment on each of the apps rated. Comments and themes are summarized below.

App Name	Strengths	Weaknesses	Other Uses
Articulate It	<ul style="list-style-type: none"> <li>- Easy to use</li> <li>- Allows for data collection</li> <li>- Flexible for individual or group use</li> <li>- Ability to record voice and play back</li> <li>- Nice photos, realistic</li> <li>- Goals can be individualized</li> <li>- Pictures can be skipped</li> <li>- Little prep time is needed</li> <li>- Accuracy summary given</li> <li>- Efficient (all artic cards in one place)</li> <li>- Accountability</li> <li>- Easy to access recording</li> <li>- Notes are stored within program</li> <li>- Phoneme position can be chosen</li> <li>- Different processes can be chosen for each child</li> <li>- Adjustable activity length</li> <li>- Time available to cue child before next word</li> <li>- Can move through activity at own pace</li> <li>- All English phonemes available</li> <li>- Engaging, fun, motivating</li> <li>- Sound can be turned on/off</li> <li>- Can email results</li> <li>- Easy to select targets</li> </ul>	<ul style="list-style-type: none"> <li>- Can't remove unwanted pictures</li> <li>- Could be more engaging</li> <li>- Concerns about vocabulary level and functionality of words</li> <li>- Not able to select vocab used</li> <li>- Expensive</li> <li>- Correct/Incorrect results visible to the child</li> <li>- Targets not graded for articulation difficulty (# of syllables)</li> <li>- Pictures not appealing</li> <li>- Matching game ends before data collection is complete</li> <li>- Can't turn on/off evaluation</li> <li>- Matching portion should have a setting where next card won't flip until an attempt to say word has been registered (not necessarily accurate)</li> <li>- Doesn't give feedback directly</li> <li>- Only tests at word level (does not facilitate moving up and down hierarchy)</li> <li>- Recording (picks up a lot of ambient noise)</li> <li>- Phoneme don't include vowels</li> <li>- When you pick multiple locations for targets it does not show where it occurs in the word</li> <li>- No feature for easily marking cues used</li> <li>- Can't pick word shape</li> <li>- Very little reinforcement built into the game</li> <li>- No way to choose, order or delete words</li> <li>- Not individualized</li> <li>- Not natural-all drill practice and no meaningful communication</li> <li>- Can't return to previous page</li> <li>- Pictures don't always represent target word</li> </ul>	<ul style="list-style-type: none"> <li>- Small group activities</li> <li>- Turn taking</li> <li>- Drill based practice on speech sounds/patterns</li> <li>- School aged kids</li> <li>- Use with more focused self-motivated older students/adults</li> <li>- Targeted practice for articulation/phono</li> <li>- Home practice</li> <li>- 1-on-1 treatment</li> <li>- Artic for kids working on sounds in one, two, three syllable words already</li> <li>- Auditory discrimination</li> <li>- Use as a card deck-can work along with any game or motivator you want</li> <li>- Use in session instead of drill based flashcards</li> <li>- Baseline measure</li> </ul>

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Artic Pix/ Phono Pix	<ul style="list-style-type: none"> <li>- Efficient, time saving</li> <li>- Engaging, fun, motivating</li> <li>- Love the sentence option</li> <li>- Convenient for articulation practice</li> <li>- Can be used with groups</li> <li>- Nice photographs</li> <li>- Data tracked efficiently</li> <li>- Multiple decks</li> <li>- Shuffle feature</li> <li>- Feedback with faces</li> <li>- Minimal pairs, in word and sentence</li> <li>- Game feature is more interesting</li> <li>- Good recording quality if child were to speak loudly</li> <li>- Incorporates practice for discrimination</li> <li>- Focused</li> <li>- Individualized</li> <li>- Different skill levels</li> <li>- Natural reinforcement</li> <li>- Can create different folders to save test scores</li> <li>- Simple to navigate</li> <li>- No prep time</li> <li>- Can choose specific targets</li> <li>- Words more child friendly</li> <li>- Can play back recording for self-evaluation</li> <li>- Gives summary of accuracy</li> <li>- Provides a means of giving feedback</li> <li>- Great data collection</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of adaptability to individual needs</li> <li>- Matching is fun but would be hard to give kids appropriate cues while playing game</li> <li>- Minimal pair game seems counter intuitive</li> <li>- Can't select specific targets to use</li> <li>- Could use more target words</li> <li>- Some words too complex/non-functional</li> <li>- Not as good for establishing a sound in a word</li> <li>- No feature to take notes</li> <li>- No way to track cues</li> <li>- Confusing, icons for navigating the program are not labelled</li> <li>- Have to do a lot of navigating within the app if you want to mute the model half way into the session</li> <li>- The way the app keeps data isn't transparent</li> <li>- Can only work on one target at a time</li> <li>- Not naturalistic</li> <li>- No word or sentence choices</li> <li>- Can only choose one child at a time</li> </ul>	<ul style="list-style-type: none"> <li>- Targeted practice for artic/phono</li> <li>- Home practice</li> <li>- One on one therapy</li> <li>- Good for drill based practice with individual clients</li> <li>- All ages</li> <li>- Pure articulation only</li> <li>- Discrimination task for minimal pairs</li> <li>- Good for clients who are engaged by technology</li> <li>- As part of session-wouldn't send home until child was relatively competent and parent had been trained how to navigate it</li> <li>- Good for children who are hard to engage</li> <li>- Good for a child who has the sound established in 1,2,3 syllable words</li> <li>- Could use it as a reward to incorporate speech into language treatment</li> <li>- Use for phono awareness</li> <li>- Auditory discrimination</li> <li>- Use with a child with speech or phono errors at word or sentence level</li> <li>- Drill practice</li> </ul>

