



# **City, University of London**

## **MA in Publishing**

***Your Own Hero! App with Extended Business Analysis***

### **Major Project Report 2018**

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Tiffany Walker

28 August 2018

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# ABSTRACT

The aim of this major project is to determine the feasibility and viability of the simulation storybook app *Your Own Hero!*, an innovative concept designed for those with autism, for the purposes of creating an effective and compelling business case analysis. *Your Own Hero!* is a storybook concept where autistic children can become the hero of their own story, where coping mechanisms and social skills are taught through the use of personalised fiction. *Your Own Hero!* creates a simulation effect of integrating true likeness and traits of a child, the use of their name, and the use of their personal family and home settings into a storyline that is known to cause anxiety/triggers for those with autism. This type of publication is a form of social stories, which is type of treatment used for those with autism and known to be effective for the behavioral and social development of autistic people due to its use of modeling and exposure therapy. I created a prototype app format of *Your Own Hero!* since I thought a digital variation to the storybook would allow for instantaneous gratification and also create a more immersive simulated effect and hopefully be more meaningful/effective to the user. Autism is a neurological disorder that affects language and cognitive development, impairing communication, behavior, sensory and social skills. At this point in time, there's no one cause and no "cure" and affects over 1% of the population worldwide, 1 out of 58 children are diagnosed (US). Diagnoses have increased 119% over the past 10 years (US) due to the diagnostic criteria expanding into a spectrum of attributes. Autism is now identified as Autistic Spectrum Disorder (ASD), with children and adults exhibiting various combinations and degrees of behaviors and severity.

This business case analysis will show how the *Your Own Hero!* app and overall concept is a needed publication, as well as a financially feasible and viable product. I will demonstrate

the importance of autistic-specific publications for not only social and emotional growth, but also enhancing inclusivity and societal integration. I will demonstrate the overall need for autistic-specific publications based on current publishing trends, user statistics and the growing population of those with ASD that have individual, personalised needs. I then will demonstrate the means by which *Your Own Hero!* can be feasibly produced technologically and the various revenue and business model opportunities that would lead to its launch and sustainable viability.

This investigation was done through an interdisciplinary approach, inclusive of mixed-methods research. The prototype app I created was used for feasibility testing so as to gauge the usability factors of the end users and to gauge the financial requirements when tested on those in the tech/app-publishing industry. The secondary research informed the historical and statistical findings indicating psychological and social need for more autistic-specific materials such as the *Your Own Hero!* concept, in both print and digital, for use as supportive tools in both home and school settings. The use of primary research, where I interviewed experts in the fields of publishing, autistic-specific education and tech/business, qualified the secondary research I had done and expressly informed the feasibility and viability logistics of the overall business case analysis. It is through this extensive, interdisciplinary research that I establish a compelling business case for the publication/production of the *Your Own Hero!* app concept as a product needed and financially viable.

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**CHAPTER 4: APPENDIX**

**CHAPTER 5: REFERENCES**

## \*\*Dissertation term usage explained\*\*

Please note that part of the struggle within the autistic community is the semantics involved with how they are referred to within society. You will see materials that state phrases such as "...those with autism" and "person with ASD", as well as phrases that are more up front in saying "autistic people", "autistics", "autists". I have researched the various terms and for the purposes of this dissertation's academic style of writing, have used intermittently what I found to be the preferred terms for the various belief systems: e.g., "...those with autism" and "autistics".

As many have indeed embraced the neurodiversity movement (See section 2:3.4 Research) and don't consider autism to be a disability but rather an attribute of different thinking capabilities, the straight forward use of the word "autistics" is becoming favoured by many because of it signifies the understanding that autism is inherently linked to their identity. The word is used with pride the same as if describing a type of heritage without shame (e.g. British or American, lesbian, gay, African American, Latino, etc...). (Brown, Undated; WrongPlanet, 2013)

Although the person-first phraseology of "...those with autism", "person with autism" were formed out of the care/concern to "put the person first before the disability" (Brown, Undated) so as not to confuse autism as a part of their identity, this phrase has somewhat gone out of favor by some in the belief it is a phrase that indicates separateness. It is believed it infers a group of people with a dark disability. I am using it within my dissertation because some parents still prefer its usage, and it is most seen in academic writing thus far.

The word that I am not using is "autist" due to seeing that some believe it to trivialise the identity concept. As one autistic person best commented: (WrongPlanet, 2013)

"Someone who does art is an 'artist', and someone who does science  
is a "scientist", and so called 'magicians' are now called 'illusionists'. But unlike  
those groups -- autistic people don't voluntarily practice autism as if it were a craft.  
So that's why I don't like 'autist'."

(WrongPlanet, 2013)

# CHAPTER 1 | INTRODUCTION

## 1:1 Purpose

The purpose of this major project was to determine the feasibility and viability of the digital simulation storybook app prototype artefact I created, *Your Own Hero! (YOH!)*, for the niche market of autistic children/YA in order to compile an informed and effective business case.

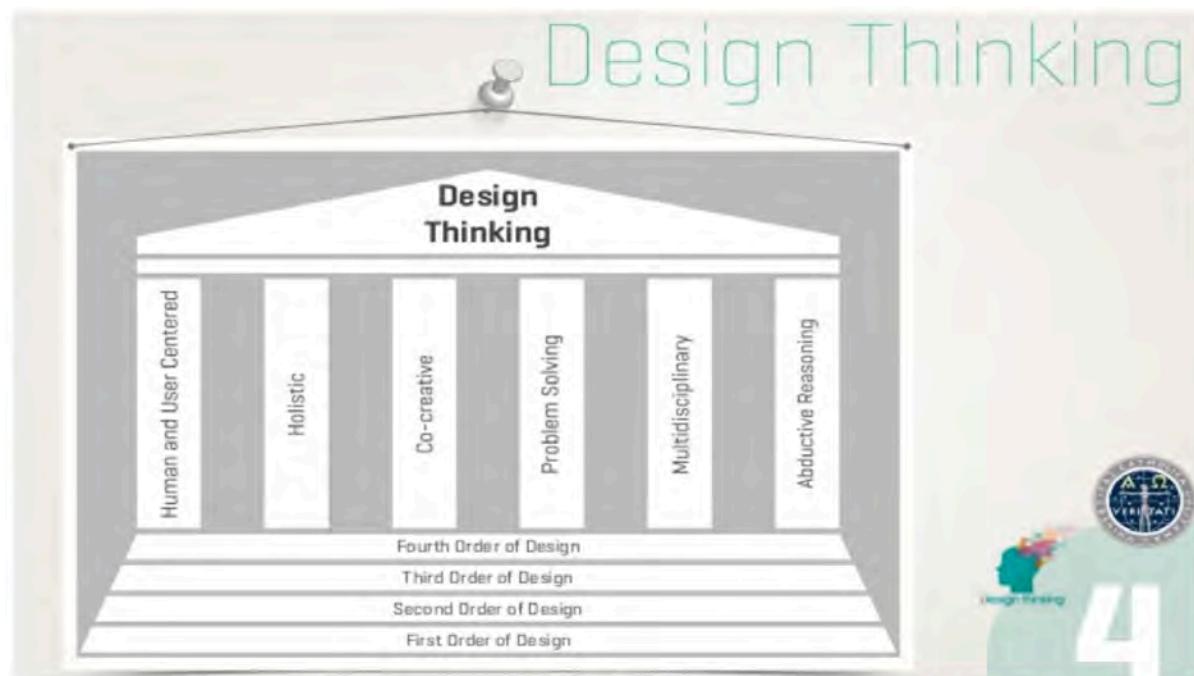
## 1:2 Methodology

For this Practice-based Research project, I set out to find a blueprint of methodology that would coincide with all the aspects that comprise the *YOH!* concept: autism (end-user), publishing, technology, business strategy. This methodology would allow for a systematic means of explicating, appraising, and iterating the *YOH!* concept. Because of the many aspects entailed, I found myself in the realm of Interdisciplinary Research, supported by a mixed-methods data collection technique of primary and secondary research. Below I will briefly give overview to the framework of my research.

### 1:2.1 Research defined

This is a Practice-based Research project due to the “basis of the contribution to knowledge” revolving around a “creative artefact” I designed: the *Your Own Hero!* simulation storybook app.(Candy, 2006) In addition, because of its interactive, digital nature, the artefact played “a significant part in generating and embodying new knowledge” via its usage in the feasibility testing done, which strengthens the purpose of using Practice-based Research.(Candy and Edmonds, 2010)

Interdisciplinary Research, where multiple disciplines are integrated and synthesised “to gain a more well-developed perspective, or discover something new”(White,2018; Jensenius,2012), was incorporated into my major project due to the digital, interactive design nature of the artefact involved and the coinciding business case that is connected to the outcome of this investigation.(Phocas,2015) I had considered several processes including, human-centred design, design-centred methodology, holistic-design, strategic design, and the NADI-design. However, I came upon the interdisciplinary Design-Thinking method, which is considered a “highly interactive and incremental process” that promotes “productivity within the research & development framework and innovation process” (Cerejo,2012). It was the one methodology that incorporated all the elements with which I was in need: Human-Centred Design; Holistic Design; Co-creative; Problem Solving; Multidisciplinary; Abductive Reasoning; and it takes consideration of the iterative stages of design. (See picto-graph below)



**Picto-graph of Design Thinking methodology, which is a form of interdisciplinary research in its incorporation of multiple methodologies to meet the needs of the user and producer of a product.**  
**(Cerejo, 2012)**

## **1:3 Business Case overview**

As this major project is a business case analysis based on the *Your Own Hero!* simulation storybook app prototype I created for those with autism, understanding what a business case is and what the key elements necessary for a persuasive outcome should be identified. In this section, a brief outline of what a business case entails will be discussed in relation to my publishing product, *Your Own Hero!*

### **1:3.1 Business Case vs. Business Plan**

There are similarities between a business *case* and business *plan* in that they are both used to influence investors/decision makers and both create a projection of financial planning and overall outcome of a given idea. (Schmidt, 2018). However, although they can be used as complementary “tools” for each other, “they address different questions. And they serve different purposes.” (Ibid) Swiftly defined: “A business plan is a proposal for a new business or major change to an existing business. A business case is a proposal for a strategy or project” [designed to bring action]. (Schmidt, 2018; Spacey, 2017)

In consideration of my dissertation revolving around a product or artefact (Candy, 2010; Candy and Edmond, 2010), which I created with the intent to bring into production, and being that my underlying purpose in designing *Your Own Hero!* was deeply linked to the autistic community and the overall need for such a publishing product in philanthropic terms alone, it seemed the best business schematic to communicate my intentions or “call to arms” for this situation, was that of a business case. For the purposes of this dissertation, the 5 key elements of a business case that I will investigate forthwith are: (Systemation, Undated)

1. Business need: Introduce your product by defining the value your solution will deliver and how it aligns with a business' goals and objectives. (Ibid)
2. Solution scope: Define the context of your solution/product through the capabilities of your idea, the methods used to deliver your idea, and the market and organisation that will be affected. (Ibid)
3. Stakeholder concerns: Demonstrate the big picture to potential investors and how your solution/product will impact the status quo for both the market, market segment and company, as well as indicate the potential risks or issues. (Ibid)
4. Estimated time and cost: Present investors with reasonable estimates of cost involved and the time it would take to implement and deliver the solution/product. (Ibid)
5. Overall ROI: Indicate the return of investment in terms of revenue and efficiencies, both financial and non-financial benefits. Leverage the solution/product potential to the point they can't say "no". (Ibid)

### **1:3.2 Feasibility vs. Viability**

The core of what a business case outlines is the feasibility and viability of a project.

Understanding what each of these terms encompasses begets a fully realised, successful business case proposal.

- ***Feasibility***

Feasibility refers to the research involved in finding the “strengths and weaknesses” (DifferenceBetween,2011) of a given business venture/product. It is best visualised in what is called a SWOT Analysis, where a cross-referenced paradigm is drawn up depicting separate quadrants listing the **Strengths**, **Weaknesses**, **Opportunities**, and **Threats** of the venture (TheBusinessAnalyst, Undated). There are various types of feasibility including, economic, legal, operational, schedule, market and area, resource, cultural, and financial (DifferenceBetween,2011), and will be touched upon throughout this investigative major project.

- ***Feasibility Test***

There's another way in which feasibility can be investigated and that is through a feasibility test (Allen, 2018). In this scenario, an actual prototype of the intended business venture is produced, otherwise known as a minimal viable product (MVP). This basic, bare minimum sample product is used to test on potential customers of various segments in order to gain the most accurate feedback regarding functionality and desirability, which play a key role in overall business case in terms of value proposition.(Ibid) Value proposition is described as being the “clear articulation of why customers should choose your solution over that of your competitors”(Ibid).

- ***Viability***

Viability refers to the “investigation of the existing business or proposed [business] venture’s sustainability” (Ibid). This is best visualised through a PESTLE Analysis where an acronym indicates the 6 variables investigated in order to gain a sense of long-term viability (Kunchala, 2016):

|                      |  |
|----------------------|--|
| <b>Politics:</b>     | government policy; funding; grants               |
| <b>Economy:</b>      | inflation; labour/energy costs                   |
| <b>Social:</b>       | population, culture, education, media, lifestyle |
| <b>Technologies:</b> | emerging tech; web; communication                |
| <b>Legal:</b>        | regulations and standards                        |
| <b>Environment:</b>  | ethical issues; recycling; pollution; weather    |

In layman terms, one can determine if there is a place in the market for a given new business venture/product and make educated decisions on whether to move forward by

cross-referencing feasibility and viability research (ManagementGuru,2014), PESTLE to SWOT.

### 1:3.3 Conclusion

The above information influenced the direction of my major project by creating an outline of things to investigate. Without which, I may have researched elements that would otherwise be considered not relevant for demonstrating my product's validity in bringing it to market. I had made the decision to do a business analysis as my dissertation based on the initial research I compiled in the *YOH! Proof of Concept* (Walker, 2018) (see appendices 4:1)

The SWOT Analysis below indicates my initial findings (Walker, 2018).

| <u>SWOT ANALYSIS:</u>  |   |
|--|---|
| STRENGTHS  | WEAKNESSES  |
| <ul style="list-style-type: none"> <li>• Fulfils a need for autistic -focused materials (digital &amp; fiction &amp; skills).</li> <li>• Personalized</li> <li>• Gives parents/children control of their day-to-day needs.</li> <li>• App grows with child.</li> </ul>                   | <ul style="list-style-type: none"> <li>• Tech/Storyline development potentially cost-prohibitive.</li> <li>• Distinct needs of autistics can't be met completely.</li> <li>• Niche audience=lower purchasing power; limits publisher's interest to invest.</li> </ul> |
| OPPORTUNITIES  | THREATS   |
| <ul style="list-style-type: none"> <li>• Break barriers of innovation &amp; disability literature.</li> <li>• Publisher can be the first to tap into unexploited market.</li> <li>• Extension of publisher literature brands.</li> <li>• Extension of users &amp; storylines.</li> </ul> | <ul style="list-style-type: none"> <li>• Tech advancements make app cost-prohibitive, or obsolete.</li> <li>• Licensing of well-known animated animals. (**depending on biz model used.)</li> </ul>   |

Original SWOT Analysis for *Your Own Hero!* app. Excerpted from *Your Own Hero! Proof of Concept*. (Walker, 2018, p. 15)

From the prototype I created, I was able to conduct a feasibility test (see section 2:2.2) throughout this investigation. The use of this tangible prototype allowed me to gain comprehensive insight within the publishing and tech/business fields regarding the strengths and weaknesses of both the subject matter concept, which would pertain to the autistic-specific storyline; as well as, the digital concept, which was the autistic-specific format with which the subject matter was presented.

Through my user testing I was able to accumulate information to better gauge the cost variables (tech and story), market variables (who can use this product), legal variables (licensing of story characters utilised), and the user variables (**UI/UX**). To be clear, **User Interface (UI)**, is how the user connects to the material based on how the information is displayed visually communicated in order for the user to actually use the product; **User EXperience (UX)**, is how the product “logically flows from one step to the next” in order for the user to progress through the material displayed (Ming, 2014). In summation, the feasibility testing allowed me to fully see the viability of my product in real time through the Design-Thinking methodology, an Interdisciplinary Research method .

---

Doing something costs  
something. Doing nothing  
costs something. And,  
quite often, doing nothing  
costs a lot more!

Ben Feldman

PICTUREQUOTES .COM

(Feldman, 1989)

---

# CHAPTER 2 | YOUR OWN HERO!

**Access the *Your Own Hero!* app**



**URL: <https://marvelapp.com/3a3db92>**

**PASSWORD: ABrindlecorp**

## 2:1 Introduction

For the purposes of this dissertation, it's important to present the concept/product with which this business case analysis is based. In this chapter, the *Your Own Hero!* app/concept and USPs will be discussed, as well as a pictorial review of the actual prototype app. Through visually seeing the prototype artefact, a solid point of reference can be ascertained; giving relevant leverage to better understand the feasibility and viability research.

## 2:2 *Your Own Hero! Overview*

*Your Own Hero!* is a simulation storybook app where autistic children can become the hero of their own story, whilst learning coping mechanisms and social skills along the way. It fuses both personalised-fiction and non-fiction elements so as to create an immersive, visual environment conducive to contextual learning of emotional and behavioral skillsets, affirming self-esteem that will engender social inclusivity and imaginative empowerment play. The story offerings will be situations known as triggers for autistics so they can see

various ways to navigate themselves, and alleviate anxieties based on the narrative line they choose, which will allow exposure, modeling and habituation therapy through repeated viewing.

The storylines are personalised by using the child's name and likeness, and also that of his/her family, which will transpose into an animated form and integrated into the pre-designed storyline infrastructures along with the setting of the story utilizing the likeness of the matched rooms of the child's home. The app is designed to adeptly meet the autistic-specific needs and user experience required for many autistics, allowing the child to go through a story as themselves with a hero-cape option, or journey through the story not as themselves but as their favourite animal avatar. It will also allow for the child to have a companion with them through the story, whether a parent, sibling, friend or their favored animal avatar. The personalization continues with the various attributes/traits of autism (also referred to as presentations throughout this report for purposes of inclusivity) the child exhibits being implemented into the storyline, the level of autistic severity, and choice in activity deemed to be the child's favourite thing to do which will be incorporated into the plot as their reward for making it through the triggering situation.

The app also includes aural innovation, where 2 buttons will be available for family members/parents to pre-record soothing sayings or fun words that will aid the child throughout the story if anxiety occurs or utilised just for fun, changeable at any time. Depending on the storyline chosen, there will also be existing fun noises integrated into the story as well, which can be muted if it is best for the child. This is in addition to the option of highlighted words appearing upon the page to help the child learn to read, and the option of text-to-audio and/or the parent recording the whole story for the child to listen to.