Sunny Artic Test	<ul style="list-style-type: none"> <li>- Can mark type of error</li> <li>- Efficiency for calculating error type</li> <li>- Screening and full evaluation is available</li> <li>- Praise given after each opportunity</li> <li>- Can mark where the error occurred and what it was</li> <li>- Can record</li> <li>- Allows you to go back to the assessment if not completed</li> <li>- Little prep. Required</li> <li>- Easy to understand report card</li> <li>- Do not have to calculate test at end</li> <li>- Handy quick tool for a quick screen</li> <li>- Analysis easy</li> <li>- Efficient to deliver and set up</li> <li>- Scored online</li> <li>- Visually appealing</li> </ul>	<ul style="list-style-type: none"> <li>- Child can see you mark errors</li> <li>- Can't mark vowel errors</li> <li>- Built in encouragement odd</li> <li>- Can't choose which sounds to work on specifically</li> <li>- Can only turn off praise if volume is turned off</li> <li>- Kids may touch picture and get pronunciation of word</li> <li>- Not standardized</li> <li>- Time-consuming to write-in errors</li> <li>- Can't put in addition of sounds</li> <li>- Keyboard not in IPA if you need to write about a specific sound</li> <li>- No measures of reliability or validity</li> <li>- Can't note how distorted</li> <li>- Child might get bored waiting for you to enter data for each word</li> <li>- Feedback is not ideal for any assessment</li> <li>- Hard to administer</li> <li>- Buttons can be finicky</li> <li>- multi-tasking</li> <li>- have to score right on screen in front of child</li> <li>- Can't note directly on other sounds</li> <li>- Can't record all items in 1 file</li> <li>- Student doesn't get to touch iPad</li> <li>- Seems slow to administer</li> <li>- No norms</li> <li>- Difficult to insert data</li> <li>- Difficult to shift focus from iPad while you have your turn</li> <li>- No delayed imitation</li> <li>- Would be great if you could have 2 iPads, if the child's screen did something interesting to keep their attention while clinician input data</li> <li>- Notes an error exists but doesn't specify what it was</li> <li>- Gives positive reinforcement no matter what child's production was.</li> </ul>	<ul style="list-style-type: none"> <li>- Baseline probe for child with good attention or few errors</li> <li>- Quick screen</li> <li>- pre and post measures</li> <li>- Probe throughout year</li> <li>- Use with young child who doesn't realize you're recording errors</li> <li>- Identifying patterns of error in speech</li> <li>- For treatment planning</li> <li>- Informal probes</li> <li>- Cueing (imitation)</li> </ul>
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Doodle Buddy	<ul style="list-style-type: none"> <li>- Engaging</li> <li>- Lends itself to many different goals and activities</li> <li>- Easy to navigate</li> <li>- Doesn't require a lot of fine motor control</li> <li>- Cute, easy activity</li> <li>- Fun, varied</li> <li>- Reinforcing</li> <li>- Good for kids with fine motor problems or who can't read or write</li> <li>- Fun for a break</li> <li>- Can incorporate some simple goals</li> <li>- Creative, rewarding</li> <li>- Encourages more human interaction</li> </ul>	<ul style="list-style-type: none"> <li>- Not directly speech-related</li> <li>- Only limited by the ideas of the clinician</li> <li>- Not focused</li> <li>- Doesn't teach functional skills</li> <li>- Need time to figure out different functions</li> <li>- Fewer goal-directed opportunities for use</li> <li>- No data keeping</li> <li>- Have to come up with your own way of using it for therapy</li> <li>- Not really applicable to speech</li> <li>- May be hard to transition out of because it is so engaging</li> </ul>	<ul style="list-style-type: none"> <li>- Finish a set of cards/drill and get to draw a picture</li> <li>- Practice sound-letter correspondence</li> <li>- As a break from difficult activities</li> <li>- Writing without pencil</li> <li>- Reinforcement</li> <li>- Vocabulary building</li> <li>- Descriptors (describe child's picture)</li> <li>- Practice turn taking</li> <li>- Language processing (make pictures with items from a category, find items in a category)</li> <li>- Expressive language</li> </ul>
Speak It	<ul style="list-style-type: none"> <li>- Cheap</li> <li>- Relatively quick and easy to use</li> <li>- Good voices, intonation is good, has stress</li> <li>- Predictive saves you key strokes</li> <li>- Gives a voice to a child's written words</li> <li>- Allows you to record and save functional phrases, commonly used phrases</li> <li>- Choice of voices and other voices can be downloaded</li> <li>- Emailing audio files would be handy</li> <li>- Functional</li> <li>- Quick, easy, user-friendly</li> <li>- Can upload whole documents</li> <li>- Can adjust voice speed</li> <li>- Adjust font size</li> <li>- Highlights words as read</li> <li>- Could be used as AAC to communicate</li> <li>- Could be used to help understand test</li> <li>- Can copy and paste in text</li> <li>- Easy to use if you can spell and type</li> <li>- Quick repair for communication breakdown</li> <li>- Interesting with different voices</li> <li>- Different speeds, volumes</li> </ul>	<ul style="list-style-type: none"> <li>- Keyboard hard to type on, can't type on it like a normal keyboard</li> <li>- Can't adjust key size, hard for kids with motor difficulties</li> <li>- Child has to be able to spell</li> <li>- Voices unnatural</li> <li>- Must create own sentences</li> <li>- No emotion settings</li> <li>- No kid voices, terrible voices</li> <li>- Limited phrasing</li> <li>- Intonation is not accurate for 'wh' questions</li> <li>- Not practical for young children</li> <li>- Have to spell and type in full word</li> <li>- Need accurate typing/spelling</li> <li>- Not very engaging</li> <li>- Limited accountability</li> <li>- Cannot record own voice</li> <li>- Need some literacy skills</li> <li>- No picture aids</li> <li>- Needs to be facing a certain way to use some functions</li> <li>- Voices not fully accurate for names, some irregular words</li> </ul>	<ul style="list-style-type: none"> <li>- Could use as a tool if can't afford more expensive options</li> <li>- Could use to trial some AAC if not sure if you want to use it</li> <li>- Use with child who can spell but has limited verbal output</li> <li>- AAC device for a child with high cognitive abilities and good receptive language skills</li> <li>- Reading support for kids who have low literacy skills, reading disabilities</li> <li>- Could facilitate information gathering for those with difficulties with reading comprehension</li> <li>- Discrimination tasks</li> <li>- Increased intelligibility</li> <li>- Articulation</li> <li>- Supplement oral communication for clients with good literacy skills</li> <li>- Specific activities ( ordering in restaurant)</li> <li>- Motor speech</li> <li>- Articulation (modelling for home practice)</li> <li>- AAC for teens</li> </ul>