Because of the customization/personalization options, the consumer reach for *YOH!* is significantly broadened and able to simulate many trait variations within the spectrum, as well as grow with an autistic child throughout the course of development. A parent may manage the app initially; however, it was aesthetically designed for a child to be part of the process and take over once a greater sense of autonomy was achieved. There are intended iterations/extensions for the *YOH!* concept for when the autistic child/YA is ready for a different kind of storytelling in which a button would link them to a *Zelda*-esque, choose-your-own-story option, once again designed to cater to the autistic end-user.

Another extension opportunity for *YOH!* was in having material for a sibling to also be the hero of their own story, whereby the same storylines are used, but it is the sibling that learns coping mechanisms to better deal with their autistic sibling and the option to the *Zelda*-esque variation to match their level of storytelling. All of these aspects allow the parent to control the day-to-day developmental needs of their child(ren) and have a therapeutic supportive tool available to cover any gap in the medical/educational care they may be receiving. Beyond this app being intended for family use, an iteration of storylines would most definitely include classroom situations for older pre-teen/teen users, as I have come to find out *YOH!* may forge a greater solid footing in its usage and credibility if it is released via educational channels first.

## **2:2.1 Pictorial review**

Below is a pictorial review of the *YOH!* app in its expanded conceptualised ideation and not what is to be the MVP. There'll be excerpts from my original *Proof of Concept* (Walker, 2018, p.7-13), as well as slides of new iterations. Since the original prototype design, I've made user-specific UI/I-UX iterations based on the feasibility testing I performed throughout the course of this investigation. And I'm still undecided as to how much animation I'd prefer,

as well as the type of illustration to utilize to be engaging for both higher functioning and/or older autistics and those that are lower functioning autistics. Whether the animated version of someone's likeness should be in a fully saturated, cute variation, or a more life-like, sketched illustration, or both in order to capture all age-ranges. I did want to explore the actual storyline/character development end of *YOH!* so as to have several sketched out stories for better feasibility testing. Me just verbally describing the plot with the cape-option didn't do the concept justice since it wasn't in a tangible/visual form. I did somewhat hit a creative barrier when trying to decide how to get into the story since I wasn't sure if it should be in a 1<sup>st</sup> or 3<sup>rd</sup> person narrative. My research actually made me wonder if autistics think in 3<sup>rd</sup> person and all the materials should be written as such. I was able to complete one 1<sup>st</sup> person variation of a storyline, which actually helped show me the importance to do both 1<sup>st</sup> and 3<sup>rd</sup> person, because of the different directions a story can go. I finally got confirmation that autistic children like all the variations just as neurotypicals. Unfortunately, however, due to the time constraints of this dissertation, I ran out of time to do more story sketch-outs, much less commence animating my ideas on my own to see where that took my concept. That said, I feel confident in what is visually/tangibly presented as is, because it does fully demonstrate all that can be with the *YOH!* concept.

**NOTE:** Pictorial review displays key screens of interest or points of iteration after feasibility testing feedback. Pictures go in succession, however not every app page will be displayed.



**YOH!** opening sign-in page and “About” tab landing page. I intentionally put the Autism Society logo there to indicate how the credibility//stamp-of-approval//sponsorship of an autistic association would be helpful.



Screenshot of the “enter your name” app page and an older screen indicating the blanket usage of the word “your”. Research indicated autistics need explicit direction, not implicit. Originally, all of the app pages used the pronoun “you” and “your”, whereby an autistic person may not know the instructions are for them. I changed the “enter your name” page to the beginning, as the entry point, so the name can be integrated throughout. So, by putting the “enter your name” first, the name can be implemented throughout.



A screenshot of the MarvelApp.com dashboard of the *Your Own Hero!* app layout. This is the updated version of the app after several iterations from the feasibility testing. Most notably, the “enter your name” function was put as the entry point of the profile set-up.

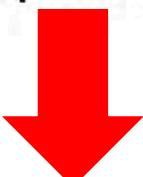
### Tailored-Made Autistic User-Experience:

- 1.) Customize spectrum levels, symptoms, and colour palette. Change at any time and the storyline adjust



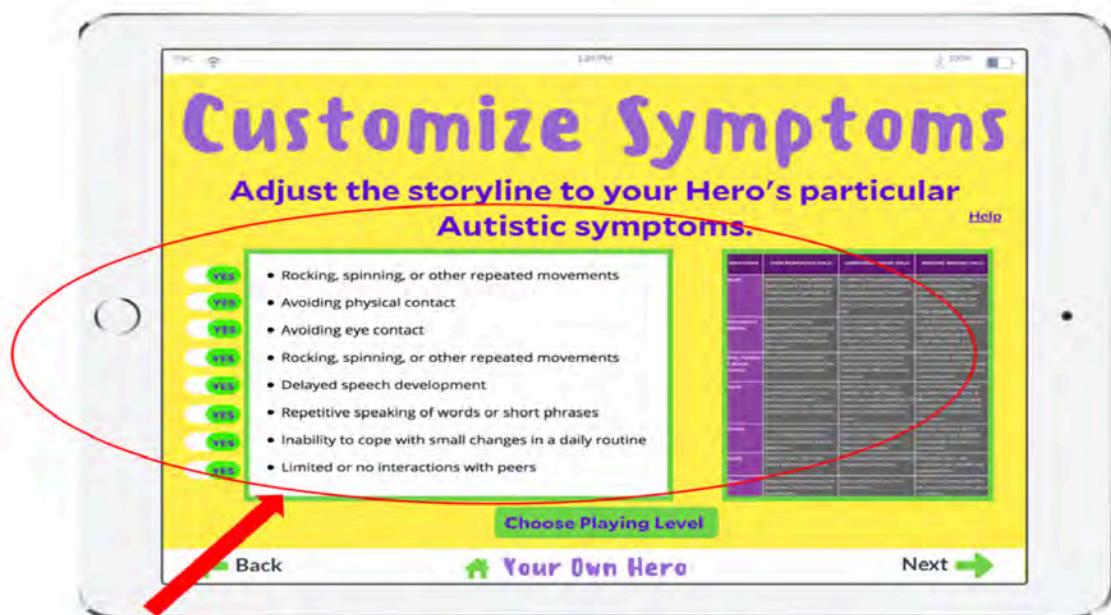
Mild Colours for Autistics

Excerpt from *YOH! Proof of Concept* showing an original version of the autistic-specific customizing page for ASD traits. *YOH!* enables a tailor-made storyline to match an autistic's specific individual needs. (Walker, 2018, p.9)



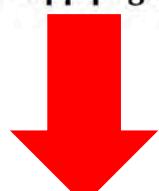


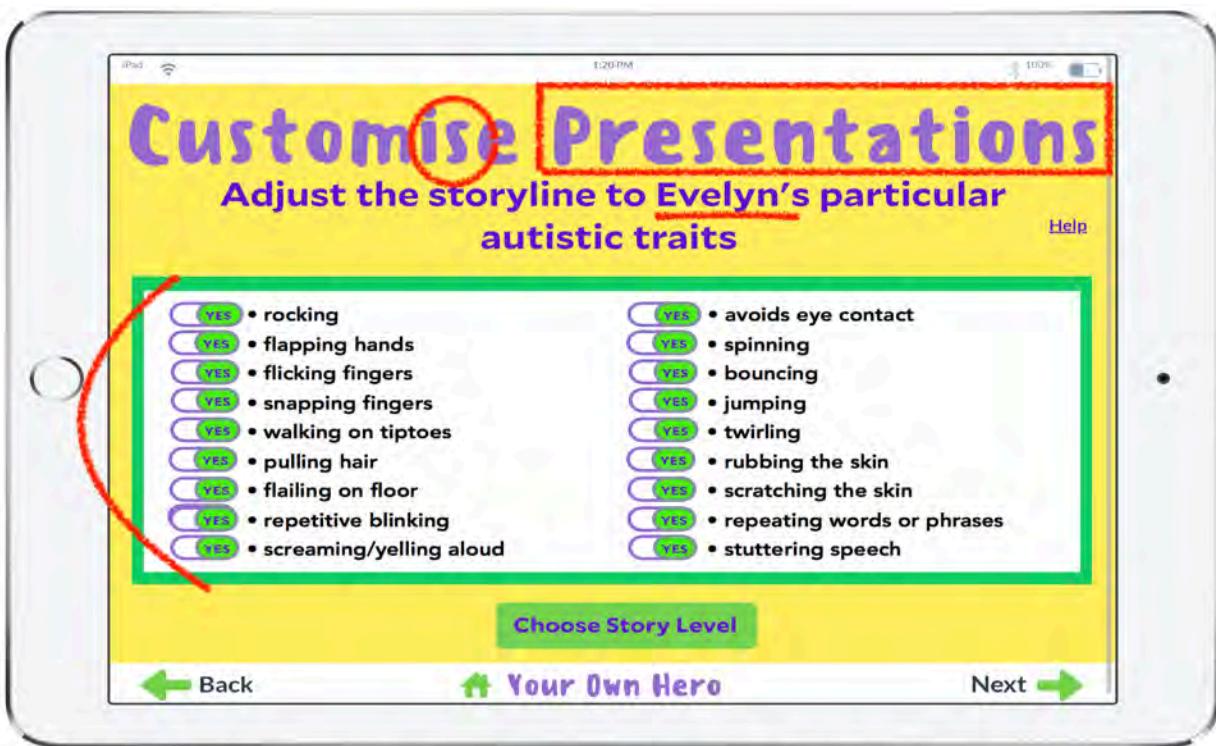
New iteration of the ASD customisation app page. Adjustments to verbiage have been made so as to align with more inclusive terminology (e.g., "symptoms", "your"), and the word "Playing" has been taken out of the title so there is no longer potential confusion if whether or not this is a game or not.



\*\*\*I want this to be a hover option pop-up over EACH Level

Excerpt from *YOH! Proof of Concept* again shows an original version of the Customise "Symptoms" app page. (Walker, 2018, p.9)





New iteration of the “Symptoms” page, with actual traits listed in an easier to read schematic, adjusted verbiage for inclusivity and UK spelling fixes. I still wish to make this a hover option over each severity level, but I kept in this layout due to its instant visual clarity of YOH! simulation options.



#### Personalisation / Simulation Experience:

- 1.) Scan/Upload pictures (& name-done on other app screen) of child and family to animate into the storyline. Change pictures as your child grows, or whenever you like.



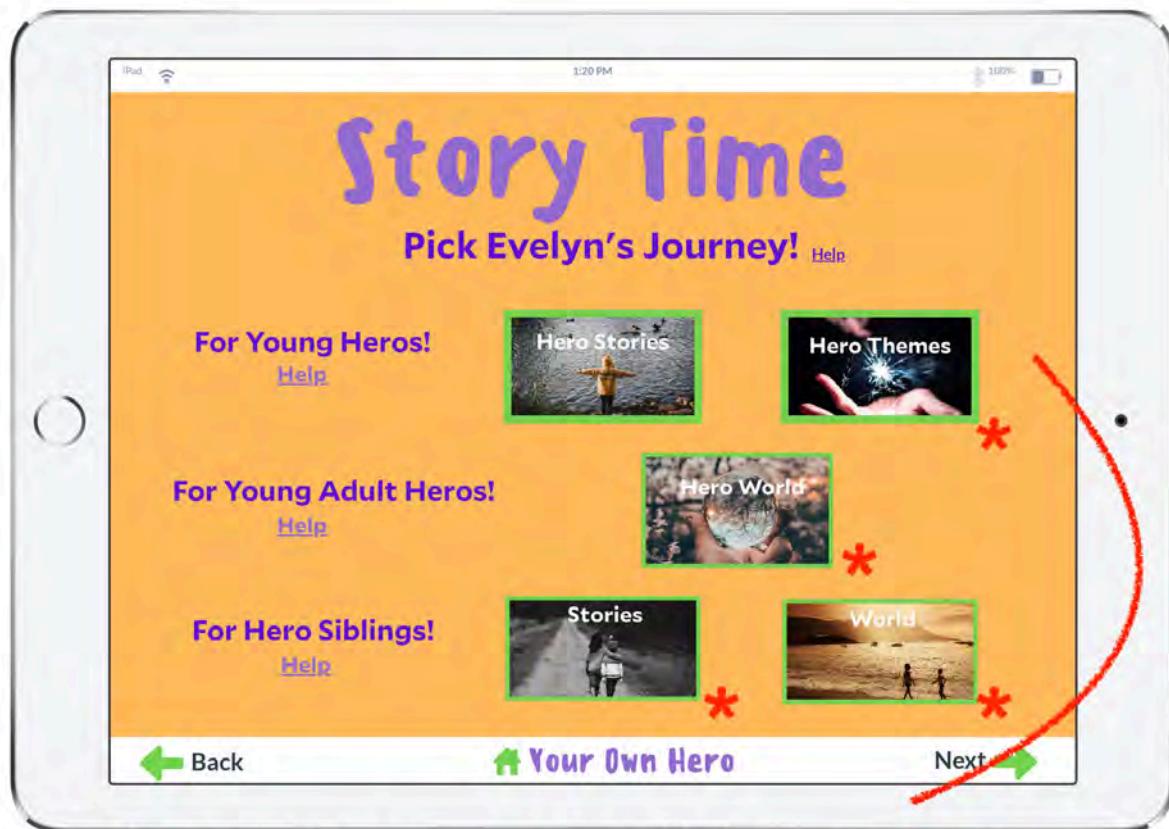
Excerpt from *YOH! Proof of Concept* showing the element of simulation/personalisation that is a main USP to *YOH!* (Walker, 2018, p.7)



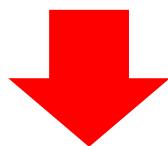
**New iteration: "Hero Activities", where the child picks an activity that will be incorporated into the story as a form of reward/incentive for making it through the trigger moment.** This was added after I started sketching stories out and realised there wasn't a catalyst/incentive element for the child to want to get to the end of the story.



**Hero options with the new iterations of verbiage in place. The avatar animals demonstrate the opportunity for publisher character branding.**

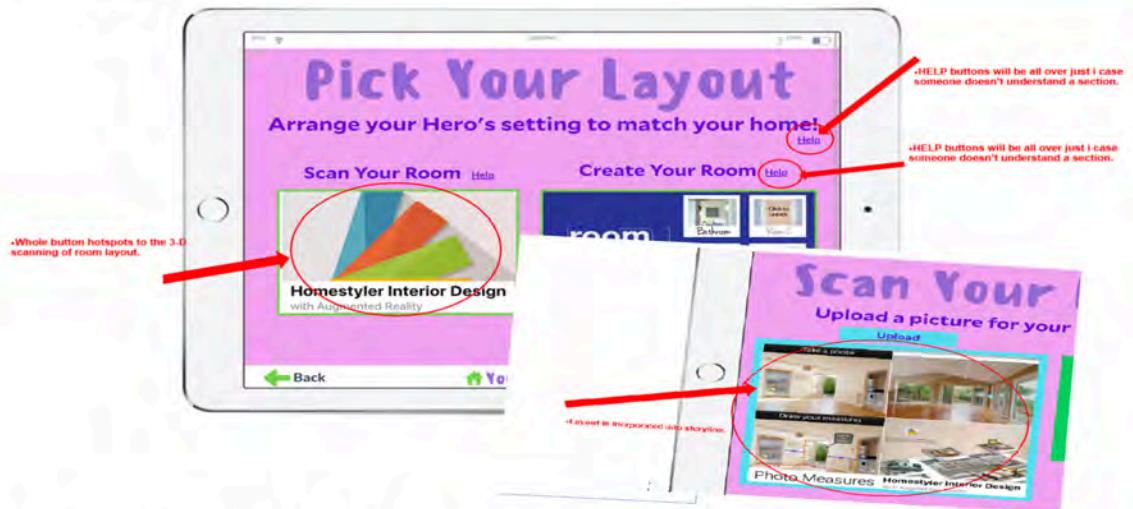


Screen shot of the “Story Time” app page with the expanded conceptualisation options of “Hero Themes”, “Hero World”, and the sibling options of stories. ★

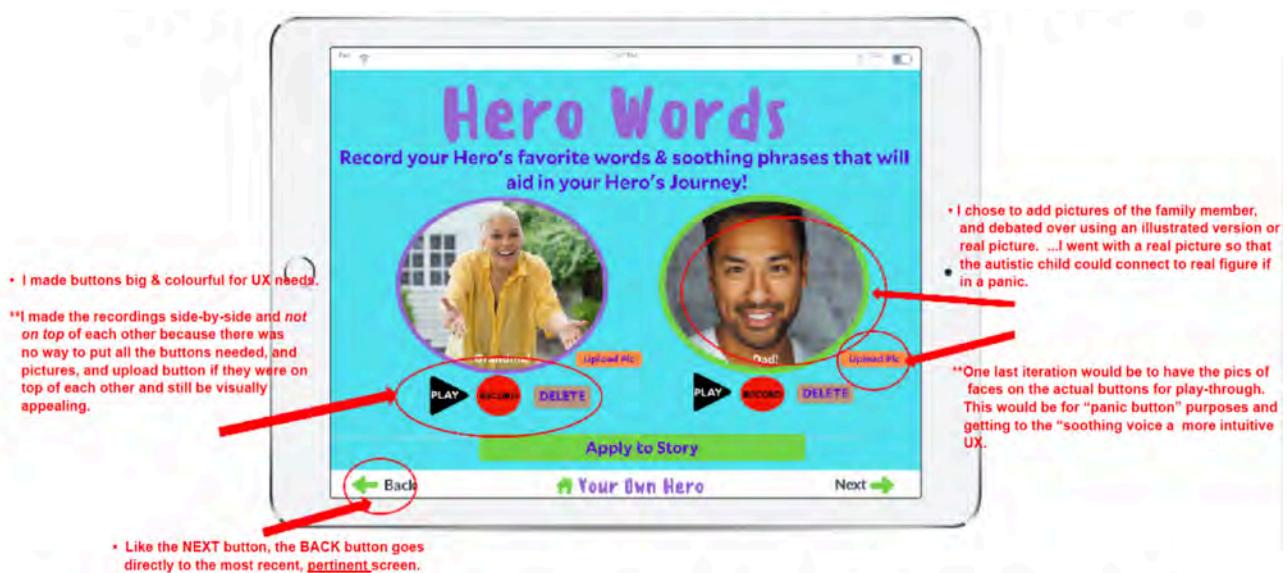


(Left) New iteration of what the MVP would be for “Story Time”.

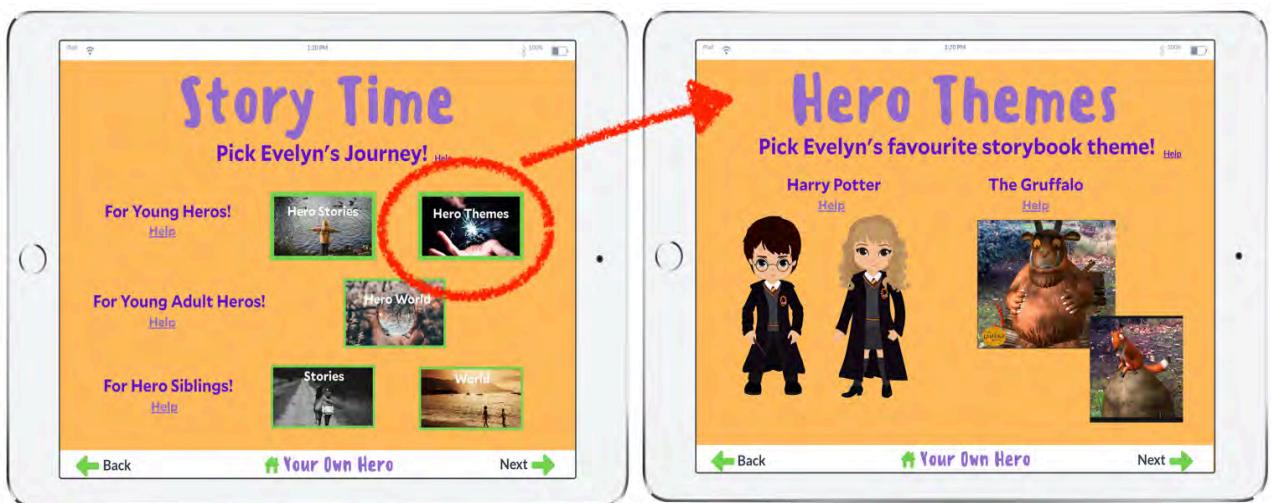
(Right) Story option app page listing stories that are research as common triggers.



Excerpt from the *Your Own Hero! Proof of Concept* showing the room simulation capability. (Walker, 2018, p.8)



Excerpt from the *Your Own Hero! Proof of Concept* showing the audio innovation. (Walker, 2018, p.8)



4 screen shots of the “Hero Theme” concept that is an expanded iteration of YOH!. This demonstrates another opportunity for publisher character branding and taps into an autistic child’s special interests even further. Same storylines but the situation would occur within the setting of the character’s world.



4 screen shots of the final steps before the story begins. New iterations are in the verbiage and the sound buttons now being pictures of the people on the recordings for quick reference.

## 2:2.2 Value proposition

The concepts of feasibility and viability have been previously discussed as being key factors of a proper business case (see section 2:2.2). However, the core understanding of *what* creates value in a product has not been discussed. Value is inherently linked to a product's desirability, which is then linked to feasibility and subsequently viability in what becomes a never-ending cycle that ultimately determines the success—or failure—of a given product/business (Jeffries, 2016). The marketing term “value proposition” is used in business to present the feature, innovation, or service in a clearly articulated way that make a product/business desirable to customers and stand out from the competition (Allen, 2018). Value proposition is also known as Unique Selling Point (USP).

## 2:2.3 Unique Selling Points

- ***Immediate USPs***

Immediate USPs are tangible representations of how and why a price point is determined beyond cost of production factors. The simulation storybook app *Your Own Hero!* has several immediate USPs. The specific consumer for which the product is intended, which is the autistic community, an exponentially growing niche market in need of user-specific materials. There are the various uses this product will fulfill based on user-specific profile (see chart below): there is the user-specific storyline content (trigger stories common to autistics) and digital format content (interface/layout) that are attuned to the specific needs of autistics; the ability to personalize the story by uploading of actual pictures has not been done before; the fusion of fiction and non-fiction in a digital format; and, connected to all of these USPs, is how the product on a whole is a type of tangible intervention in being a type of supporting material that “will bridge the gap between timely and affordable therapy

options for families [and teachers]" (Walker, 2018, p. 22). On the distinct publisher end of immediate USPs, this product offers an ability for brand extension of animal/character tie-ins with long-term potential. (*Ibid*) (See pictures below)

**The Unique Selling Points of *Your Own Hero!* (Walker, 2018, p. 7)**

# Your Own Hero!

- Tailored to Autistic UX
- Autistic Child is the Hero of Their Own Story
- Personalized Simulation Experience
- App Grows with the Child
- Parents Can Control Their Child's Daily Needs
- Easy Interface
- Blends Fiction & Non-Fiction
- Researched Storylines Teach Skillsets & Coping Mechanisms
- The Whole Family is Included in the
- Audio Capabilities for Personalised Effect.

| <u>MVP</u><br>Target Audience   | "IDEAL INNOVATION"<br>Extended Target Audience  |
|---|---|
| <p><b>Various Spectrum Autistic Kids</b></p>  <ul style="list-style-type: none"> <li>-Autistic children 2+, various spectrum autistics.</li> <li>-Children that need fiction stories that feature autistic child as protagonist, leading a story.</li> <li>-Children that need variations of supportive methods to read in terms of family/friend/animal/audio options.</li> <li>-Children that need storylines that teach them skills e.g.) coping mechanisms in a personalized way.</li> </ul> | <p><b>Beth, 28, Parent</b></p>  <ul style="list-style-type: none"> <li>-Busy Mom with part-time job.</li> <li>-Needs assistance teaching autistic daughter, 4-yr-old, socializing skills &amp; how to deal with every day triggers.</li> <li>-Would like to be able to have material that she can read with her child, but also allow her child to do on their own.</li> </ul>   |
| <p><b>Sally, 67, Grandparent</b></p>  <ul style="list-style-type: none"> <li>-Grandmother,</li> <li>-Grandparent who watches the autistic grandchild (2) and needs material that can assist with coping mechanisms they can't teach, and can learn with child.</li> <li>-Would like material that can help with every day events.</li> </ul>   | <p><b>Parents with both autistic &amp; non-autistic children</b></p>  <ul style="list-style-type: none"> <li>-Busy working parents; multiple children</li> <li>-Parents that need personalized support for their autistic child as their symptoms shift day-to-day; teaching skills.</li> <li>-Parents wanting added support for non-autistic child to help them learn skills to better manage their sibling.</li> </ul>                  |
|   | <p><b>Dan, 46, Parent</b></p>  <ul style="list-style-type: none"> <li>-Dad, Owns his own company.</li> <li>-Has a young adult autistic child (18) &amp; would like reading material that keeps challenging his child, but still reinforces coping mechanisms.</li> <li>-Would like material that allows his child to explore choices &amp; autonomy in safe, fictionalized storylines for autistic YA.</li> </ul>                        |
|   | <p><b>Cathy/Ben, Teachers</b></p>  <ul style="list-style-type: none"> <li>-Teachers of autistic-integrated classes.</li> <li>-Teachers in need of personalized reading material for autistic child to focus on topics most relevant to their needs, during larger class scenarios/triggers.</li> <li>-Teachers wanting digital support to curriculum, and allows for autistic child's family to be included for extra support.</li> </ul> |

**User Profiles of the target market of consumers within the autistic community.  
(Walker, 2018, p. 6)**

- **Indirect USPs**

Indirect USPs are the intangible and/or subconscious aspects of a product that create desirability and is a key component to what drives momentum within the feasibility and viability cycle described above. An example of this would be the emotional connection a consumer has with a brand such as Apple or Nike. An indirect USP can play a huge part in what drives a price point and sometimes can become more important than immediate/tangible USPs (Zorfas and Leemon, 2016).

An initial indirect USP would be the personalization capability of my app where one uploads personal pictures and names. This is an act of co-creation, which honour's the consumer's desire for recognition and freedom-to-choose, otherwise known as prosumerism (Dujarier, 2015, p.460). The act of prosumerism, where the consumer is given a sense of ownership over the story and app components is something that you can't get with other fiction products. I could contend that prosumerism is a tangible USP in that it is the part of the tangible activity itself of using the app/uploading; however, I feel it is more an intangible USP because the sale of the product is based on the *idea* of the act, and actually creates a subliminal sense of ownership, intangible desire that leads to the point of purchase. The other intangible USPs: the ongoing/ life-long educational aspect of modeling and exposure therapy; the credibility of the publisher connected to its development and production (brand connection); the credibility it [the product itself] garners from the autistic community hubs (i.e., The Autism Society; Autism Speaks) which also lends to its discoverability; the potential of word-of-mouth social networking of credibility, the potential future use *inside* the education system; the overall intangible feeling of hope of an intervention method that is effective for each child's needs. Specific to a publisher is again the brand extension capabilities via the character tie-in, which was mentioned above in the *tangible* USP

listings, but in this case, I'm referring to the growth in stature of a publishing company and its overall consumer-brand emotional connection that is the intangible offshoot from taking part in the product.

# CHAPTER 3 |

## MARKET AND ECONOMIC SCOPE OF *Your Own Hero!*

### **3:1 Introduction**

There are 4 components that affect the feasibility and viability of the *Your Own Hero!* concept: autism, publishing, tech and business. In this chapter I will discuss the market and economic scope within each of these components through the means of secondary and primary research. These findings were vital to informing this comprehensive business case analysis, and influenced the direction and final outcome of this major project.

### **3:2 Autism overview**

Autism is a neurological disorder that affects language and cognitive development, impairing communication, behaviour, sensory and social skills. In 2013, the *Diagnostic and Statistical Manual of Mental Disorders-5* (DSM-5) significantly broadened autism's scope and is now listed as Autism Spectrum Disorder (ASD). This umbrella term consists of 3 sub-categories, all of which were previously listed separately (Singh, 2014). This wide-reaching shift in definition/criteria now encompasses many that may have otherwise been considered mentally retarded and without a treatment solution (Evans, 2013, p.4,23; Chamak and Bonniau, 2012, p.4-6; Feinstein, 2010, p.291-293).

As of today, the exact cause of autism is still unknown, and there is a growing belief there are "likely many causes for multiple types of ASD" ranging from biological, environmental, physiological, pregnancy/obstetrics and genetics, to combinations of these factors (CDC,

2018; Reed, 2016; Vuong and Hsiao, 2016). Revered American neurologist, Dr. Mary Coleman, believes “dozens—possibly hundreds—of subtypes” of autism will be discovered and connected to a “specific medical condition”, with her having found 70 variations thus far (Feinstein, 2010, p. 194, 210).

It is now confirmed that signs of autism can start to present as early as infancy to 18 months, with an assured diagnosis possible by 2 years of age (CDC, 2018; Wilson et al., 2017). Because there is no known cause, there isn’t a specific medical test (i.e., blood test) that gives an expeditious diagnosis of autism. Diagnosis is completely based on tracking cognitive development, behavioural attributes, activities/interests and interactions with others (Autism Society, 2018; CDC, 2018). However, due to the complexity and individuality of autism, symptoms can be missed and diagnosis can happen later in life as well. Diagnosis, and subsequently treatment, can also be hindered by that, affecting upwards 75% of those with autism (Reed, 2010, p. 117-118; Frontiersin, Undated; Raising Children, 2018). Disorders such as extreme learning disabilities, depression, bipolar and epilepsy, which often co-exist, create barriers to not only accurately diagnosing autism, but also potentially hindering preferred treatment, since onset of these comorbidities can happen at any time in life (Ibid). It is in these cases that prescription drugs are utilised in order to stabilize the comorbid condition, enabling more focused capabilities for ASD treatment (Raising Children, 2018). Below is a picto-graph indicating the main comorbidities that are connected to autism. It should be noted that many of these traits, which are considered under the spectrum of ASD, are quite common across the population.



(Haidts, 2017)

**A graphic of the main comorbidity conditions connected to ASD and are under the spectrum of ASD. (Haidts, 2017)**

### 3:2.1 History

Autism, now considered “one of the most complex of all psychological disorders” (Feinstein, 2010, p.2), has always existed, with cave art studies now suggesting autistic savants “played a key part in pushing forward human evolution” (Waltz, 2013, p12). In hunter-gatherer and agrarian societies where “intellectual ability would have had somewhat less relevance than it does today”, autistic traits would have actually been well-suited for the daily farm work needed to be done—if not prized (Waltz, 2013, 11-12). In fact, there are references throughout history, literature and folklore that indicate people were demonstrating traits of autism, though absent of the label we use today (Feinstein, 2010, p.3-5; Waltz, 2013, p.13-18). In many longstanding fairytales of Western and Eastern European decent, such as those told by the Brothers Grimm, you can see the use of “changelings” within the story (Feinstein, 2010, p.3; Waltz, 2013, p.13-18). This plot line entailed supernatural entities stealing away normal children to be swapped with an

“abnormal” child, sometimes with “malevolent entities”; and descriptions of “changelings” were listed as: “screaming constantly, not talking, playing with ‘invisible friends’, making strange movements, and having no emotional connection with their mothers.” (*Ibid*) Indeed, because there wasn’t an understanding of neurology or mental illness, abnormal behaviors were frequently believed to be of a “supernatural cause” of religious proportions and handled by either abuse, sending the child away to fend for himself, or institutionalizing for life (Waltz, 2013, p.13-18).

The word itself and its definition, have gone through reformations that coincide with the slow progression of autistic research. “Autism” is a term originated by the Swiss psychologist Eugen Bleuler in 1911 out of his work with schizophrenia (a term he also coined), and was considered a symptom of schizophrenia (Waltz, 2013, p.43). Bleuler formulated the word out of Freud’s concept of “auto-eroticism”, though didn’t fully agree with Freud’s theory of love/sex being the center of a child’s emotional growth, and created the hybrid word “autism” without the love and sex connotation (Evans, 2013).

### **3:2.2 Autism as we know it today**

The fundamental hinderance of not knowing a cause and falling trap to trending scientific theories and hypothesis (e.g., Freud/Jungian, et. al) created many hurdles in the early stages of autistic research/treatment. Autism’s ultimate reformation came about 1938-1943 between the individual work of Hans Asperger and Leo Kanner. Both had recognised the traits of autism were not connected to schizophrenia. Asperger, the namesake of the syndrome term we use today, identified those with higher IQs and creative and verbal skills. Even in that early stage of research, Asperger found that the use of education was proving to be more effective over the use of medications or “talk therapy” (Feinstein, 2010, p.39;

Waltz, 2013, p.48). Kanner outlined traits/criteria that distinguished autism, and coined the term “Early Infantile Syndrome” or “Infantile Autism”. (Feinstein, 2010, p.27-29; Special Learning, Undated) Kanner followed children demonstrating a lower IQ variation of autism to where he also came to believe that autism wasn’t a form of psychosis, but “arose from an interplay between innate traits and environment” (Waltz, 2013, p.51).

### **•Autism’s modernization**

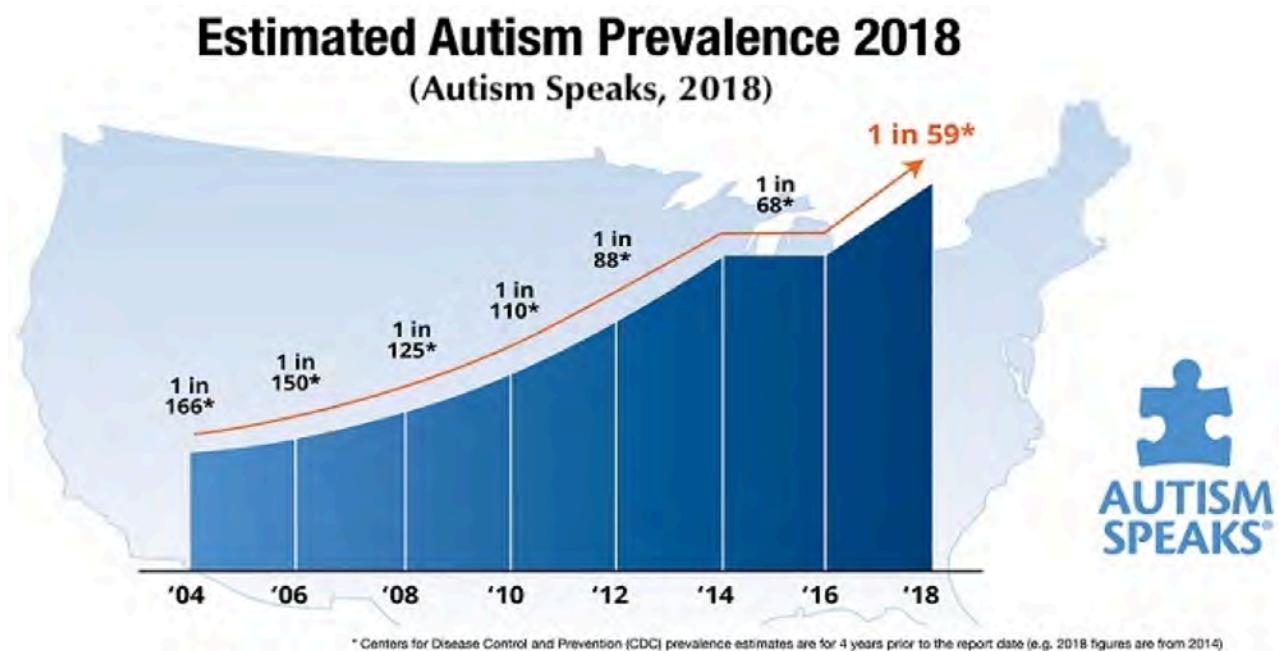
From its inception through the 60s, autism’s definition shifted from being considered a symptom of schizophrenia, a psychosis of a *deliberately* self-imposed ‘inner-life’ of hallucination and fantasy, presumably a normal stage of child development and treated with psychoanalysis (Evans, 2013, p.18; Evans, 2017; Waltz, 2013, p.51), to being considered a separate “physiological disorder caused by traumatic childhood experiences or lack of care from the parents”. (Special Learning, Undated; Evans, 2013, p.4) It wasn’t until the 1970s that autism was identified as a complex syndrome *completely unrelated* to schizophrenia or mental retardation and without an “inner life” of hallucinations or fantasy. A complete turn of definition that is noted to be the “exact opposite” from where it began. (*Ibid*)

By the 80s, autism seemed to be on track with increased momentum, finally recognised as a syndrome of “cognitive deficits” and “a problem of ‘social’ interaction, rather than a problem of emotional relationships” (Evans, 2013, p.23). A standardised method of measuring the development of language ability and sensory-motor function was finally securely in place, which aided in efficient diagnosing (Evans, 2013, pg.26). This included 3 key features: “the way they use language, the way they interact socially, their play skills” (Feinstein, 2010, p.210). And specific behavioural characteristics were identified: “developmental delay, repetitive movements, unusual social behaviours, and impaired

speech and communication" (Waltz, 2013, p.22). Through the research of the 80s and 90s, autism is believed to potentially have multiple causations from prenatal mishandlings, to chromosomal, neurotransmitter and testosterone anomalies (Feinstein, 2010, p.207-17); and now known to be interconnected with various other developmental disorders (Evans, 2013, p.23). In addition, it's been verified that autism is indeed a "neuro"/cognitive situation, garnering more proficient treatments/interventions.