	<ul style="list-style-type: none"> <li>- Can type whatever you want</li> <li>- Highlights as it speaks</li> <li>- Can alter text size</li> <li>- Different languages can be used</li> <li>- Can target reading and writing and individualize it to client's needs</li> </ul>	<ul style="list-style-type: none"> <li>- Takes time if typing slow</li> </ul>	
Proloquo2go	<ul style="list-style-type: none"> <li>- Accessible and relatively cheap</li> <li>- Child and adult voices</li> <li>- Lots of options and pretty user friendly</li> <li>- Allows to have customized phrases</li> <li>- Quick access to recently used phrases</li> <li>- Can add new vocabulary</li> <li>- Developer seems to provide a lot of support, training/support available on website</li> <li>- Uses picture support to go with word choices</li> <li>- Comprehension</li> <li>- Built in word/sentences to increase efficiency</li> <li>- Allows app to be adapted to suit client</li> <li>- Word prediction</li> <li>- Different options and settings</li> <li>- Convenient (touch screen with pre-set phrases)</li> <li>- Like the tenses for teaching verbs</li> <li>- Can load personal photos</li> <li>- Can combine words</li> <li>- Option for larger keyboard</li> <li>- Word prediction</li> <li>- Comes with grids</li> <li>- Many options to individualize</li> <li>- Adaptability, flexibility in word sent. Picture</li> <li>- Use and sync with ipad/iphone</li> <li>- Lots of uses</li> <li>- Lots of vocab</li> <li>- Can individualize messages</li> <li>- Functional</li> <li>- Incorporates interaction with communication partner</li> <li>- Good for children and adults</li> </ul>	<ul style="list-style-type: none"> <li>- The back button is too small</li> <li>- Need to be cognitively able because many steps (key strokes)</li> <li>- May take a while to type long messages which could slow down convo</li> <li>- Very expensive</li> <li>- Need good cognition and motor skills to use it independently</li> <li>- Time-consuming to develop sentences to speak</li> <li>- Time-consuming to learn how to use</li> <li>- Unnatural intonation</li> <li>- Less natural for communication</li> <li>- Time to learn organization of items</li> <li>- Need good spelling</li> <li>- Need good attention, problem solving, reasoning, learning skills</li> <li>- Time to produce your message</li> <li>- Complicated, complex, arbitrary (not user-friendly)</li> <li>- Phrasing and pronunciation</li> <li>- Very expensive</li> <li>- Voice</li> <li>- Requires training</li> <li>- Parent would need to buy an iPod or iPad</li> <li>- Touch sensitive</li> <li>- Difficult to navigate (many different screens)</li> <li>- Can't record own voice</li> <li>- Can't be used with young children (need to be able to use the technology)</li> <li>- Cumbersome (too many categories)</li> <li>- Hard to keep track of where you are in the</li> </ul>	<ul style="list-style-type: none"> <li>- Use with child with adequate cognitive skills and limited verbal output</li> <li>- Can be adapted for children with lower language skills</li> <li>- AAC for older kids with little functional communication</li> <li>- Could create sets of phrases for routine activities</li> <li>- Could use it as a multiple choice tool to provide kids with support</li> <li>- Would be a motivating tool for language therapy for kids who are working on building sentences</li> <li>- Could use to teach school aged children grammar</li> <li>- Overall communication</li> <li>- AAC (instead of other types)</li> <li>- Portable AAC</li> <li>- Helping children to write their own stories augment expressive communication</li> <li>- SLI</li> <li>- Motor speech</li> <li>- Vocab</li> <li>- Grammar</li> <li>- Alternate/supplemental communication for clients with unintelligible speech</li> </ul>

<p>... Proloquo2go</p>	<ul style="list-style-type: none"> <li>- Portable</li> <li>- Saves recent and most frequent phrases</li> <li>- Quick transition between screens</li> <li>- Change the tense or quantity for certain words</li> <li>- Pictures are descriptive of what the word/phrase is</li> <li>- Can change lots of voice features</li> <li>- Increases intelligibility</li> <li>- Cheaper than other AAC</li> <li>- Good training videos online</li> <li>- Can make icons really big</li> </ul>	<p>app</p> <ul style="list-style-type: none"> <li>- Words are not always in the same place</li> </ul>	
<p>Tap Speak Sequence</p>	<ul style="list-style-type: none"> <li>- Can incorporate a communication partner</li> <li>- Can choose/develop sequences that suit client needs</li> <li>- Provides way to review sequences</li> <li>- Can be customized to different individuals</li> <li>- motor skills</li> <li>- Allows you to make your own recordings</li> <li>- Customize images</li> <li>- Flexible</li> <li>- Simple</li> <li>- Can use own photos to individualize</li> <li>- Good tool for pre-teaching a sequence</li> <li>- Can use a variety of applications</li> <li>- Visual supported by voice</li> <li>- Adjustable for fine motor</li> <li>- User-friendly</li> <li>- Can generate/record own sequences</li> <li>- Links visual with language</li> <li>- Can change the tap length</li> <li>- Can create sequences for use with specific clients</li> <li>- Can modify complexity of phrases</li> <li>- Can record own voice</li> <li>- Can be adapted to motor abilities</li> <li>- Great for 1 on 1</li> <li>- SLP can create own cues</li> </ul>	<ul style="list-style-type: none"> <li>- Cannot have them order and manipulate a sequence to tell a story</li> <li>- Can't share sequences</li> <li>- Can't print easily</li> <li>- Must collect own data</li> <li>- Pictures aren't animated</li> <li>- Can't download sound bites (have to record everything)</li> <li>- Children cannot interact with sequences (put them in correct order)</li> <li>- Time consuming</li> <li>- Kind of hard to figure out</li> <li>- Lots of prep. Time</li> <li>- Has limited uses for therapy</li> <li>- No sorting function for arranging items in sequences</li> <li>- Does not have set sequences already created</li> <li>- Not a lot of flexibility with voice/sound/pictures</li> <li>- Model only</li> <li>- Can't share/print sequences, ideal for 1-2 clients not group</li> <li>- A bit difficult to operate</li> <li>- Can't share sequences</li> <li>- May take a fair amount of time to set up for each child</li> <li>- Can't print</li> </ul>	<ul style="list-style-type: none"> <li>- Social stories</li> <li>- Teaching sequencing</li> <li>- Create a story together</li> <li>- Prepare for show and tell</li> <li>- Everyday conversation</li> <li>- Singing songs</li> <li>- Writing short stories</li> <li>- Nursery rhymes</li> <li>- Recipes</li> <li>- Everyday tasks and routines</li> <li>- Creating sequences and sending as homework for practice</li> <li>- Visual organizer</li> <li>- Sharing info/story for a child with limited speech or expressive language</li> <li>- Use for cueing system</li> <li>- Developing and practicing sequence skills</li> <li>- Able to add in repetitive parts of stories/songs</li> <li>- Developing stories/narratives social stories</li> <li>- Teaching turn-taking</li> <li>- Reinforcement</li> <li>- Creating visual schedules and sequences for routines and events</li> <li>- Literacy skills</li> <li>- Teaching new sequences</li> </ul>