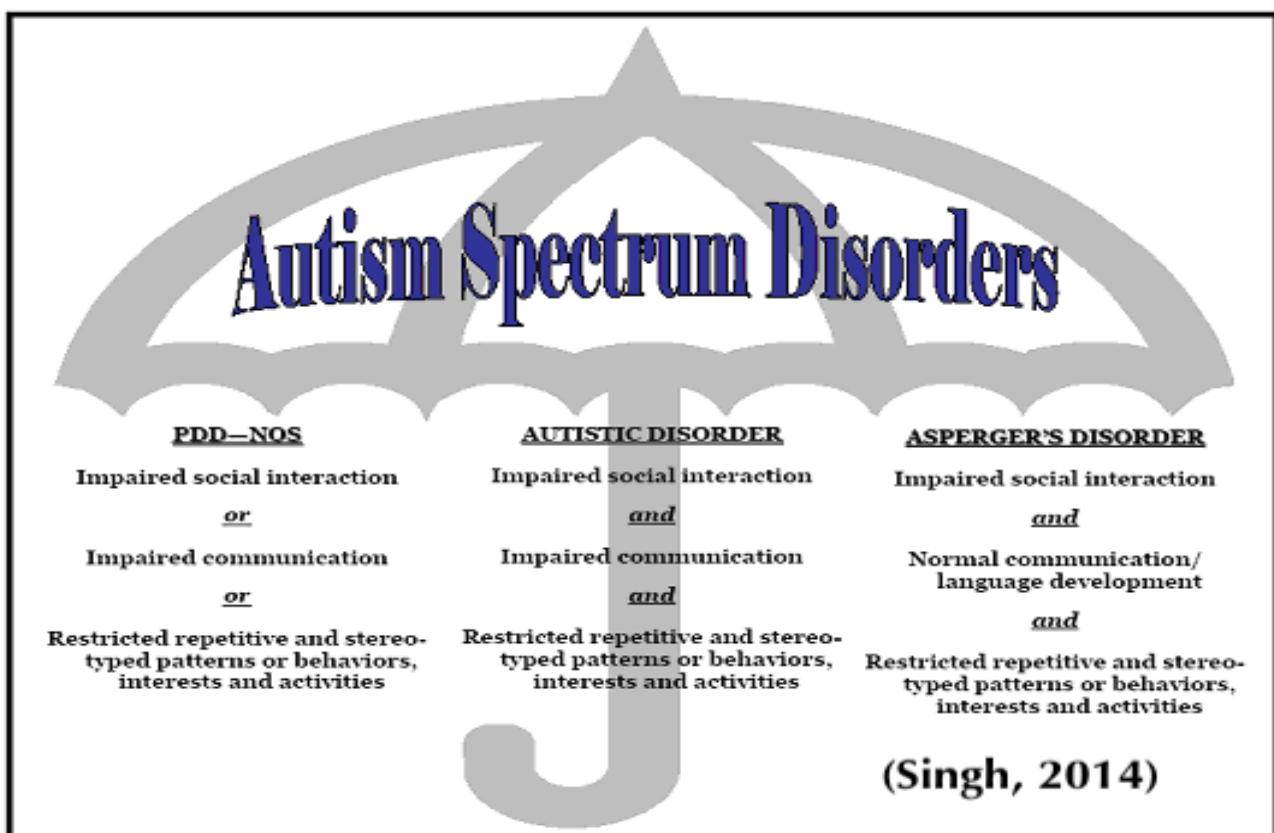
What is important to note is the overall pro-active momentum that has kicked in over the past 20 years to where new laws and government funding have been implemented to "combat" autism's insurgence and find effective and efficient treatments (Feinstein, 2010, p.287-288; Waltz, 2013; Reed, 2016; Chamak & Bonniau, 2012). In fact, the 90s brought the "neurodiversity" movement where those connected with autism felt it should not be looked upon as disability or disadvantaged, but as "merely a different way of thinking"; "a variation within normal thinking rather than a categorical medical problem" (Evans, 2017). The terms "neurotypical" and "neurodiverse" were then entered into the lexicon of politically correct terminology (*Ibid*). In addition, laws were finally being put in place (in most countries) to account for the specific needs medically and educationally of those with autism, creating a proper legal standing that paralleled other issues such as for the deaf and blind. (Autism Speaks, 2018; Feinstein, 2010, p.277-278; Chamak and Bonniau, 2012, p.6-7)

### 3:2.3 Prevalence



**A graph indicating the rapid rate of autism diagnoses in the US.**  
(Autism Speaks, 2018)

Considered by the Centers for Disease Control (CDC) to be the “fastest growing developmental disability”, statistics indicate ASD affects 1% of the population worldwide (Autism Society, 2018). In the States, it is estimated that over 3.5 million people have autism, newly calculated to be 1 in 58 people are diagnosed (Autism Society, 2018). In the UK, it is estimated 700,000 people have autism, meaning over 1 in 100 people (a 2012 study) are diagnosed (Autism.org, Undated). Calculations from US’ Centers for Disease Control (CDC) noted that from 2000-2010 the rate of increase was at 119%; and that is before the adjusted criteria in the DSM-5 was put forth in 2013 that broadened autism’s scope even further than previously listed (Autism Society, 2018).



**Table 1** Severity levels for autism spectrum disorder (Raymond and Kamphaus, 2013)

| Severity level                                  | Social communication   | Restricted, repetitive behaviors   |
|---|--|--|
| Level 3<br>"Requiring very substantial support" | Severe deficits in verbal and nonverbal social communication skills cause severe impairments in functioning, very limited initiation of social interactions, and minimal response to social overtures from others. For example, a person with few words of intelligible speech who rarely initiates interaction and, when he or she does, makes unusual approaches to meet needs only and responds to only very direct social approaches.  | Inflexibility of behavior, extreme difficulty coping with change, or other restricted/repetitive behaviors markedly interfere with functioning in all spheres. Great distress/difficulty changing focus or action.   |
| Level 2<br>"Requiring substantial support"      | Marked deficits in verbal and nonverbal social communication skills; social impairments apparent even with supports in place; limited initiation of social interactions; and reduced or abnormal responses to social overtures from others. For example, a person who speaks simple sentences, whose interaction is limited to narrow special interests, and who has markedly odd nonverbal communication.   | Inflexibility of behavior, difficulty coping with change, or other restricted/repetitive behaviors appear frequently enough to be obvious to the casual observer and interfere with functioning in a variety of contexts. Distress and/or difficulty changing focus or action. |
| Level 1 "Requiring support"                     | Without supports in place, deficits in social communication cause noticeable impairments. Difficulty initiating social interactions, and clear examples of atypical or unsuccessful responses to social overtures of others. May appear to have decreased interest in social interactions. For example, a person who is able to speak in full sentences and engages in communication but whose to-and-fro conversation with others fails, and whose attempts to make friends are odd and typically unsuccessful. | Inflexibility of behavior causes significant interference with functioning in one or more contexts. Difficulty switching between activities. Problems of organization and planning hamper independence.  |

- ***The male:female ratio gap***

There has been a long-standing belief that autism affects more boys than girls 80% to 20% (Autism Speaks, Undated). However, it is now contended these findings were of diagnostic bias. Historically, most medical research had always put males center stage due to sexual bias/sexism (Barlow, 2014; Liu and Dipietro Mager, 2016). Most of the original research done in autism didn't have equal gender ratios (Feinstein, 2010, p.29-30, 155, 165, 176, 180-182; Reed, 2016, p. 71-72) so it became an assumption/habit to only look for symptoms in boys (Zeliadt, 2018). And it should be noted how the autistic diagnostic tests past **and currently** used are mainly *based on behavioural traits discovered through research mainly done on boys* (Ibid). Studies now reveal ASD is quite prevalent among girls and presents more severely, but girls are able "mask their autism features" thus making autism harder to detect (Ibid) due to: 1. Girls are able to imitate their peers more easily. 2. Repetitive behaviors, which are signature symptoms of autism, don't present as boldly in females. 3. Special interests, which are another classic symptom, are more socially accepted traits in girls [for sexist reasons]. (Ibid;2017)

- ***Industrialised society and the rise in autism***

It's been tracked since the 60s how there's been a "phenomenal" rise in autism diagnoses (Evans, 2013, p.4). In light of the past 20 years, some would argue autism is now at epidemic proportions (Chamak and Bonniau, 2012, p.4; *The Cost of Autism*, 2016; GreenMedInfo,2014). In conjunction to these statistics, there was a notion that autism is only found in industrialised societies, "...an illness of Western civilization, and appears in countries of high technology, where the nuclear family dominates" (Feinstein, 2010, p. 233). However, as previously discussed, autism has always existed, though there wasn't always a name for it and stigmas around disabilities might have swayed acknowledgement

altogether (Waltz, 2013, p.11-24). Since it has been proven that “autism recognizes no geographical or social boundaries.” (Feinstein, 2010, p.233), the real question to ask is if we, as a collective society, are just becoming aware of what autism is and how it presents itself? Is this “rise” really just indicating how there are many living with autism, but haven’t had a label to put to their traits?

Part of this rise is actually just the natural spike in diagnoses that occurs with every expanded change to the criteria defining autism, and this last one was the biggest (Evans, 2013, p.4). The 4 correlating components to this rise being: “the broadening of the diagnostic criteria, the diagnosis of children at younger ages, the diagnosis of adults not previously diagnosed, and changes in epidemiological methods [how data is gathered and analysed]”. (Chamaka and Bonniau, 2012, p.4-5)

In conjunction, it should be said that even though statistics say autism affects about 1% of the population *worldwide*, there are many countries that are unaccounted for. As a result, statistics on the prevalence of autism are actually askew. Many countries still carry stigmas about having a less than “normal” child (Feinstein, 2010, p. 233-264). Countries like China, Latin America, Mexico and most underdeveloped countries still have a “cultural attitude” of shame regarding autism and disabilities in general (Feinstein, 2010, p.233-234). Autism is also being under-documented due to some countries following outdated research/treatments. (Chamak and Bonniau, 2012, p.6-7). Countries like France, Switzerland, Brazil, and Argentina still categorize autism as a psychosis as Bleuler did in 1911 (Chamak and Bonniau, 2012, p. 7). In the case of France, they are basically 50 years behind in how they reject the American and International diagnostic criteria, opting to still give credence to the ‘refrigerator mothers’ mentality and follow Freudian psychodynamic

approach to treatment which has been proven to be ineffective (Chrisafis, 2018; Chamak and Bonniau, 2012, p. 7; Waltz, 2013, p.69-70). The number of children left undiagnosed due to their overall negligence in using outdated guidelines and inadequate educational laws has been considered scandalous to the point the UN has gotten involved (Ibid).

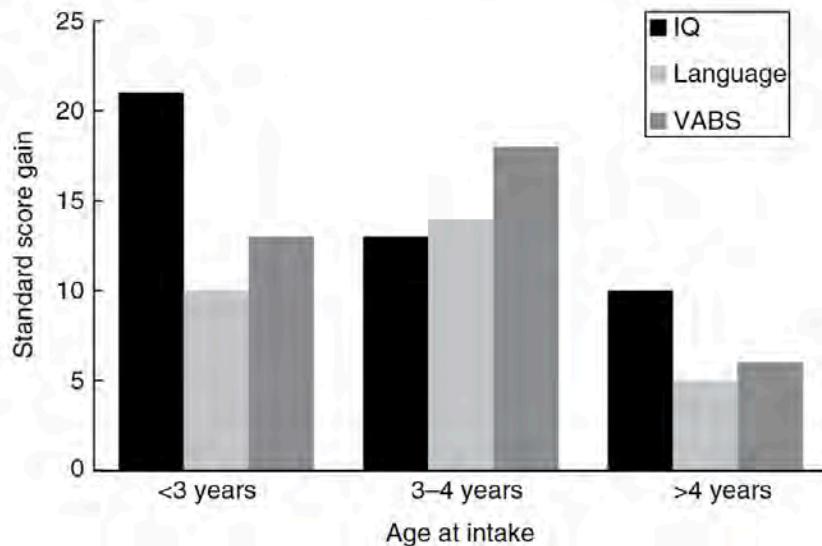
### 3:2.4 Treatment/Interventions

***“Interventions for ASD must be flexible...ASD is a spectrum and not a unitary disorder and interventions will need to be tailored to suit different situations with different individuals.”***

(Reed, 2016, p.3)

It is now proven that early diagnosis and treatment lead to greater long-term success (Autism Society, 2018; Reed, 2016, p. 118-121). Statistics show that the lifelong cost for one with autism can be \$1.4 to \$2.4 million (US) depending on the severity of autism; behavioural therapies, or “interventions” as they are commonly referred, can cost \$40-60k annually in the US (Autism Society, 2018). With early intervention, lifelong costs “can be reduced by 2/3” (Ibid).

### *Child Predictors for Behavioural Interventions*



A bar graph indicating the success in 3 domains of skills due to ABA early treatment/intervention based on the age of intake.

IQ=intellectual functioning; Language=language ability; VAB=adaptive-social behaviours.  
(Reed, 2010, p. 119)

- ***Treatment options***

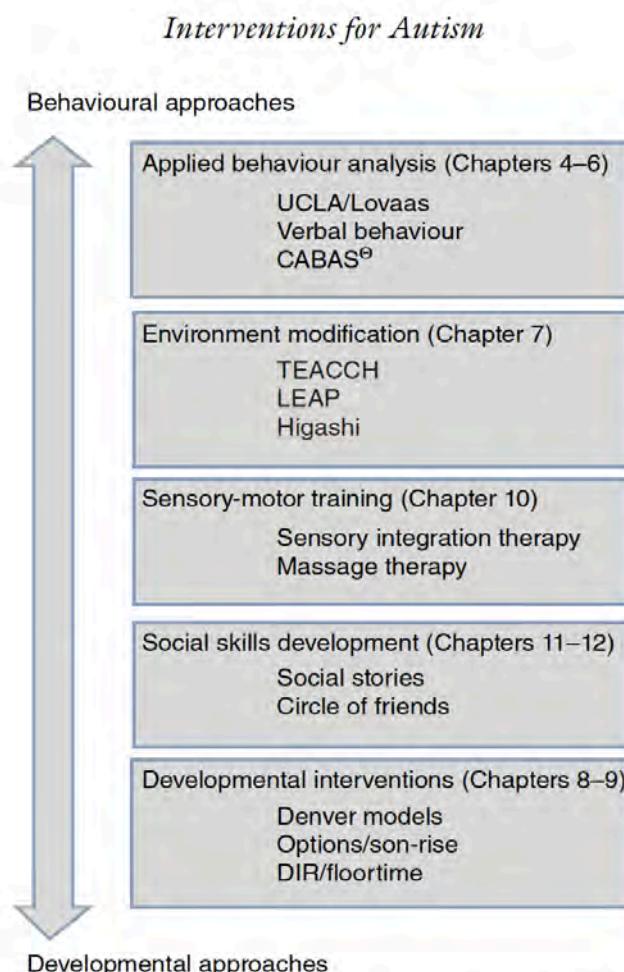
***“Not all people with ASD require help and not all people with ASD require help with everything.”***

(Reed, 2016, p.3)

Treatments have shifted over the years to match the current trends in research and diagnosis (Feinstein, 2010; Reed, 2016). Because autism was originally considered a psychosis/psychological condition for almost the first 50 years of its use, the Freudian psychoanalytic approach to treatment was embedded as an applicable treatment plan. (Waltz, 2013, p. 71) As child psychology advanced and research slowly started to prove the cognitive, social and sensory disorder aspects that define autism as we know it today,

treatments started to match various the discoveries (Feinstein, 2010, p. 82, 106-108, 117-138; Reed, 2016, p. 24-87).

As the chart indicates below, there are a numerous treatment options utilised including medical, educational, behavioral and animal methods, and sub-options within each variation (Reed, 2016, p.4). However, for the purposes of this major project I will only give a swift overview of the key interventions that are in relation to my storybook simulation app, YOH!. (See chart below)



A chart indicating the individual intervention programmes listed in connection to their approach being either more behavioural or developmental based. (Reed, 2016, p. 4)

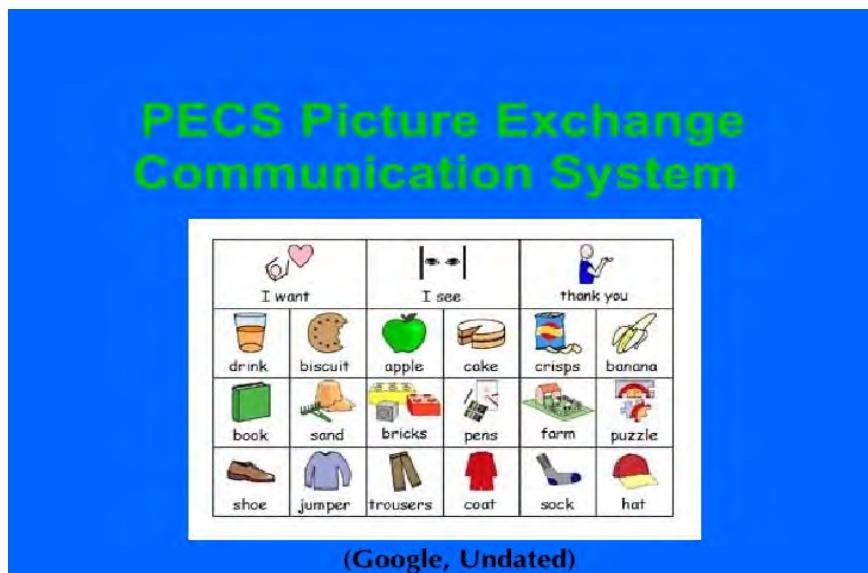
### •AAC - Augmentative & Alternative Communication

Deemed as the “most effective” intervention to “foster and enhance functional communication”(Alexander and Dille, 2018). AAC is a type of intervention that aids in communication when faced with non-verbal symptoms, with two sub-categories: (Ibid)

- Unaided**, which are in the form of sign language or gesture-oriented form of communication.

- Aided**, which are any physical products that create a pathway to communicate.