		<ul style="list-style-type: none"> <li>- Need literacy skills</li> <li>- Not very interactive</li> <li>- No pictures to choose from</li> <li>- Limited outcome measures included with app</li> <li>- Must record own voice</li> <li>- Set-up time if you need to make a sequence</li> </ul>	
Model Me Going Places	<ul style="list-style-type: none"> <li>- Already made for some situations</li> <li>- Real pictures</li> <li>- Has verbal and visual info</li> <li>- Free</li> <li>- Story narrated by a child</li> <li>- Nice music</li> <li>- Ready to use videos</li> <li>- Naturalistic and functional</li> <li>- Nice pictures, clear and pleasing</li> <li>- No prep</li> <li>- Very detailed scripts</li> <li>- Very kid-friendly</li> <li>- Good for initial intro to social scripts</li> <li>- Easy to use</li> <li>- Kids would enjoy the movie format and getting to turn the page</li> <li>- Reinforces social/pragmatic skills around common experiences</li> <li>- Economical</li> <li>- Nice voice</li> <li>- Uses kids in videos</li> <li>- Rate of speech is slow</li> <li>- Simple clear text</li> <li>- Like manual advance of video, written in first person "I" like a social story</li> <li>- Functional situations</li> <li>- Simple predictable language</li> <li>- Like that you can see video or go frame-by-frame</li> <li>- Well written social stories</li> <li>- Text is on the bottom of the screen</li> <li>- Can go through one picture at a time or whole</li> </ul>	<ul style="list-style-type: none"> <li>- Can't personalize/edit stories</li> <li>- Limited stories (have to buy the DVDs- not convenient for use)</li> <li>- Not sure how you would measure outcomes</li> <li>- Need to branch more to social skills (eg this is how I behave at a birthday party)</li> <li>- Not adaptable to speech needs/behaviors - can't add or change text or pictures</li> <li>- Can't add more videos to app</li> <li>- No punctuation in print on screen</li> <li>- Few situations to choose from</li> <li>- Story keeps looping (doesn't stop at end)</li> <li>- Stories may not apply to all children</li> <li>- Videos have a lot of items in sequence ( may be too long for some clients, not adaptable)</li> <li>- Child's voice may not be always appropriate</li> <li>- Can't make your own stories</li> </ul>	<ul style="list-style-type: none"> <li>- Quick, easy resource when you don't have time to make your own social stories</li> <li>- Teach appropriate social behaviour for a specific situation</li> <li>- Use with a child to review social behaviour</li> <li>- Teach social stories to kids with pragmatic difficulties</li> <li>- Could use to prep kids for upcoming social experience, guide kids through these experiences step-by-step, building pragmatic familiarity with a few common experiences</li> <li>- Sentence structure</li> <li>- Children with ASD</li> <li>- Teaching routines</li> <li>- Retelling sequences</li> <li>- Behaviour management with children</li> <li>- Prepare for telling about where you've been</li> </ul>

	<ul style="list-style-type: none"> <li>sequence</li> <li>- Portable</li> <li>- Can have more than one on one place</li> </ul>		
Bob's Books Magic	<ul style="list-style-type: none"> <li>- Has 4 levels</li> <li>- Models individual phonemes well, in a story format which is more functional</li> <li>- Colour pictures are rewarding</li> <li>- Option of letters vs phoneme sounds</li> <li>- Very engaging</li> <li>- Puts phonological awareness skills into context ( sentence and stories instead of isolated words)</li> <li>- Very functional skills - sounding out words, etc,</li> <li>- Good 'rewards' -wiggling, colour in pictures, etc.,</li> <li>- Great price</li> <li>- Has hierarchy built in (cues and supports)</li> <li>- Efficient</li> <li>- Engaging</li> <li>- Repeats the stimulus if needed</li> <li>- Lots of choices for stories</li> <li>- Great auditory information</li> <li>- Graded feedback by level (cueing)</li> <li>- Foils in higher levels and no visual cue to spell</li> <li>- Progression from simple to more complex</li> <li>- Can start at any scene</li> <li>- Kids would like jiggling and music</li> <li>- Nice sound and pictures</li> <li>- Won't let you make a mistake (errorless learning)</li> <li>- Can repeat question</li> <li>- Lots of story choices</li> <li>- Works on spelling and letter identification</li> <li>- Lots of modelling</li> <li>- Doesn't focus on only nouns/verbs</li> <li>- Simplistic</li> </ul>	<ul style="list-style-type: none"> <li>- Only 12 stories/scenes</li> <li>- Would like to see them go up to 5 phonemes with consonant clusters</li> <li>- Can't add your own stories</li> <li>- Does not measure outcomes</li> <li>- Cannot be modified</li> <li>- Limited word list/choices</li> <li>- Can't turn off the shaking ( which could get annoying) without turning off all the sounds</li> <li>- Requires fine motor control to drag</li> <li>- Visuals, scripts and events could be more engaging (eg. mat sat - could have him sit on something funny or have fun action/consequence once word/phrase is completed</li> <li>- Pictures 'cute' but not very natural</li> <li>- Cumbersome to navigate back and forth</li> <li>- Can't start in the middle,</li> <li>- Would take a child a long time to complete the story (if they were having trouble)</li> <li>- Add sentences and pictures</li> <li>- Does not put letters in correct spot if continue to make same error</li> <li>- No data keeping</li> <li>- No time/opportunities built in to practice phonological awareness skills like segmenting/blending/rhyming</li> <li>- Can't turn off sound effects without turning off saying sentences out loud</li> <li>- This app would primarily be used for younger children only</li> <li>- Sentences are a bit weird</li> <li>- Only 3 letter words</li> <li>- Can't choose the specific sounds/letters to work on</li> <li>- Not a sequence</li> </ul>	<ul style="list-style-type: none"> <li>- Phonological awareness for young children</li> <li>- Emergent language learners for vocab</li> <li>- Sound letter correspondence</li> <li>- Practice basic phonics or spelling with child</li> <li>- Home practice</li> <li>- All kids to support pre-literacy and literacy skills</li> <li>- Kindergarten, grade 1</li> <li>- Home practice with parents</li> <li>- Homework because don't need SLP input (won't let you make a mistake and easy to use)</li> <li>- Practicing letter names and sounds</li> <li>- Spelling (varies depending on level)</li> </ul>