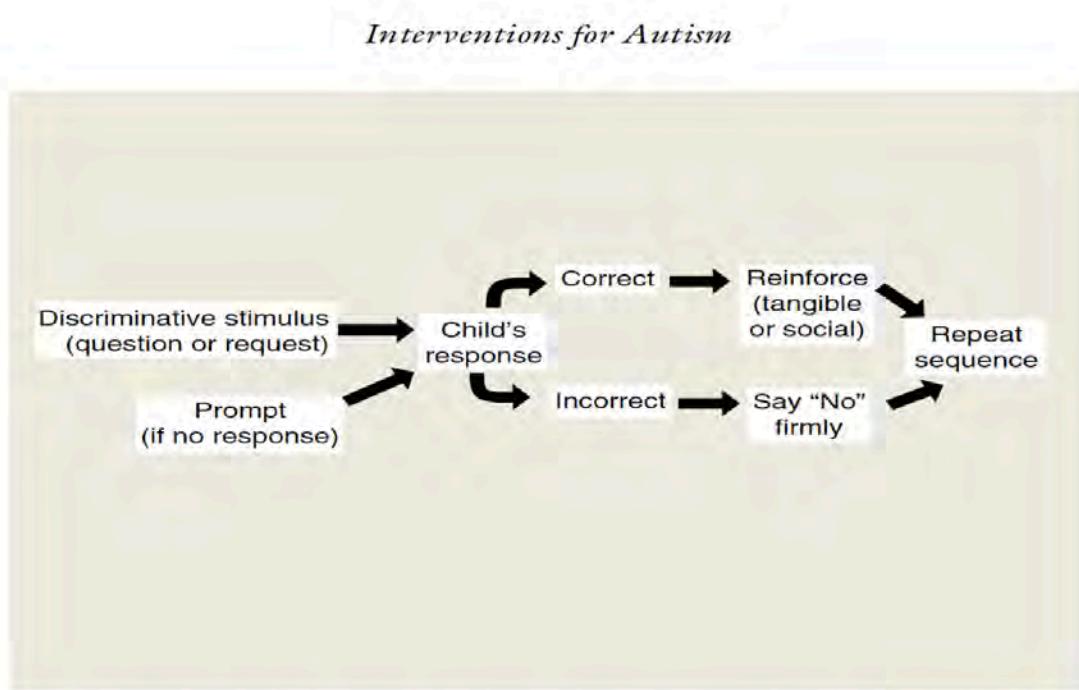
(e.g., Computers; Picture Exchange Communication System-PECS)



Picto-graph of an example of an Aided AAC, Picture Exchange Communication System (PECS) used to help an autistic communicate by finding the corresponding pictures to convey their needs.

### •ABA - Applied Behaviour Analysis

A behavioural approach to treatment whereby skills are taught through “some form of intensive, systematic teaching...[thereby] acquiring a ‘normal’ or neurotypical model [of behaviour]” (Feinstein, 2010, p.136). (e.g. Lovaas method, also known as the “early intensive behavioural intervention” (EIBI), developed at UCLA. (See below for example of process)



A diagram of the stages involved in a single ‘drill’ of the Lovaas Method , a form of behavioural ABA treatment similar to the Pavlov’s dog behaviour conditioning method.  
 (Reed, 2016, p. 66)

**•TEACCH – Treatment and Education of Autistic and Related Communication Handicapped Children**

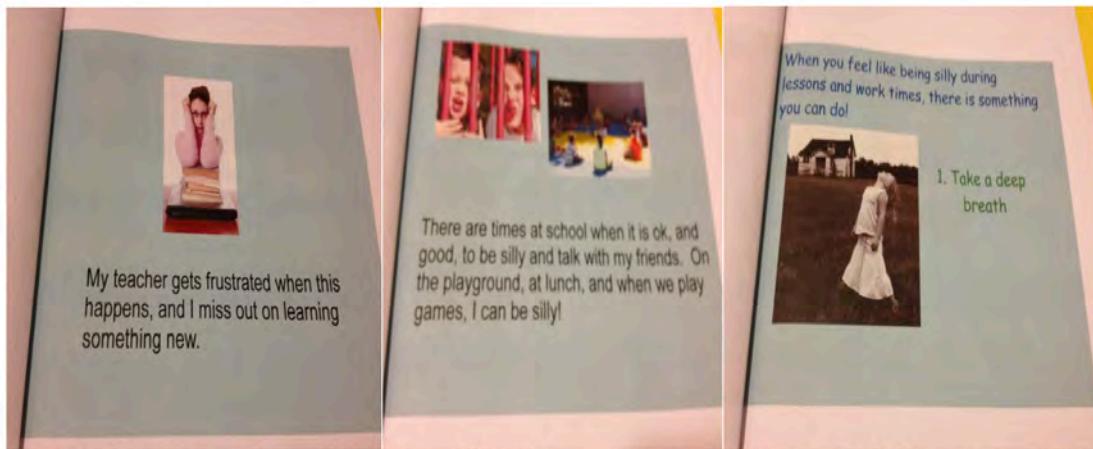
A form of ‘environmental’-manipulation intervention, where through “adapting the environment to the limitations and abilities of the person with ASD [in hopes] to maximize the opportunity of the individual to acquire skills in that context” (Reed, 2016, p.133)

**\*\*The difference between TEACCH and Lovaas Method\*\***

TEACCH intervention allows for the patient to learn things in context of a potential situation he/she may be faced with. It is considered to be playing to a patient’s “strengths and develop around some of their interests to help them function more comfortably”; a Gestalt-type therapy, where there is greater focus on the “meaningfulness and understanding” of a given situation and thus “promote their learning more effectively” (Feinstein, 2010, p.136). Gestalt Therapy being a methodology where a person’s behaviour is believed to be improved by working on the “complex systems” of mind-behaviour-environment connection all together and not broken up to where behaviour is deconstructed in tiny parts (Cherry, 2017). In contrast, the Lovaas method follows more of a classic behavioural training methodology (aka Pavlov’s dog), thus doesn’t teach things contextually, but rather teaches those with autism to exude more neurotypical behaviours (Ibid).

**•Social Stories**

A type of social skill intervention devised to help those with autism better understand social interactions and/or prepare them for new endeavors similar to a form of exposure therapy and Bandura’s Social Learning Theory/Modeling (Bandura, 1971; 1974). It has been proven to “decrease disruptive behaviour and increase appropriate social interaction” (Reed, 2016, p. 224).



**Example of a home-made social story utilised to prepare an autistic child for new situations or new skills to learn; an example of modeling and exposure therapy. (Teaching Ace, 2012)**

### **•Modeling / Exposure Therapy**

There are psychology theories intertwined within all of the interventions in use today, most notably seen in Social Stories and the TEACCH methods, which have created the foundation as to why they have proven to be cognitively effective.

#### **1.) Modeling:** Anthony Bandura's *Social Learning Theory* (1971)

brought to the forefront the concept of the psyche and its "continuous reciprocal interaction between behavior and its controlling conditions" (Banduras, 1971, p.2). He went on to expand upon the power of observation, and the ability of one to "acquire large, integrated units of behavior by example..."(Ibid) and essentially learn "new patterns of behavior" (Ibid, p.3). Social Learning can be done via observation, imitation (copying), and role models (Davies, 2013). Later this theory would best be known as just the word "modeling" (Bandura, 1974, p. 862) and connected to his self-efficacy theory, where behavioural change can occur through performance-based success and the self-confidence that is garnered creates an forward momentum of desired behavioural improvement (Bandura, 1977, p. 191).

**2.) Exposure Therapy:** Is a form of cognitive behavioural therapy (like ABA) that is based on the concept of habituation, a “mechanism hard-wired into the human genetic program”, where upon the “nervous system arousal decreases on repeated exposure to the same stimulus” (Shpancer, 2010). Exposure therapy creates a “systematic desensitization” (Sharpe, et al., 2010) towards whatever thing or situation is bringing anxiety or fear by exposing the person in a repeated, graded process; either by imaginary means of mental visualisation or through direct, interactive means (Ibid; Merrill, 2011). It has been proven that anxieties, fears and phobias are most effectively treated through this type of therapy. It should also be noted there is comorbidity (see list below) found between autism and anxiety, which gives reverence as why it is effective in autism intervention methods (Merrill, 2011; Shpancer, 2010).

### 3:2.5 Conclusion

**“We are fine if you put us in the right environment. When the person with Asperger’s Syndrome and the environment match, the problem goes away...When they do not match, we seem disabled”.**

**Quote from an Asperger’s patient, as documented by Simon Baron-Cohen.  
Excerpted from *Interventions for Autism*  
(Reed, 2016, p.5)**

Through the discovery process of autism’s history, prevalence, and treatment, I was able to assess the market for which my autistic-focused publishing product is intended. It was determined that with the recent expanded diagnosis criteria in the DSM-5(2013), there is a significant increase in the prevalence of autism. I also indicated the potential increase in

autism on a global scale due to countries adjusting their negative mindset and antiquated laws to finally account for those with autism. Both factors demonstrate the increased need for autistic-focused support materials both domestically and globally, digitally and print, and potential for translation capabilities.

It was also brought to light how autism is a developmental disorder and not a psychosis, thereby indicating an educational approach of treatment is possible as opposed to antipsychotic, medicinal approaches that are done with a psychosis.

- With this confirmation, I was then assured that autistics can process information albeit in their own way and at their own speed, and a storybook such as *YOH!* is deemed an option for learning. Also connected to this, is the discovery of the cognitive need to be explicit with directions and language when addressing autistics. This meant that within my app, I would need to go back and adjust my pronouns and implement personalised name usage sooner within any of the directions.

It was made clear how although there are common traits associated with autism, each person can have very individualistic and variant combinations of symptoms or autistic presentations, thereby creating the need for more personalised treatment/intervention plans.

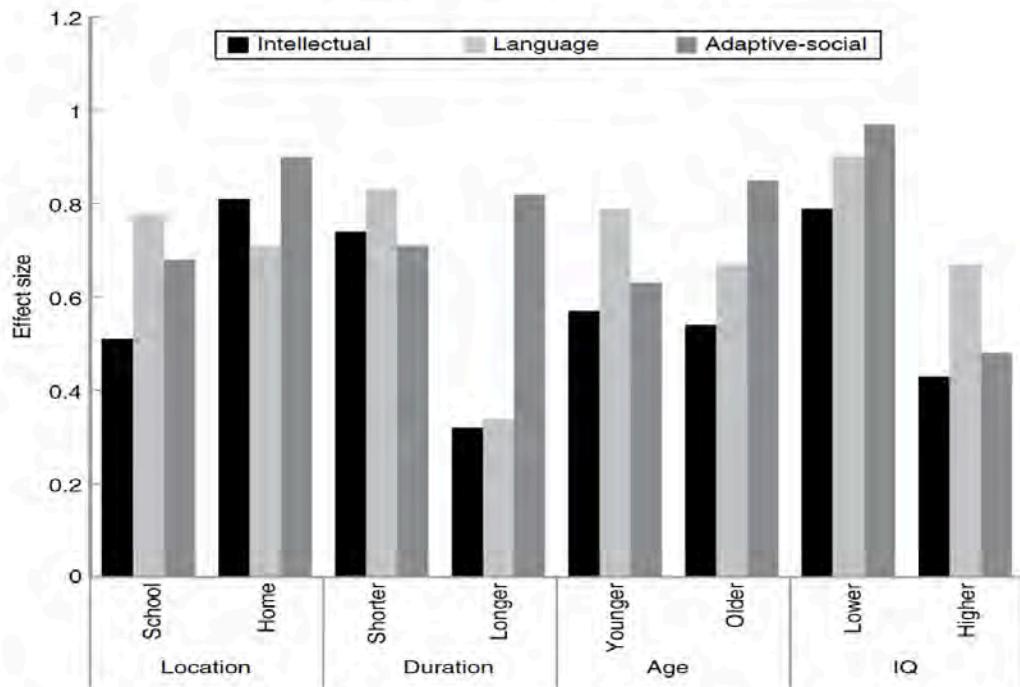
- Because *Your Own Hero!* was designed to be a simulation where a person being able to upload their own picture, autistic traits/severity, and room layout to be integrated into a storyline that is chosen to match real-life scenarios autistics face every day, and is also able to adjust to a child's age in order to grow with the child, it is able to consistently meet the needs of many autistics both male and female.

From understanding the various neurocognitive deficits that present in autism and the numerous options of interventions, I was able to not only see where my storybook app, *Your Own Hero!*, already fell in-line with the cognitive needs and interventions I wasn't aware of before I created the prototype; as well as, see where I could improve elements of what I've designed based on cognitive needs I didn't initially know was needed.

- Because *Your Own Hero!* is a material item in the form of an app/computer product meant to aid in an autistic's development, it is classified as an AAC (Aided Augmentative & Alternative Communication) system.
- Because my storyline was designed to show the likeness of the autistic person doing a set of interactions/transactions that would help teach a social skill such as learning a coping mechanism and the behaviour connected to that, I achieved what would be considered a Social Story.

- Because my storyline touches on a level of behaviour modification, my app somewhat falls within ABA (Applied Behavioural Analysis). Although I did realise before this research that a reward/incentive/goal needed to be added into the story so as to create a story arc, progress the story in general, as well as help with the learning of a new behavioural option, this addition of a reward was confirmed as being needed after seeing that rewards are proven effective on shifting behaviour as is demonstrated in the Lovaas intervention.
  
- Because my app storyline/simulation puts the autistic person *in context* of a trigger issue, with a more “gestalt” take on approaching interactions and behaviour, I realised it paralleled the TEACCH (Treatment and Education of Autistic and Related Communication Handicapped Children) intervention. In relation to this, my further discovery of cognitive deficits such as Social Communication Disorder (See section 2:2.5 Diagnosis) where autistic people have a disorder placing language, people, situations in context, I realised that my app would be very useful because it is contextual and thus coincides with TEACCH’s known efficacy (see graph below) for helping sync behaviours to the situation at hand (Reed, 2016, p. 112, 133-145).

### Interventions for Autism



**A bar graph indicating the effectiveness of the TEACCH intervention under various aspects of the programme or participant characteristics. TEACCH teaches new skills within context, just as Your Own Hero! (Reed, 2016, p. 144)**

The most important discovery within my investigation is the use of Modeling and Exposure Therapy, which is ultimately what makes all of the interventions effective (Reed, 2016, p.82, 102, 108, 117-118, 135, 139, 142, 148, 151). The act of being able to show or model the desired interaction and/or behaviour, and through the act of repeating the behaviour as well as repeatedly being exposed to the scenario and/or behaviors, allows for the habituation of not just the desired contextually-linked behaviour, but also the whole scenario context itself. Thereby engendering a more socially adapted person with less anxiety/fear, who is then able to have a more expansive, productive life.

- Because *Your Own Hero!* was designed to be a simulation storybook, where the autistic child gets *to see themselves* (i.e., modeling) go through a journey of learning

the skill of behaviour modifying *in the context* of a scenario that would *trigger* emotions and behaviours (i.e. exposure therapy) so as to work through those moments (i.e. self-efficacy), my app ticks the most effective boxes of cognitive interventions.

In summary, *Your Own Hero!* is showing to be a viable product on multiple levels based on the market needs specific within the autistic community.

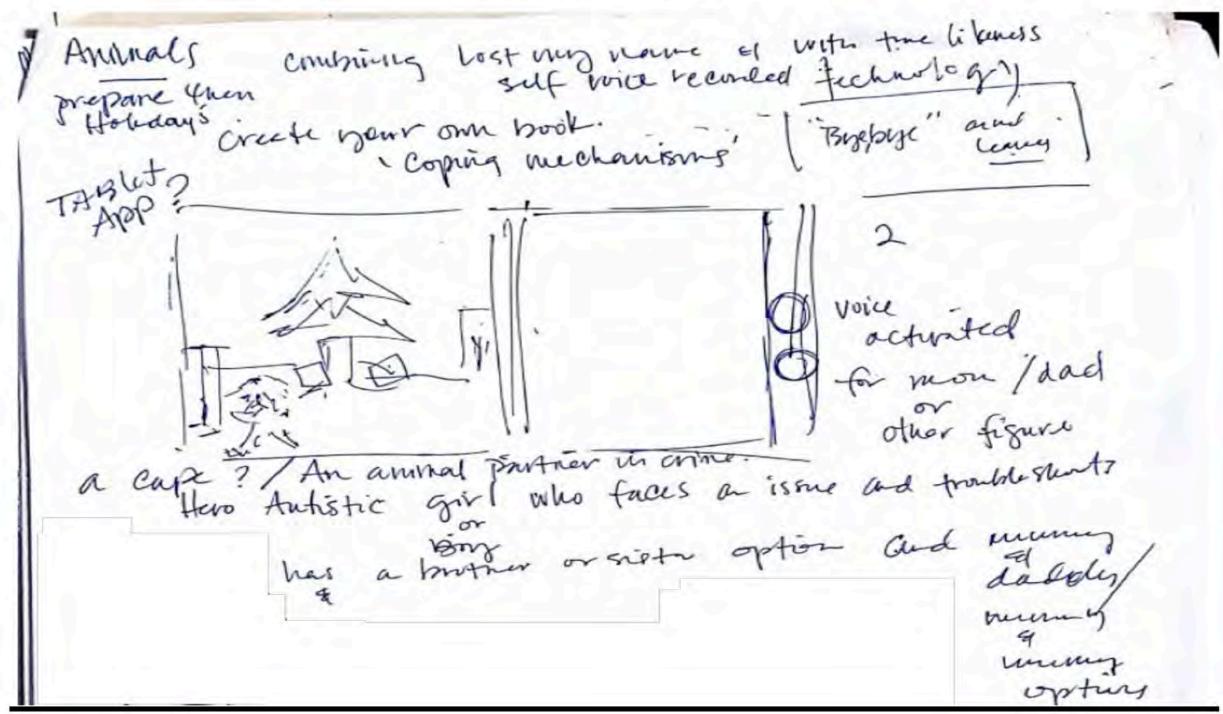
## **3:3 Publishing overview**

This section will discuss the feasibility and viability of *Your Own Hero!* in relation to the value proposition it presents to a publisher in terms of its need within the autistic community and through the current offering of autistic materials published today amongst competitors.

### **3:3.1 The publishing components within *Your Own Hero!***

The publishing component involved in the *YOH!* is in terms of story and genre. The intent of *Your Own Hero!* concept was to use personalised fiction of the likeness of a child, family and an animal of personal choice woven into the storyline as a means to teach a social/behavioural skillset via the immersive experience of the story. I say this because although there are apps and digital games that have story/storylines occurring to where it is an integral part of the incentive to play the app/game, *YOH!* is not dependent upon the digital/tech component in order to bring this type of personalised fiction to market. In fact, as noted in my *Proof of Concept Appendix* (Walker, 2018, [Appendix] p.2), I originally saw this concept in book format, where there would still be the simulation effect of actual pictures/names of people and true-to-life room locations illustrated and applied to the story. However, instead of animation being involved as it would be in app format, the story would be in classic page-turning format along with buttons on the side for family members to manually record sayings. All of which would then be a print-on-demand product and mailed. (See figure below)

**2a.) FUNCTIONALITY: Original Concept/Sketch-  
As physical book with audio buttons (Week 2)**



**Excerpt from the *Your Own Hero! Proof of Concept Appendix. Sketch of the original envisioned Your Own Hero! concept in book format.* (Walker, 2018, [Appendix] p. 2)**

It should also be noted there is another publishing element to the YOH! concept in terms of the potential branded character usage within the stories. Again, I originally envisioned this concept as a book with basic animal characters weaved into the storyline that were true-to-likeness of actual animals. However, the ideation process of YOH! revolved around my first-hand experience with the child who had an affinity for the Disney character, Dory. And it was actually someone else who pointed out how I was pitching Dory within the storyline, and why not have the animal characters, or avatars based around the favourite characters of the autistic child. And with that distinction, it was realised the huge potential of brand extension for many publishers that had popular characters. This presented a whole new angle of feasibility to the YOH! concept in how it met the user-specific needs of supporting

the use of special interests to aid in educating, socializing, and anxiety relief (Reed, 2016, p. 136). This also of course coincided with the documented effectiveness in the use of animals/characters (Pearson, 2013).

### **3:3.2 The market segment need for autistic materials**

For purposes of demonstrating the feasibility and viability of *YOH!*, it is important to understand the mental/emotional schematic related to the market segment of autism and the materials already utilised and proven to be effective. This will demonstrate the reasoning behind not only why this market segment is a consumer of certain publications over others, but also the scientific evidence of why creating a publication such as *YOH!* is valuable altogether.

It has been proven that the crucial years for social development are the ages of 0-10 (Ducarre, 2017, p. 6). It is also proven, as discussed earlier (see section 2:3.7), that early treatment/intervention and education can reduce long-term developmental and social issues in autism (Autism Society, 2018; Reed, 2016, p. 118-121). Being that books are ancillary tools supporting education and intervention (Ducarre, 2017, p. 6) brings cause for the need to get more autistic-centric reading materials into production. Fiction should be of utmost priority because of its micro and macro trickle-down effect on society on a whole. It does this by influencing the socialization of both autistics on a personal front (micro); and neurotypicals on a social front (macro) in terms of thwarting negative perceptions of autism (*Ibid*) and creating an overall integration of autistics in society as just another “normal” type of person, who has unique traits just as everybody has unique traits and identity.

The neurological effect of fiction can first be understood through understanding the science behind it, where through neuro imaging of the brain it has been proven how neural networks can be triggered to where you feel as if you've experienced an activity/emotion just through the act of perception or imagination (in Ducarre, 2017, p.15). This also parallels Bandura's *Social Learning Theory* (1971) and the concept of modeling as discussed above (see section 2:3.7). Connected to neurology, is the concept of para-social relations as defined by Donald Horton and Richard Wohl, whereby a person can form emotional bonds with fictional characters (in Ducarre, 2017, p.15). The neurological effect of fiction is then further described in 2 concepts: self-identification and self-expansion (Ducarre, 2017, p. 16). Self-identification, which is a person's sense of belonging, occurs through a fictional character when it is "representative of the 'individual actual self'" (In Ibid). Self-expansion, which is when a person learns new knowledge/understandings, occurs through characters that are "representative of 'individual ideal self'" (Ibid). All of these components combined through the use of fiction create an opportunity for an autistic child to forge a positive sense of self, confidence to advance, and overall healthy well-being.

### • ***Subtypes of autistic publications***

Autistic publications are broken into both non-fiction and fiction, however there are subtypes of those categories that bring a level of complexity. Tracking the materials is also difficult because the subject matter of autism is basically new as of the last 20 years and there's not solid infrastructure of firm delineated sub-categories within the book-tracking systems like BookScan. There's quite a large number of non-fiction materials, which are straightforward for the most part. Where there are materials for parents and families, or those with interest and/or deal directly with those with autism in whatever capacity (e.g., work, school, etc...). This would include books for aiding in dealing with the challenges families face, the history

and medical/scientific exploration of autism/ASD sub-types, and biographies of autistic people and those of merit within the autistic community describing their journey. However, when dealing with books meant specifically for those with autism, and specifically children, things are broken down into sub-types of books, or what area of focus the book will take on. Below is a list of the various subtypes of publications so as to delineate the current types of resources available. I have used the terms defined by Lucie Ducarre's (2017) research for distinction purposes.

•**Awareness Books**: Designed to forge better acceptance and inclusion of an autistic person either for the actual autistic or for siblings or classroom use by describing behaviours in a fun way. (*Ibid*, p.7)

•**Skills Books**: Designed to teach/improve social skills, communication and emotional behaviours. (*Ibid*, p.7)

•**Adapted Books**: Books that are respectful to the sensory needs of an autistic, identified by either the *format, structure or ancillary materials*. These types of books can be of any subject matter (e.g., awareness, skills, fiction) and also used for others with special needs other than autism (e.g. dyslexia). (*Ibid*, p.7)

For the purposes of this investigation, **Fiction Books** will be defined as characters identified as being ASD, as the protagonist in an imaginary setting, on a journey; and books with autistic characters present within the storyline and incorporated to progress the storyline. Fiction books and awareness books are meant for both autistics and non-autistic children, whereas skills and adapted books are specifically designed for the needs of autistics (*Ibid*, p.7).

### **\*\*\*A gray area in autistic fiction\*\*\***

I defined these sub-types because there is somewhat of a gray area to autistic fiction in that you could have skills taught through imaginary characters (e.g., a panda bear), in an imaginary setting (e.g., a forest); or a child on a journey through a situation in an imaginary location, teaching the skill as seen in *Once Upon a Potty* by Alona Frankel. I consider this a gray area because although there are fictionalised elements involved in character and setting, the situation and skills being taught are *actual*, true to life; and in the case of autism, very autistic-specific. This is opposed to what fiction means to so many of us in terms of thematic storytelling such as *Harry Potter* (Rowling), *Jane Eyre* (Bronte), *The Perks of Being a Wallflower* (Chbosky), where individual skills and lessons are weaved throughout the whole story, engendering thematic life skills and lessons. Two different types of fiction.

- ***Market segment statistics***

In a recent survey, it was found that 95% of parents of autistic children are desiring more autistic-specific publications overall, however a higher want for eBooks, adapted books, skills books on the topics of emotion and social norms (Ducarre, 2017, p.42-44). It is also noted they are willing to pay more for publications due to knowing they require a certain specificity to suit their child's needs, as well as assuming the product will last longer because of its user-specific content (Walker, 2018, p.16-18; Ducarre, 2017, p.44-45). It is particularly noted their willingness to pay more for adapted and skills publications.

It should be noted that these results are from a small, cross-sectional survey of French parents and aren't ideal for gathering the full scope of need within the market segment of autism. If the constraints of time and university guidelines for testing weren't ominous, I would've have conducted a survey across a wide-range of parents with autistic children, with various incomes, from various countries. This would allow me to accurately assess

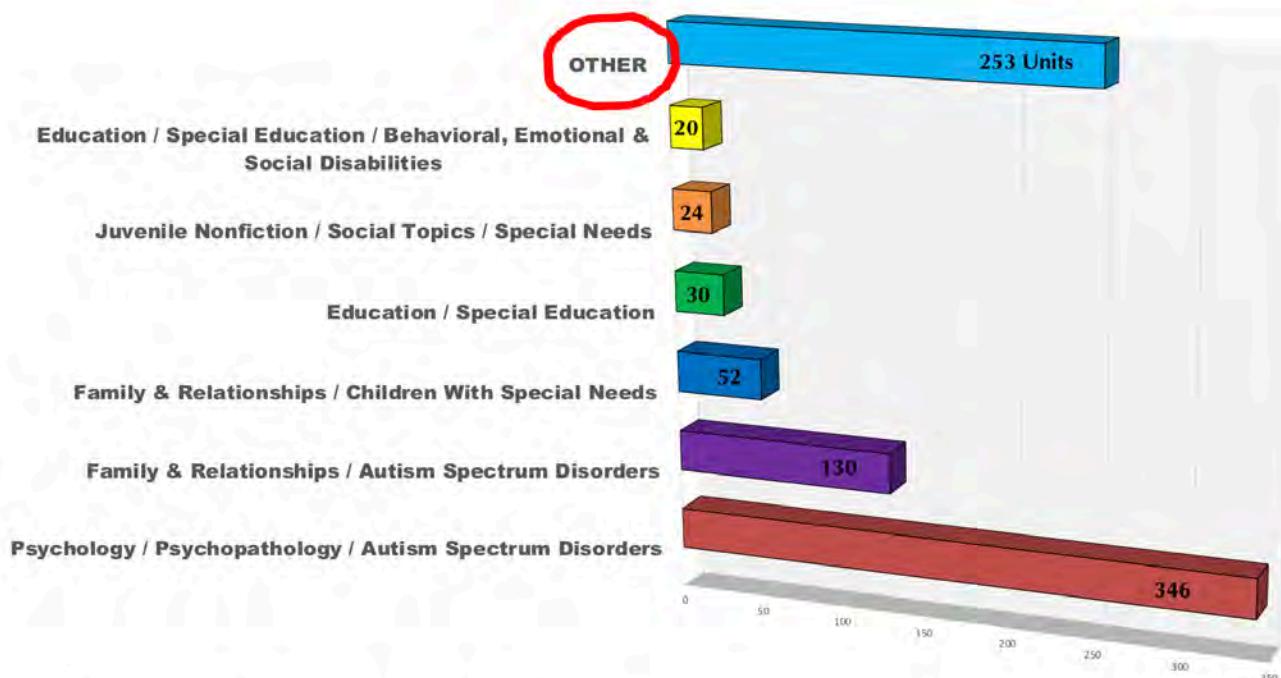
what types of books per language/culture/income status are most desired and get an actual/precise price point range acceptable to parents so that a well-rounded business case could be presented. However, I do feel the survey used gives enough evidence to deduce there's a strong need, and enables one to extrapolate how much greater the needs would be if a larger survey were conducted.

### **3:3.3 Publishing trends**

Publishers have always played an important role in “engaging and transforming” society (Thompson, 2012, p. 161; Tucker, et al., 2017). By producing literary materials and making them available to the mass public, publishing became the mechanism by which social change was forged; most notably in the fields of religion, politics, education, and culture on a whole (Tucker, et al., 2017). *The Merchants of Culture* (2012), sociologist John Thompson’s title of his esteemed book, perfectly phrases what the role of publishers have been throughout history as the book itself discusses the many aspects and challenges that face publishers in the 21<sup>st</sup> century in order to remain “cultural and intellectual ambassadors” (Poirier and Genet, 2015) amidst advances in technology shifting publishing at its core (Thompson, 2012).

There is an inferred onus on publishers to publish materials that contribute to the ever-evolving socialization of different segments of people and communities (Thompson, 2012, p. 161). However, it has become clear that in addition to the lack of cultural and ethnic diversity in book publishing that sparked the BAME movement (Onwuemezi, 2018), there are also a limited amount of books regarding special needs/disabilities (Myers, 2016). Autism may have gained recent momentum over other social needs books, but as US’ NPD BookScan (see below) have confirmed, the amount of autistic-specific books available are

severely low at 857 units (US). And if you compare non-fiction to fiction offerings (fiction indicated in the “Other” category), it clearly is a “massively underserved” category in autistic materials as noted by US BookScan’s executive director of business development Kristen McLean (2018).



**US BookScan graph depicting the BISAC category codes and amount of autistic publications currently in available in the US, by unit, within the field of autism  
1994-2017**

- ***Book tracking discrepancies***

For the purposes of this major project, I had wanted to demonstrate how the YOH! concept is viable in terms of filling the gap in the market of fiction materials for autistic people. From my extensive research, I should let it be known that it is actually difficult to get an accurate listing of autistic-related publications in general, but even more so in regards to fiction due to its gray area of categorization. Because the US and UK no longer have a consolidated BookScan system, I found myself tediously go line-by-line in excel sheets trying to determine if a book was truly fiction or mislabeled, and there are different category codes of

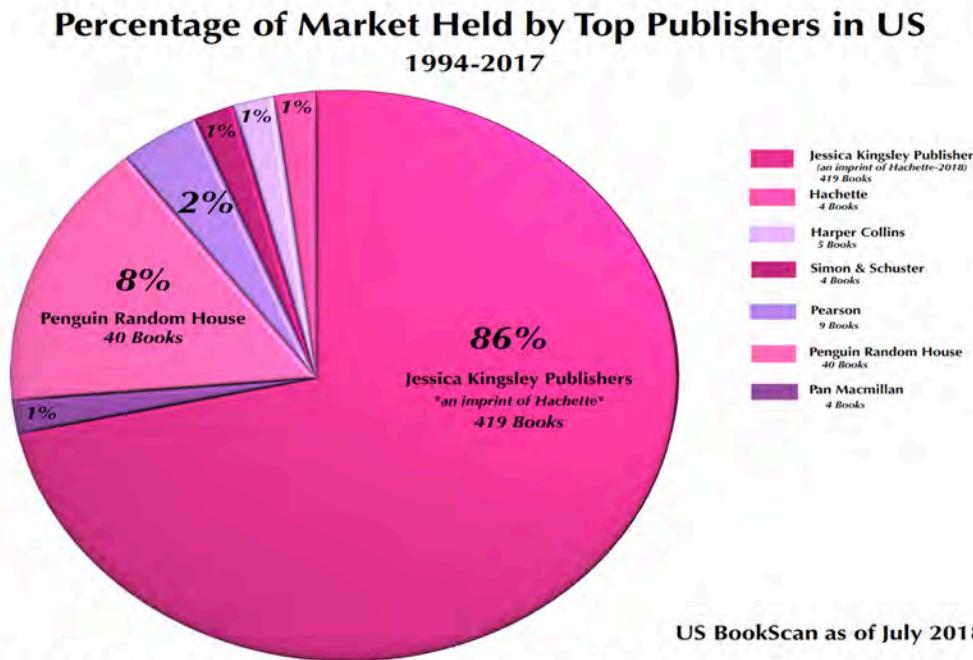
BISAC (US) and BIC (UK) that don't crossover, so I couldn't consolidate the excel sheets if I wanted. Within the realm of autistic fiction there are even more discrepancies. First off, there is not a tracking specifically for autistic-fiction, to where I had to do a keyword search under 'aut' and 'asp' in order to pull up *any* books that may have used autism or Asperger's in the title, the bibliography/index, or the blurb of the book—and only possible with UK BookScan, not the US version because it didn't have that function. Then there's the issue of what type of fiction is within the fiction, which I do believe is why some books may have been mislabeled as fiction when they were more of a non-fiction genre. As mentioned earlier regarding the gray area in fiction, there are many books that yes, are illustrated and have a random fictional character narrating, but they are "stories" explaining a presentation (symptom) of autism versus a true journey of a story taking place (an awareness book in the guise of fiction). There's also the issue of a book having only a secondary character as autistic and not really having the story *about* the autistic person on a journey, but just a floater character in the story; or the story where the protagonist is the mother or sibling telling a story about how they deal with their child or sibling, but the book wasn't technically *for* the autistic child. This is not to mention there are also duplicate listings of books due to new editions that are also affecting the counts of books. This means that whatever figures I notate and give a graph for don't fully represent the situation at hand.

In the graphs below, you will see a compiled list based on the US Bookscan listings of some of the top publishers and how they stack up against each other. If I were to combine the listings of the UK Bookscan, there are more units to notate for several publishers (notated by red dot notations) and there are a few publishers that are heavy contributors not listed in the US, including various educational publishers. Taylor & Francis Ltd., AAPC Publishing, SAGE Publishing, Nova Science Publisher and Hodder & Stoughton all have

solid contributions. However, their added contributions don't actually change the statistics that indicate how top publishers are clearly not taking an active participation on a grand scheme, and Jessica Kingsley Publishers (JKP) is still leading the pack. JKP only recently joined Hachette in 2018, and I can see exactly why they were a welcomed addition to such a conglomerate after these findings. (See graphs below)

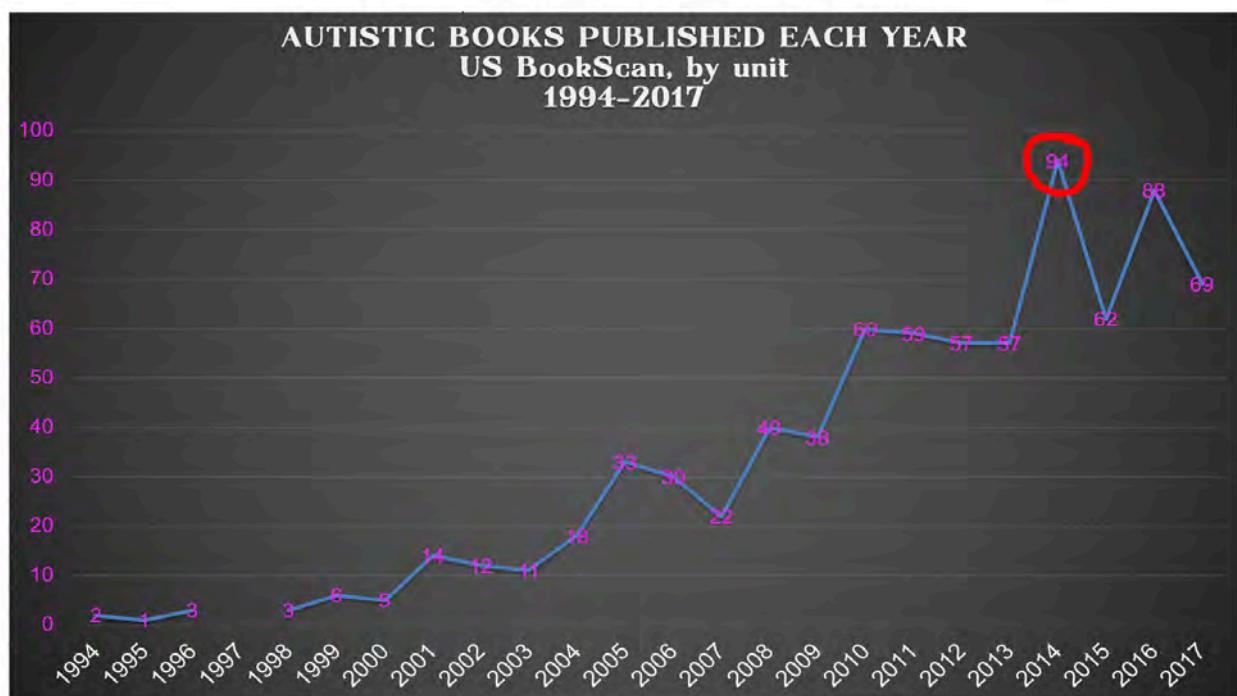
| PUBLISHER  | BOOK COUNT<br>Includes:<br>(HB, PB, Audio, <u>New Editions</u> ) |
|--|--|
| Jessica Kingsley Publishers & Imprints<br>***Now under Hachette*** | 419  |
| Hachette & Imprints  | 4  |
| Penguin Random House   | 40   |
| Pearson  | 9  |
| Harper Collins & Imprints  | 5  |
| Pan Macmillan / Palgrave Macmillan                                 | 4  |
| Simon & Schuster   | 4  |
| McGraw-Hill Education & Imprints                                   | 2  |
| Houghton Mifflin & Imprint   | 3  |
| Springer   | 4  |
| Crown Publishing & Imprint   | 4  |
| Wiley & Imprints   | 6  |
| Scholastic   | 3  |
| Oxford University Press  | 5  |
| Other (small % of contribution)                                    | 133  |
| The Guilford Press   | 76   |
| Future Horizons  | 60   |
| SkyHorse Publishing & Imprints                                     | 57   |
| Recorded Books & Imprints (Audio)                                  | 19   |
| <b>TOTAL UNITS</b>   | <b>857</b>   |

**US BookScan listing of major publishers based on their contribution to autistic materials in units, 1994-2017**



**A pie chart based on the top publishers of autistic books. This chart indicate JKP is the leader at publishing 419 books, though this doesn't indicate what is available in the UK.**

The discrepancies of tracking various types of autistic publications aside, showing the gap in the market on a whole can easily be shown through tracking the sheer low numbers of published autistic materials each as seen in the below chart. When less than 100 books are published a year in either non-fiction or fiction in comparison of just the amount fiction alone that is published, a gaping hole in the market is really evident. However, on a positive note, publications have steadily increased and with the current state of affairs regarding autism, progress is still to come. (See chart below).