<p>...Bob Books</p>	<ul style="list-style-type: none"> <li>- Can adjust the settings</li> </ul>	<ul style="list-style-type: none"> <li>- Can't spell words out of order, it says you are wrong - this may confuse kids</li> <li>- You can't skip forward before one scene is completed</li> <li>- Can't save as</li> <li>- Can't make your own pictures, sentences or words</li> </ul>	
<p>Language Builder</p>	<ul style="list-style-type: none"> <li>- Has cues built in (visual and audio)</li> <li>- Can be individualized to client</li> <li>- Can evaluate/teach both receptive and expressive language</li> <li>- Voice recording can be used as feedback</li> <li>- Pictures are colourful and engaging</li> <li>- Functional pictures are used (real)</li> <li>- Easy way to save data from the session</li> <li>- Level of hints is variable</li> <li>- Simple</li> <li>- Different levels of support</li> <li>- Text gives nice support visually for the more supportive hints</li> <li>- Low cost</li> <li>- Can add themes - could be related to class themes</li> <li>- Good voice</li> <li>- Can use receptively and expressively</li> <li>- Clear contextual and concrete photos</li> <li>- Can skip pictures</li> <li>- Optional hint</li> <li>- Easy to record sentences with correct picture to transcribe picture</li> <li>- Naturalistic and interactive with SLP if you want it to be</li> <li>- Repeats instructions each time</li> <li>- Able to save for pre/post (email)</li> <li>- Save recordings</li> <li>- No prep time necessary</li> <li>- Flexibility in sentence creation by client</li> <li>- Non-threatening</li> </ul>	<ul style="list-style-type: none"> <li>- Limited amount of pictures</li> <li>- Cannot choose pictures</li> <li>- Accountability</li> <li>- Hints only work well for children who are readers</li> <li>- Doesn't read the hint when the hint provides written words</li> <li>- Have to record to get to the next picture</li> <li>- Not appropriate for 3 year olds</li> <li>- Higher levels provide audio support and lower levels provide visual in the form of written sentences - 3,4,5 year olds would not be able to use the "visual" support</li> <li>- If you use hints you need to record the utterance (time consuming)</li> <li>- Doesn't track data</li> <li>- It takes too much time to take the hint and record</li> <li>- Levels of settings aren't developmental</li> <li>- Higher levels are actually easier for kids who can't read, level 1 provides text and level 3 provides auditory hint</li> <li>- Target is not consistent - verb, noun</li> <li>- No feature for collecting data or providing feedback</li> <li>- Some bugs, cannot delete only 1 sentence, must play a recording before can save it</li> <li>- Must name each recording - too time consuming</li> <li>- Need to be able to incorporate 2 elements it gives you into a sentence = tough)</li> <li>- Can't scaffold hint or see what hint is</li> </ul>	<ul style="list-style-type: none"> <li>- Work on building language skills</li> <li>- Have child listen to his production and determine if it sounds correct - to build awareness</li> <li>- Have child listen to saved recordings of clinician - child has to decide if sentence is correct</li> <li>- Could use pictures for "wh" question practice</li> <li>- Sentence formulation</li> <li>- Stimulus for probes</li> <li>- Younger kids could work on vocab and descriptors (eg. tell me about this picture), pronouns (what is she doing?), grammar, expressive language</li> <li>- Use to naturally elicit verbs and introduce vocab not for the intended purpose</li> <li>- Story starters</li> <li>- Pronoun/verb use</li> <li>- Tense</li> <li>- Higher level sentence formation</li> <li>- Drill practice for sentence building or picture description</li> <li>- In session with SLP,</li> <li>- Writing stories</li> <li>- Commenting</li> <li>- Conversation starters</li> </ul>

	<ul style="list-style-type: none"> <li>- Can record and have child listen back to their production</li> </ul>	<ul style="list-style-type: none"> <li>- Limited opportunity to include communication partner in naturalistic setting</li> <li>- No feedback</li> <li>- Need a communication partner to monitor responses</li> <li>- If you ask for a hint you can't skip doing a recording</li> </ul>	
Social Skills	<ul style="list-style-type: none"> <li>- Has 2 difficulty levels</li> <li>- Good choice of stories</li> <li>- Can add pictures/voices</li> <li>- No prep</li> <li>- Low cost</li> <li>- Has specific goal targets</li> <li>- Nice pictures, real, naturalistic, contextual</li> <li>- Can change text</li> <li>- Use for a variety of purposes</li> <li>- Can add own choice</li> <li>- Comes with pre-made stories</li> <li>- Simpler and more advanced versions of stories</li> <li>- Can go through each picture individually and talk about it</li> </ul>	<ul style="list-style-type: none"> <li>- Can't edit stories without deleting original story</li> <li>- Can't add new stories</li> <li>- Can't record own voice or add own pictures</li> <li>- Voice isn't very interesting, unnatural intonation</li> <li>- Can't have multiple stories per topic</li> <li>- Can't print stories ( we often send a copy home and have one at school for child to read with who they want)</li> <li>- Different orientation of the screen for the stories and the menu</li> <li>- App is designed for very specific situations</li> <li>- Just adding new pictures in may upset a client who is very rigid and picky about continuity</li> <li>- The not advanced stories are awkward and confusing</li> <li>- Topics are limited</li> <li>- Can't save as new story, changes overwrite the original</li> <li>- Story I looked at was too long - I expect the child would get bored</li> <li>- Need to go through entire story to get to main menu</li> <li>- Need child voice</li> <li>- A little cumbersome to navigate around</li> <li>- Some "steps" seem unnecessary</li> <li>- Can only be individualized for one person</li> <li>- Make template to create own stories</li> <li>- Number of different cues allowed (audio, text, visual)</li> <li>- Can only make new stories if you buy an</li> </ul>	<ul style="list-style-type: none"> <li>- Pre-teaching of routine</li> <li>- Social scripts</li> <li>- Could record stories to focus on other language targets (grammar)</li> <li>- Could use it with older kids to have them create narratives, write story, act it out, record, share with other kids</li> <li>- Pre made social stories</li> <li>- Teach different pragmatic skills</li> <li>- Teaching a sequence</li> <li>- Use for ideas to make new social stories</li> <li>- Children with ASD</li> <li>- Social stories to prepare for events</li> <li>- To teach emotions, vocab, etc,</li> <li>- Small groups or whole class to target social communication</li> <li>- Practice individualized routines to support pragmatics/behaviour</li> <li>- With SLP in session or parent at home,</li> <li>- Creating stories with client - maybe sequencing of a story</li> </ul>

		<p>additional app - then are starting from scratch without template</p> <ul style="list-style-type: none"> <li>- Not for the iPad - distorted pictures</li> </ul>	
Story Patch	<ul style="list-style-type: none"> <li>- Multiple options for creating stories</li> <li>- Individualized (own pics and text)</li> <li>- Can teach a number of different categories</li> <li>- Can use the app to make stories about any situation</li> <li>- Easy and intuitive navigation, using a template is an easy introduction to the program</li> <li>- Big library of characters</li> <li>- Can email/save as a PDF so you can print</li> <li>- Useful reinforcement</li> <li>- Good for targeting concepts</li> <li>- May help children get excited about story writing</li> <li>- Motivating</li> <li>- Would give kids ownership over their work - could print and keep as a classroom book</li> <li>- Can completely control pace, cues, support</li> <li>- Easy to personalize with own pictures</li> <li>- Adaptable for a variety purposes and client needs</li> <li>- Low cost, child centered</li> <li>- Great pictures</li> <li>- Flexible</li> <li>- Can develop individualized stories that are easily edited</li> <li>- Very engaging</li> <li>- Lots of opportunity for creativity</li> <li>- Can be used for a variety of targets</li> <li>- Can use 1 template to make individualized books for specific clients</li> <li>- Good for 1:1 and group applications</li> <li>- Very fun and fast, practical, efficient</li> <li>- Lots of practical application potential</li> </ul>	<ul style="list-style-type: none"> <li>- Time consuming to create stories</li> <li>- Does not allow for playback</li> <li>- No voice recording</li> <li>- Flipping pages is vertical (for kids learning literacy skills it would be nice if they flipped like a book)</li> <li>- No way to track data ( have to think a little about collecting data and how you will use this to meet your goals)</li> <li>- Links with narrative components (eg. characters, initiating event, etc) would be great</li> <li>- Outcome measures, have to make effort to engineer target focus (easy to get distracted)</li> <li>- Time needed to set up template</li> <li>- Time consuming to create a story</li> <li>- Still have to keep data notes</li> <li>- No pre-made stories</li> <li>- Doesn't read story aloud</li> <li>- Pictures are delayed</li> <li>- Typing - auto correct</li> </ul>	<ul style="list-style-type: none"> <li>- Build vocabulary</li> <li>- Teach narratives build grammar skills</li> <li>- Social stories/pragmatics (personal and relevant)</li> <li>- Carry over for artic ( make a sound loaded story)</li> <li>- Working on sequencing</li> <li>- Story grammar</li> <li>- Expressive language</li> <li>- Story writing goals</li> <li>- Group story writing</li> <li>- As a motivating activity for kids who aren't interested in books</li> <li>- Could print books and keep in classroom so the kids have ownership over their writing and can 'show it off'</li> <li>- Concepts (behind, in front, over, under, etc), body vocab, colours</li> <li>- Narrative skills</li> <li>- Social stories</li> <li>- Focus on specific language skills, artic, language, prediction, sentence structure</li> <li>- Story retell, narratives,</li> <li>- Building sound practice at short story level</li> <li>- Story grammar</li> <li>- Creating stories in session with client or assigning stories for homework</li> <li>- Reading, writing sentences</li> <li>- Make story about what was done in session/school</li> <li>- Story telling from pictures</li> <li>- Would use as a pre-post or reward (not teaching)</li> </ul>

	<ul style="list-style-type: none"><li>- Has spell-check</li><li>- Email home homework</li><li>- Provides different levels of support</li><li>- Original template is always there</li><li>- Don't need to put in words</li><li>- Can change characters</li></ul>		
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### Additional Applications and Super Duper Applications

The research team reviewed many additional applications, including “Super Duper” applications. These applications were not included in the study, but descriptions and ratings from the research team are included below:

#### Additional Application Descriptions

Application	Publisher	Cost	Description (from developer web-sites or app store)
ABA Problem-solving and other various flashcard apps	Kindergarten.com	.99 each	“All our applications have been created using behavioural techniques that are based on the principals (yes it was really spelled that way on the website) of Applied Behavioral Analysis using a Verbal Behavior technique.”
ABC Phonics Sight Words	App-Zoo	FREE (lite version)	“An excellent introduction to phonics.”
abc PocketPhonics lite:	Apps in My Pocket	FREE	“Young children enjoy learning to read using this letter sounds (phonics) app.” The FREE lite version includes just the first six letter sounds.
First Words	Learning Touch	1.99 each	“Push the letters into place and the pictures spring into action, teaching about letters and sounds.” Four categories of words are included.
/r/ intensive SLP	Smarty Ears	19.99	“rIntensive SLP was developed as a result of “intensive” request made by our Speech Therapists. Smarty Ears is aware of the high incidence of students seen for their difficulties with /r/.”
Sight Words	Brain Counts	FREE	“Learn over 300 High Frequency” words will help your child learn to read better, and in most schools, it is a requirement for the kids to know these without sounding them out. The power in this learning tool is the ability to change the setting to fit your child’s learning level and style and design to grow with your child.”
VolaFriends HD		\$1.99	“Kids love faces and VolaFriends make lots and lots of faces. This is a fun, developmental way for young children to explore the words and looks of basic human emotions.”