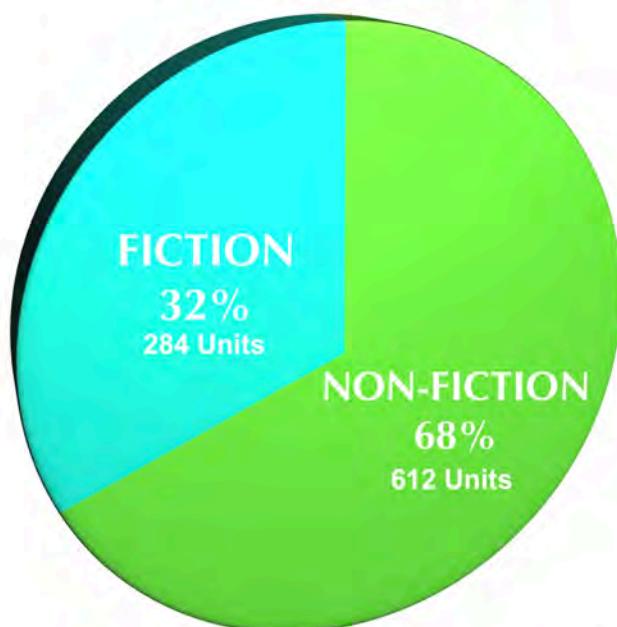
A line graph indicating how many books per year were published 1994-2017.

- ***The gap in the market for children's autistic-specific fiction***

Out of all of the fiction books available for neurotypical (aka “normal”) children, which totals about 233 million units sold in the US in 2017 (Kantor, 2017) and £365 million in combined physical and digital sales in the UK (The Publishers Association, 2017), the percentage of fiction materials available for autistic children and Y/A is a severe fraction of that. Beyond there being a need for materials for those with special needs in general, there’s now an undeniable need for autistic-specific publications due to the increase of diagnoses where 1 in 25 families are affected (GreenMedinfo, 2014; Ducarre, 2017, p.6). It should be noted that above I discussed children’s fiction in terms of units/volume and value sold; however, for the purpose of this investigation my research stayed focused on the amount of books published in general and did not tally the top selling books in volume/value notation. However, I would want a further investigation in to *which* books and *what types* of books were best sellers so as to create a well-rounded business case.

To put things in perspective in the grand scheme of lack of autistic-specific materials, below is a chart based on UK Bookscan's BIC tracking of children's fiction (1996-2018). Keep in mind this chart includes duplicates in the tally due to paperback/hardback format, and there are listings from self-publishing sites and foreign publishers as well. Even with all of those considerations, this chart represents **all** the books still in print since 1996.

Percentage of Autistic Children's Fiction vs. Non-fiction (by unit)  
UK BookScan, 1996-2018



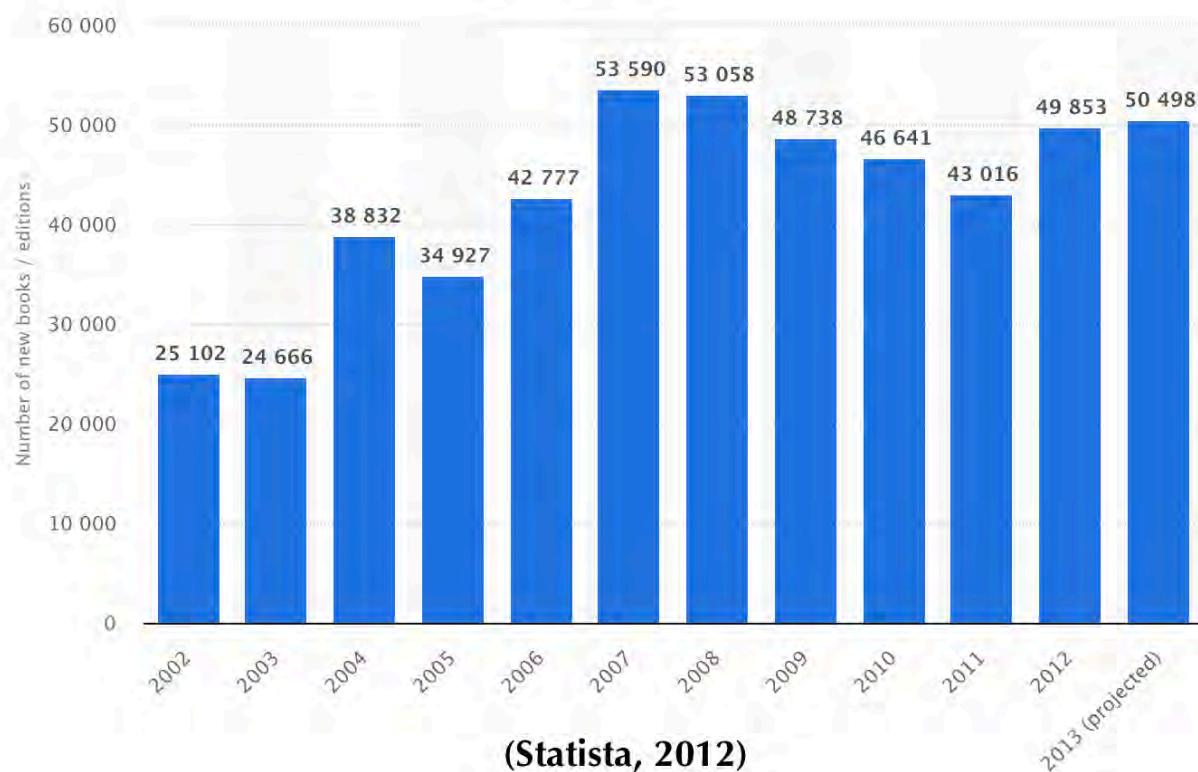
A pie chart indicating the low percentage of fiction titles available vs. non-fiction titles. Fiction is not fully sub-categorised so the amount of titles that are true fiction is not known.

That means 896 book options are available for children with autism for the growing amount of people diagnosed with ASD, on top of the 700,000 (UK) people already diagnosed as being ASD (Autism.org, Undated)—and they had even less autistic fiction books to choose from. You could, for the sake of argument, just combine the larger totals of all autistic-specific books for the US (856 units) and UK (1089 units), duplicates and all, and the tally comes to a whopping 1945 units over the span of **24 YEARS**—and it isn't that many because there are duplicates (PB/HB) and new editions. Under 2000 titles to cover the

whole ASD community, because the bulk of these books are non-fiction and actually not meant for autistics themselves but for the family members and others that deal with autism.

In direct relation to fiction, below you will see a chart indicating how many fiction books are published each year in the US (Statista, 2012). Yes, this chart is not filtered into just autistic-centric fiction publications—but this is *exactly* my point. There are almost 50,000 books published a year for neurotypical people, and the autistic *community* get under 100 books published a year, and again, remember that not all the books published are *for* autistics to read and enjoy; whereas that 50k amount are for the neurotypical person to enjoy each and every one of them. It could be posed that these figures are askew because accurate tracking is not happening, which is indeed somewhat the case as I've mentioned. But even taking that into account would equal a few books here and there, which doesn't put a dent in the fact that based on the 100 books/per year combined non-fiction/fiction to 50,000 fiction books published a year in the US, autistic-specific books are **.002%** of neurotypical fiction books. This figure really doesn't say the truth of the matter in that fiction for children, from tallying BookScan's lists and other resources there are maybe 100 books where the autistic person is the protagonist, going on a journey like usual neurotypical books would do a la *Harry Potter* and the like. This is not to say that autistics can't read and enjoy mainstream fiction and should only be allowed to read books with autistic protagonists. I'm not saying there should be a segregated formula to autistic-specific fiction. However, what I am saying, and what was stated above as being a proven factor (see section 3:3.2), the more books published with autistic protagonists the more inclusive and integrated autistics and autism itself will be, influencing future generations.

## US Totals of All Fiction Books Published Per Year, By Unit 2002-2013



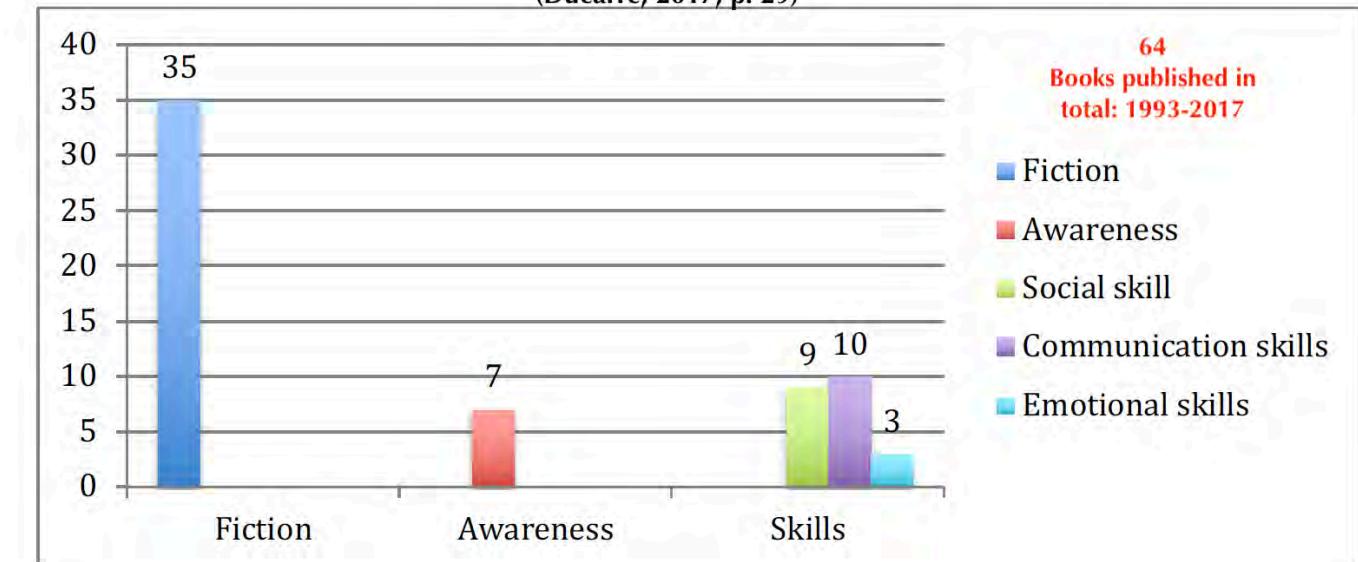
**Bar graph demonstrating the massive amounts of fiction published for neurotypicals as opposed to the fractional amount of fiction published for autistics.**

On a side note, it should be noted that if there are a limited amount of materials in English, there are even less available for those of different languages, and especially in countries where there's lesser standards of autistic care and education. France being a prominent example, as described above (see section 3:2.3), where between 1993-2017 only 64 children's books were published by French publishers. (Ducarre, 2017, p. 12-13, 28) (See charts below)

## Autistic-Specific Publications by Subtype Published in France 1993-2017

Based on Ducarre's Research on Autistic Publications Available in France, 2017 (by unit)

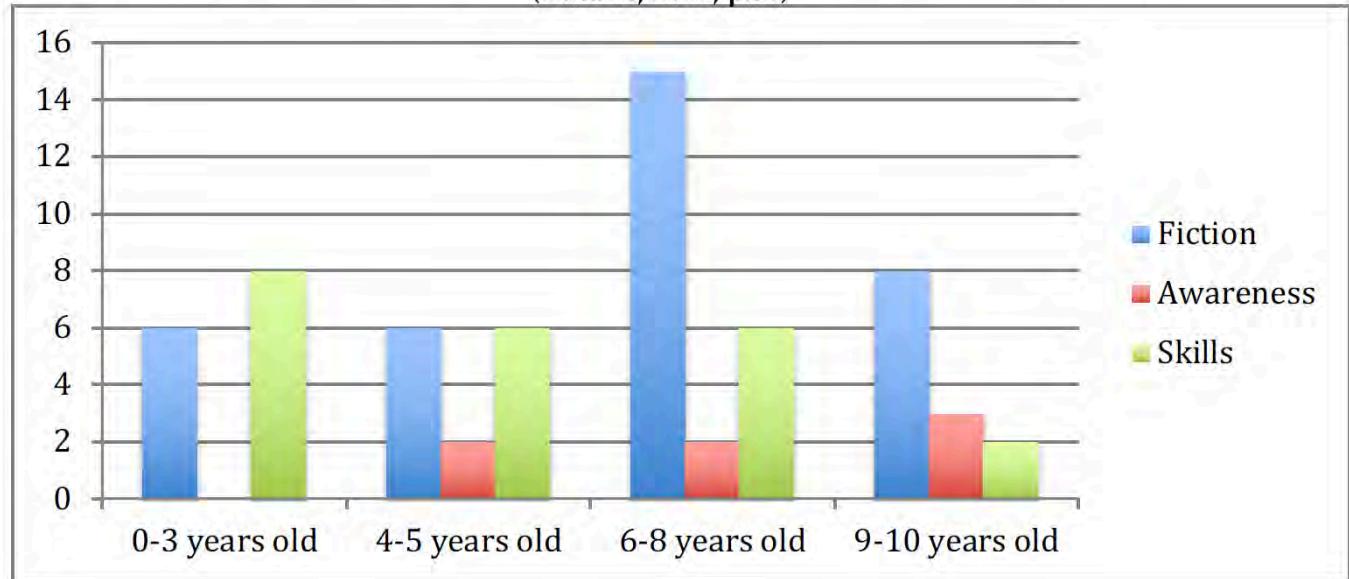
(Ducarre, 2017, p. 29)



## Subtypes of Autistic Publications Per Age Group

based on Ducarre's Research of Autistic Publications Available in France, 2017

(Ducarre, 2017, p.30)



**2 bar graphs indicating the amount of subtype publications available in France 1993-2017 (top graph) and the amount of subtypes available by age group (bottom graph). (Ducarre, 2017, p.29-30)**

### 3:3.4 Conclusion: publishers' standpoint

All the research above indicates a severe gap in the market of autistic-specific publications on many fronts and this just indicates the physical book offering of materials. After speaking to the Senior Commissioning Editor at Jessica Kinglsey Publishers (JKP), which is the leading publisher in autistic books (Clark, 2018), it became clear that this company wants to publish only the best in autistic-specific books. The challenge for JKP, as Ms. Clark commented, is in finding materials that aren't similar to what they've already published to a point that they are their own competition (*Ibid*). I also gathered from their large roster of non-fiction books, how fiction isn't even focused on with this leading publisher.

I point this out because this indicates a clear gap in the market *within* the publishing field altogether. There's huge opportunity for other publishers to not only provide much needed publications to an undervalued and underserved market segment, but rise up and potentially corner the market in at least the fiction genre. What is also identified beyond the publisher aspect, is the need of diversity in writers—actual writers with autism in particular.

## **3:4 Tech overview**

In this section I will evaluate the feasibility and viability of YOH! in relation to the technology connected to it. This entails discussing the actual digital aspect of YOH! and the infrastructure potentially needed to bring it to production, the effectiveness of this type of digital product within the autistic community, the competition within the market and coinciding business elements that have to be considered in order to create a thorough and compelling business case.

### **3:4.1 The effectiveness of tech products in ASD**

***“You have to understand that the word Autism means ‘auto’ [self]...meaning 100% personalized.”***

**Andrew Whitehouse (Whitehouse, 2018)**  
**Specialist in neurological disorders**  
**& Autism intervention**

For the purposes of demonstrating the viability, I thought it necessary to show the various ways in which the digital aspect of YOH! fulfills the needs within its market segment, proving its economic potential out of consumer demand already in place.

As previously discussed, early intervention for ASD is very important to the long-term effect of autism (see section 3:2.4) and how books catering to user-specific needs are effective as supplementary tools to aid in the education of skills and overall social integration (see section 3:3.2). However, what hasn't been verified is the effectiveness of tech products in

relation to those with autism. In terms of treatment, Augmentative & Alternative Communication (AAC) intervention, has been considered most effective for learning functional communication skills (Alexander and Dille, 2018). This treatment has an “aided” variation of a physical product, such as a computer, that enables those with autism to have an enhanced, more connected learning experience due it being of a visual nature. It has been confirmed autistics are visual learners, responding more proficiently to tactile and visual stimulation and less so to auditory cues (Evans, 2013). These findings give accredited backing to *YOH!* being in a digital format.