## Additional Application Ratings

Application	Developer	Price	Engaging	Facilitative Context	Functional	Naturalistic	Communication partner	Individualized	Focused	Evidence/theory/dev./based	Accountability	Safe	Efficient/practical
Sight Words	Bright Trail	0.99\$	3	2	2	2	1	2	3	4	1	5	4
ABC Phonics	Brain Counts	1.99\$	5	4	4	4	2	3	4	4	1	5	5
Vola Friends	VolaFriends LLC	\$1.99	3	4	4	3	1	1	4	4	1	5	5
R Intensive	Smarty Ears	\$19.99	3	2	2	2	1	3	4	2	3	5	4
ABA Questions	Innovative Mobile Apps (Alligator Apps)	Free	3	2	3	2	1	2	3	3	2	5	3
First Words Deluxe	Learning Touch	4.99	3	3	2	2	1	2	3	4	1	5	4
ABA Flashcards	Innovative Mobile Apps (Alligator Apps)	Free	3	2	2	1	1	1	2	2	1	5	3
Average App Rating*			3.81	3.667	3.866	3.184	3.5	3.636	3.9	3.347	2.606	4.106	3.771

\* The average application rating is from the app ratings used in the study and does not include the additional applications in the calculation

\*\*These ratings are from a 5 point scale, where 5 indicated agreement that a specific principle was present or that the app could be modified by the user to include that principle.

## Super Duper Applications Descriptions

Application	Cost	Cost of Physical Cards	Description (from developer web-sites or app store)
<b>60 Story Starters</b>	3.99	12.95	<i>Webber Photo Cards — 60 Story Starters</i> Application for the iPhone®, iPad®, and iPod touch® takes 60 story starter images from this Super Duper Publications card deck and combines them with audio to create 180 entertaining ways for students to begin telling their own stories. <i>Story Starters</i> also helps children improve their describing, questioning, inferencing, writing, and storytelling/retelling skills.
<b>All About You All About Me</b>	5.99	12.95	This colorful social skills App for the iPhone®, iPad®, iPod touch® and Android™ has all 56 illustrated picture cards (plus audio of each card text) from the <i>All About You, All About Me Fun Deck</i> by Super Duper Publications. Select the cards you want the students to see, and have them ask and answer essential questions about getting to know someone. The prompts include basic questions like, “ <i>What is your name?</i> ” and “ <i>What is your home address?</i> ” as well as open-ended statements like, “ <i>Tell me about your friends.</i> ”
<b>Following Directions</b>	5.99	12.95	This colorful App for the iPhone®, iPad®, and iPod touch® has all 52 illustrated picture cards (plus audio of each card text) from the <i>Following Directions Fun Deck</i> by Super Duper Publications. Select the cards you want students to see, and have them follow one-step directions like, “ <i>Growl like a bear,</i> ” to help boost their memory, motor, and auditory processing skills. You can even have the students follow multi-step directions by presenting them with more than one card at a time.
<b>How would you feel if</b>	5.99	12.95	This colorful social skills App for the iPhone®, iPad®, iPod touch®, and Android™ has all 56 illustrated picture cards (plus audio of each card text) from the <i>How Would You Feel If ... Fun Deck</i> by Super Duper Publications. Select the cards you want students to see, and have them discuss their feelings about a variety of situations. The prompts include questions like, “ <i>How would you feel if ... you forgot to study for your spelling test?</i> ” and “ <i>How would you feel if ... your favorite football team lost?</i> ”
<b>How?</b>	5.99	12.95	This colorful App for the iPhone®, iPad®, iPod touch®, and Android™ has all 52 illustrated picture cards (plus audio of each card text) from the <i>How? Fun Deck</i> by Super Duper Publications. Select the cards you want students to see, and have them develop their reasoning, problem-solving, and sequencing skills as they respond to questions like, “ <i>How do you ... help someone who’s hurt?</i> ” and “ <i>How do you ... make a sandwich?</i> ”
<b>If...Then...Fun Deck</b>	5.99	12.95	This colorful problem-solving App for the iPhone®, iPad®, and iPod Touch® has all 52 illustrated picture cards (plus audio of each card text) from the <i>If ... Then ... Fun Deck®</i> by Super Duper® Publications. Select the cards you want students to see, and have them complete statements to enhance their critical thinking, inferencing, and reasoning skills. Prompts include open-ended statements like, “ <i>If it looks like it’s going to rain, then ...</i> ” and “ <i>If you spill your drink, then ...</i> ”
<b>Irregular Verbs Fun Deck</b>	5.99	12.95	This colorful App for the iPhone®, iPad®, and iPod touch® has all 52 illustrated picture cards (plus audio of each card’s text) from the <i>Irregular Verbs Fun Deck</i> by Super Duper Publications. Select the cards you want students to see, and have your students fill in the

			blank to practice irregular past, present infinitive, and future tense verbs. The prompts include statements like, “Beth will ___ the race.” and “Yesterday, Beth ___ the race.” The Automatic Scoring option allows the students to choose from one of two answers to complete the sentence correctly.
<b>Name That Category</b>	5.99	12.95	This colorful App for the iPhone®, iPad®, iPod touch® and Android™ has all 56 illustrated picture cards (plus audio of each card text) from the <i>Name That Category! Fun Deck</i> by Super Duper Publications. Select the cards you want students to see, and have them fill in the blank to practice describing, categorizing, and organizational skills. The prompts include fill-in-the-blank statements like, “A car, bike, and train are ___.” and “A sandwich, pizza, and French fries are ___.”
<b>Plurals Fun Deck</b>	5.99	11.95	This colorful App for the iPhone®, iPad®, and iPod touch® has all 56 illustrated picture cards (plus audio of each card’s text) from the <i>Plurals Fun Deck</i> by Super Duper Publications. Select the cards you want students to see, and have your students fill in the blank to practice regular and irregular plurals. The prompts include statements like, “Eric found a ___ (penny) on the sidewalk.” and “Eric found several ___ (pennies) on the sidewalk.” The Automatic Scoring option allows the students to choose from one of two answers to complete the sentence correctly.
<b>Practicing Pragmatics</b>	5.99	12.95	This colorful social skills App for the iPhone®, iPad®, iPod touch® and Android™ has all 52 illustrated picture cards (plus audio of the text on each card) from the <i>Practicing Pragmatics Fun Deck</i> by Super Duper Publications. Select the cards you want students to see, and have them answer social skills questions about Politeness, Solving Problems, Feelings, Giving Information, Requesting, Telephone Skills, and Staying on Topic.
<b>Regular Past Tense Verbs</b>	5.99	12.95	This colorful App for the iPhone®, iPad®, and iPod touch® has all 52 illustrated picture cards (plus audio of each card’s text) from the <i>Regular Past Tense Verbs Fun Deck</i> by Super Duper Publications. Select the cards you want students to see, and have your students fill in the blank to practice regular past tense verbs. The prompts include statements like, “Becky will ___ a cake” and “Yesterday, Becky ___ a cake.” The Automatic Scoring option allows the students to choose from one of two answers to complete the sentence correctly.
<b>Super Duper Data Tracker</b>	5.99		<i>Super Duper Data Tracker</i> is an advanced tool for monitoring and documenting your students’ progress.
<b>Understanding Inferences</b>	5.99	12.95	This colorful App for the iPhone®, iPad®, iPod touch® and Android™ has all 52 illustrated picture cards (plus audio of the text on each card) from the <i>Understanding Inferences Fun Deck</i> by Super Duper Publications. Select the cards you want students to see, and have them answer questions or complete sentences to help boost their inferencing and reasoning skills. Prompts include questions like, “Who might live here?” and sentences like, “Bill is sick. His mom is taking him to...”
<b>WH Questions at Home</b>	5.99	12.95	This colorful social skills App for the iPhone®, iPad®, and iPod touch® has all 56 illustrated picture cards (plus audio of each card text) from the “WH” <i>Questions At Home Fun Deck®</i> by Super Duper® Publications. Select the cards you want students to see, and have them ask and answer questions about all aspects of home life. The prompts include WH questions like,

			<i>"Who are your neighbors?" and "Where do you keep your clothes?"</i>
<b>WH Questions at School</b>	5.99	12.95	This colorful social skills App for the iPhone®, iPad®, iPod touch®, and Android™ has all 56 illustrated picture cards (plus audio of each card text) from the <i>"WH" Questions At School Fun Deck</i> ® by Super Duper® Publications. Select the cards you want students to see, and have them ask and answer questions about what happens before, during, and after school. The prompts include WH questions like, <i>"Who is your principal?"</i> and <i>"When do you eat lunch?"</i>
<b>What Would You Do At Home If</b>	5.99	12.95	This colorful social skills App for the iPhone®, iPad®, and iPod touch® has all 56 illustrated picture cards (plus audio of each card text) from the <i>What Would You Do At Home if ... Fun Deck</i> by Super Duper Publications. Select the cards you want students to see, and have them work on solving problems and practicing good social skills as they discuss situations in and around home. The prompts include questions like, <i>"What would you do if ... you accidentally knocked over your chocolate milk?"</i> and, <i>"What would you do if ... you were doing homework in the family room, and your sister turned on the TV?"</i>
<b>Yes or No?</b>	5.99	11.95	This colorful App for the iPhone®, iPad®, and iPod touch® has all 52 illustrated picture cards (plus audio of each card's text) from the <i>Yes or No? Fun Deck</i> by Super Duper Publications. Select the cards you want students to see, and have your students answer yes/no questions to practice basic questioning, answering, and reasoning skills. The prompts include questions like, <i>"Can a cow bark?"</i> and <i>"Can a flower grow?"</i> The Automatic Scoring option allows the students to choose "Yes" or "No" to answer the question correctly.

## Super Duper Application Ratings

Application	Cost	Engaging	Facilitative Context	Functional	Naturalistic	Communication Partner	Individualized	Focused	Evidence/theory/dev. based	Accountability	Safe	Efficient/Practical
60 Story Starters	3.99	2	3	4	4	4	2	4	4	4	5	5
All About You All About Me	5.99	2	3	3	3	4	3	5	4	2	5	3
Following Directions	5.99	3	3	4	3	2	3	2	3	4	5	2
How would you feel if	5.99	3	2	4	3	4	3	4	3	5	5	4
How?	5.99	4	3	4	4	4	3	4	3	5	5	4
If...Then...Fun Deck	5.99	3	3	3	2	1	3	3	4	3	5	3
Irregular Verbs Fun Deck	5.99	3	4	4	2	1	4	4	4	4	5	4
Name That Category	5.99	4	4	3	2	3	3	4	3	4	5	4
Plurals Fun Deck	5.99	4	4	4	3	2	4	4	4	4	5	4
Practicing Pragmatics	5.99	3	4	3	3	3	3	4	3	4	5	4
Regular Past Tense Verbs	5.99	3	4	4	2	1	4	4	4	4	5	4
Super Duper Data Tracker	5.99											3
Understanding Inferences	5.99	3	4	3	2	3	3	3	3	4	5	4
WH Questions at Home	5.99	3	3	3	2	1	3	3	4	3	5	3
WH Questions at School	5.99	3	2	4	3	4	3	4	3	5	5	5
What Would You Do At Home If	5.99	3	2	4	3	4	3	4	2	5	5	4
Yes or No?	5.99	4	4	3	3	2	3	4	4	4	5	4
Average App Rating*		3.81	3.667	3.866	3.184	3.5	3.636	3.9	3.347	2.606	4.106	3.771

\* The average application rating is from the app ratings used in the study and does not include the additional applications in the calculation

\*\*These ratings are from a 5 point scale, where 5 indicated agreement that a specific principle was present or that the app could be modified by the user to include that principle.