It has been acknowledged earlier that most autistics have what is called a “weak central coherence”, where the processing/learning of new information is at the expense of “contextual meaning in favour of piece-meal processing” (Feinstein, 2010, p. 212). Meaning, autistics have difficulty learning a skill and then transferring it to new situations, which is also known as “concept blindness” or “rigid thinking” (Whitehouse, 2018). It has now been proven that autistics can and want to learn behaviors connected to social interactions, though it needs to be done in a suitable, *personalised* way for them (Bolis and Schilbach, 2018); and teaching behaviors within context, repetitively as done in the TEACCH method is most effective for deeper cognitive connection (Reed, 2016, p. 139). Coinciding with these user-specific needs, is the research that indicates video modeling/video hero modeling and modeling through simulation as more effective for teaching socializing skills, self-care skills and larger complex social systems than other forms of interventions. (Ohtake, et al., 2015; Fitzgerald, et al., 2017; Wildman, 2018) These findings thus again accredits the viability of the digital form of *Your Own Hero!* due to the concept entailing the use of personalised fiction, where a simulation is created by using the likenesses of the autistic person, his/her family and house environment *in context* of a

storyline common to most autistics; thereby teaching emotions skills (coping mechanisms) through modeling and exposure therapy (see section 2:3.7) for furthering integrated socialization skills.

Finally, *YOH!* in digital format is shown to have viability through research indicating how often those with autism use tech as a support tool and its effectiveness building emotional and social skills. Research showed that 98% of teenagers with ASD use a computer for an average of 5hrs a day and that tech usage supports social and behavioural challenges “when well-design technology offers consistent and clearly defined tasks and visually cued instructions...” (Hedges, et al., 2018). The variety of use of tech in both home and school environments showed an increase in social opportunities, independence and reduced anxiety (*Ibid*). Other research indicated how those with ASD have a natural proclivity for technology and through hands-on use and exploration, confidence is acquired through self-efficacy, which trickles down into more assured social interactions (Cortez, 2018).

- ***Educational need: classroom settings***

It should also be noted that after speaking to several teachers in both the public and private educational system, as well as a specialist in neurological development, the need for digital support like what *YOH!* offers is high. In cases of integrated schooling for high-functioning autistics, it was said that due to not having enough trained teacher assistance and full classes, it was sometimes difficult to take time out to go through the steps of various situations that would arise. (Fletcher, Durkin and Morrall, 2018) It was then commented on how there are challenges in dealing with pre-teens/teenagers that there aren’t enough adequate publications/materials for that age group to help explain not only challenges of puberty, but also the social cues and affections that may be exchanged due to a lack of

socially integrated emotional/behavioural skills. (Ibid) It was then mentioned the success they have with acting out scenarios in a peer-modeling, role-play format and really getting through to their ASD students, though there's not enough time to do those things. Having a product like *Your Own Hero!*, where they can upload the pictures of the students in conflict into common distressful teenage storylines would be extremely helpful for taking place of the role-play. (Ibid)

In terms of non-verbal, low-functioning autistics with severe learning disabilities, it was commented on how a product like *Your Own Hero!* would also be helpful in the times when the students find themselves in high-anxiety moments and disrupting the rest of the class, in need of being separated. Having a digital product to give to them for soothing purposes and story options to help them still learn even though separated from the actual class would be welcomed, in fact iPads were already in use. (Hodges, 2018) Interesting to also note in regards to the importance and effectiveness of tech, is the teacher mentioning how it didn't matter how low-functioning a student was on the spectrum, he/she could figure out how to use an iPad in moments—and settled them quickly. (Ibid) Specialist in neurological development and intervention and training consultant, Andrew Whitehouse, also was emphatic at expanding digital products for autistics because on a daily basis he sees the positive effect of tech in how autistics quickly connect with digital mechanisms (2018).

- ***Family need: home settings***

In terms of how the digital form of *Your Own Hero!* is particularly needed at home, I found that parents with multiple children are in need of materials and interventions for both their autistic child and neurotypical child (Banda, 2015). It was commented, though they wish to remain anonymous, the difficulty in handling both children with limited individual time for

both. Because each required unique needs for engagement, having a digital *personalised* storybook, where each child could be involved in the story would help alleviate the pressures on the parents to make up personalised, individual time unto its own, enabling the child to feel special. The digital book would meet them half-way.

This commentary gave validation to an iteration I had for *Your Own Hero!* where there would be a separate option for the *sibling* to become the hero of their own story and learn how to handle the challenges of their autistic sibling. There would be the same storylines but the focus would shift to where the sibling was the “hero”, as well as the Zelda-esque, choose-your-own-story extension concept as well—in due course, that is. Overall, it became clear how having a digital support tool such as *Your Own Hero!* could be effective for the whole family on various levels.

### **3:4.2 App vs. eBook vs. game**

For the purposes of demonstrating the feasibility of the *Your Own Hero!* concept, it is necessary to distinguish what the digital aspect is in relation to *Your Own Hero!*. I have used the word “concept” multiple times in connection with *Your Own Hero!* because the story content can be expanded upon, or **conceptualised**, in various ways. As I have mentioned earlier (see section 2:4.1), I saw this publication as a book first and foremost, with the only projected digital innovation being the buttons to record special phrases. However, after further ideation processes, I conceptualised *Your Own Hero!* into digital format to allow for instantaneous personalisation through the uploading of pictures and room layouts, integrated into the storylines. Therefore, because the content essentially stays static, and in this case, utilised in book or digital format it, I consider it a concept.

In order to create an accurate business case, the investigation into how to develop and produce *Your Own Hero!* into a minimal viable product (MVP) was necessary. This entailed understanding the infrastructure and mechanism needed to execute the desired story/simulation elements for costing purposes. These details would then inform the decision on a price point that would account for its development/marketing in order to come to a return on investment (RoI), which needed for a business case to influence investment opportunities.

- ***Is it an app?***

“App” is a word thrown around and there are actually variations within it. App is an anacronym of the word “application” and technically refers to a “software program that interacts with the end user”, can run through various mechanisms (desktop, mobile, web), and not strictly connected to the internet (Karch, 2018; UrbanDictionary, Undated). “App” has become a misnomer over the years through its commercialization via Apple to where people assume it to be not a full-fledged program and only a downloadable cell phone product (*Ibid*). I point this out, because I mistakenly didn’t understand the depth of what an app actually was and the costing parameters since so many people now just throw together a simple app and get it up and running on the app store. My initial digital envisionment of *Your Own Hero!* was it being on an iPad due to its wide-spread use within the autistic community (Hedges, 2018) and its inherent mobility, I originally kept referring to it as an “app” to be in-step with colloquial jargon. An app seemed to be an accessible avenue from what I understood it to be, costing £3-15k (on the low-end) depending on what activity was intended (Dogtiev, 2018). I thought my app would be able to be in that range of pricing because I had seen how some of the tech I was incorporating into my concept was already on the market. My concept involves a form of illustration of an uploaded personal picture,

which I had seen as an app on iPhone albeit of a non-animated nature, and the uploading of a room to manipulate it was already possible in apps I had seen for the purposes of refit/design work. (See examples below)



**Examples of iPhone apps already in use that were what I wanted to incorporate into *Your Own Hero!*, as utilised in the prototype and Proof of Concept app description (Walker, 2017)**

So, I assumed that half the battle of a digital *Your Own Hero!* was solved as far as tech development, and the real issue would be in bringing all the elements under one app, the financial quandary of that, the creating of the storyline content and the variations, the licensing of characters from publishers and the financial quandary to all of that. The problem is that I was looking at cell phone “apps” as if those schematics coincided with what my concept was doing in terms of being an “app” as *application*: a software program delivering content based on the end user’s wants/needs.

As I started to fully investigate how to go about building the *Your Own Hero!* “app” concept, I was lead into different territories for costing purposes to where I realised the word “app” potentially didn’t accurately define what my concept was doing. Some think an app is a quick reference tool (e.g., Shazam), some consider it a game (e.g., Candy Crush), some consider it a quick portal to a merchant they commonly use (e.g., Amazon, HSBC bank). And an app is all of those things, but for my storybook concept, where app-like qualities like usage on an iPad, pushing buttons to navigate through a few choices and uploading things were in use, did this *really* make *YOH!* a technical “app”?

- ***Is it an eBook?***

Since *YOH!* was essentially just a story with a few personalised and digital features, highlighted words and text-to-audio, was this concept really just an eBook at its core? Remembering that apps are a software program, eBooks are a PDF form of the physical book, “documents of a particular format” such as EPub/Mobi, and have limited interactivity capabilities beyond page turning, content searching, highlighted dictionary searches and font enlargement (Itzkovich, 2012). A former marketing exec of Yudu, a digital publishing/communication apps design company, thought my concept was an eBook due the factors I listed above. She informed me how eBooks with standardised page-turning capabilities, the highlighting of words on the page as one reads, and audio voice over feature, in basic form, could cost £5k-10k on the low-end. However, due to the added digital personalization features and the variable character options integrated into the storyline, which created a deeper infrastructure of software design, there was indeed an app-like quality. She estimated this concept, at a minimal viable product level (MVP), could potentially cost £50-100k to create, and always should account for a 1.5 times overage of budget. (Summers, 2018)

- ***Is it a game?***

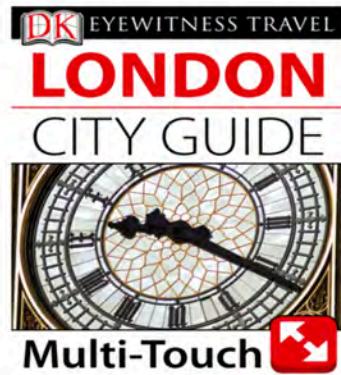
My concept did have eBook and app-like qualities, however, the consumer *is* pushing buttons to set up and choose a story, uploading pictures that are then transformed into an animated state, where highlighted words of the story come across the screen, text to audio occurs and personal recordings are enabled, when is the line crossed between an app and an actual game?

It was posed to me by two who worked in eBook creation and tech design that due to my desired app specs and storyline/character variables (see Appendix 4:3), my storybook app was more along the lines of game and the software utilised for those purposes (Cryer and Halliday, 2018). Due to the customization and complex coding potentially needed, it was considered in the “top 1% of digital products” (*Ibid*). To some extent, I would agree in that one of my iterations, or rather an extension of my concept, was to create a *Zelda*-esque, choose-your-own-story capability for those higher-functioning autistics that want more autonomy over their fiction and learning. This extension was definitely not a part of the MVP, however, and something much further down the road after *Your Own Hero!* had gotten a solid footing in the market and the ROI was on track with initial expenditures/debt.

One tech designer, who appeared to associate “app” to that of a game in relation to *Your Own Hero!*, posed the question of what about my product [game], as it is, would keep a user coming back? Or more precisely, is what I have “enough to compete” with other products [games]. (Huang, 2018) It was at that point that I restated the intention of *Your Own Hero!* as being a storybook that would be (hopefully) repeatedly read as if it were a *Thomas the Train* book, but of a more personalised, useful nature due to its intended end user. It was a needed conversation to have since *Your Own Hero!* was not similar to games

like Moshi Monsters, where personalised characters drift through happenstance events, inclusive of puzzles and room organizing. Yes, there were set up choices to the story, but it was of a more focused personalised/customised storyline on multiple levels, intended for emotional growth through playful animation. I will say Huang (2018) brought up an important note regarding viability in that it is important to keep ideas flowing in order to keep *Your Own Hero!* relevant in its market sector, and intriguing enough to hold consumers while attracting new consumers.

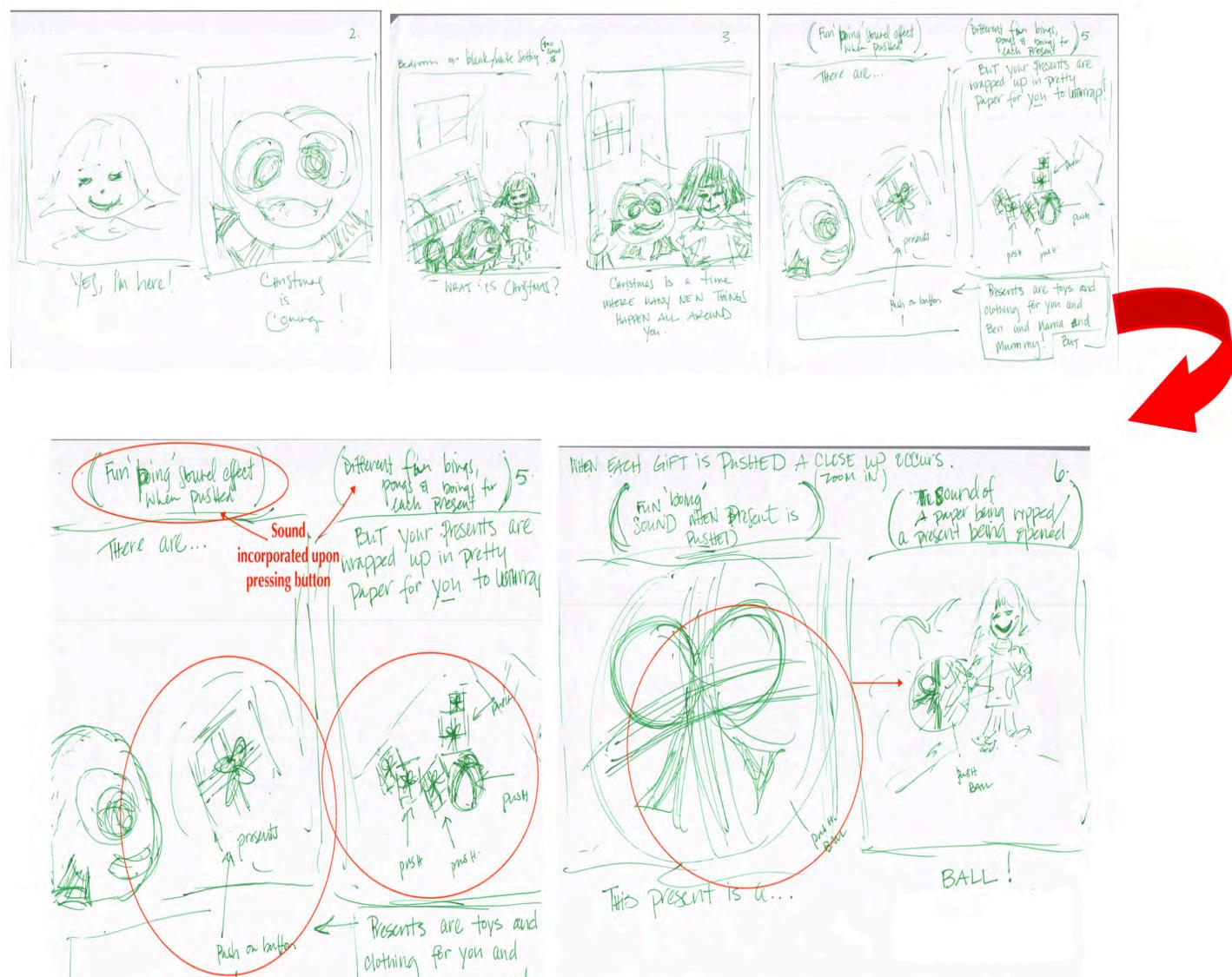
After fully researching the variant aspects of what constitutes a game, I felt that *YOH!* was not technically a game even with the customization and “complex” software infrastructure required because it actually aligned with that of an Interactive eBook app. In this type of eBook variation, the software used is specifically orchestrated to “utilize the powers of tablets to enable users to interact with the storyline in sight, sound, and touch” (Itzkovich, 2012). Examples being pop-up book apps and interactive, GPS-enabled travel guides. (See below)



**Interactive eBook app examples demonstrating the extensive ability capable within this eBook software variation. (Itzkovich, 2012)**

Being that one of my story narratives (see sketches below; see Appendix 4:2) would have buttons that could be pushed to enhance the skill-teaching aspect of the storyline, I saw

how YOH! could indeed still be considered an app. The question now remaining was in regards to the type and extent of animation I was envisioning since interactive eBook apps also had limitations of software capabilities with animation and sound.

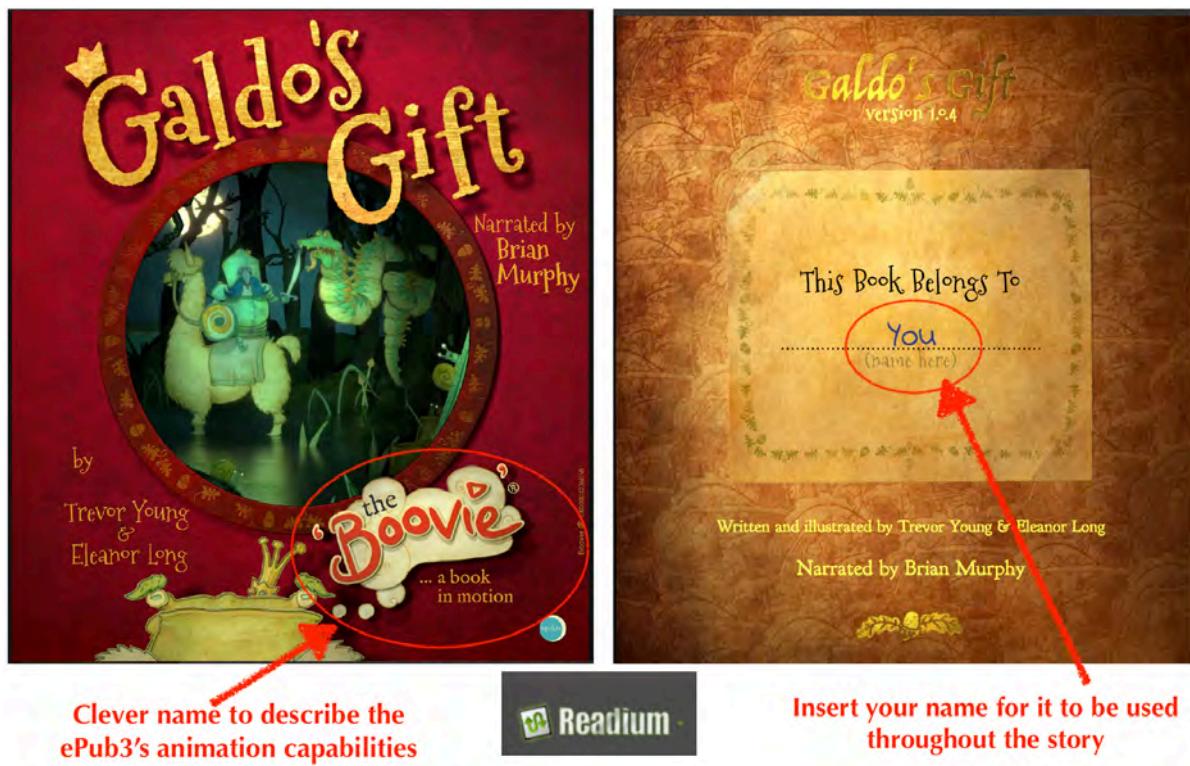


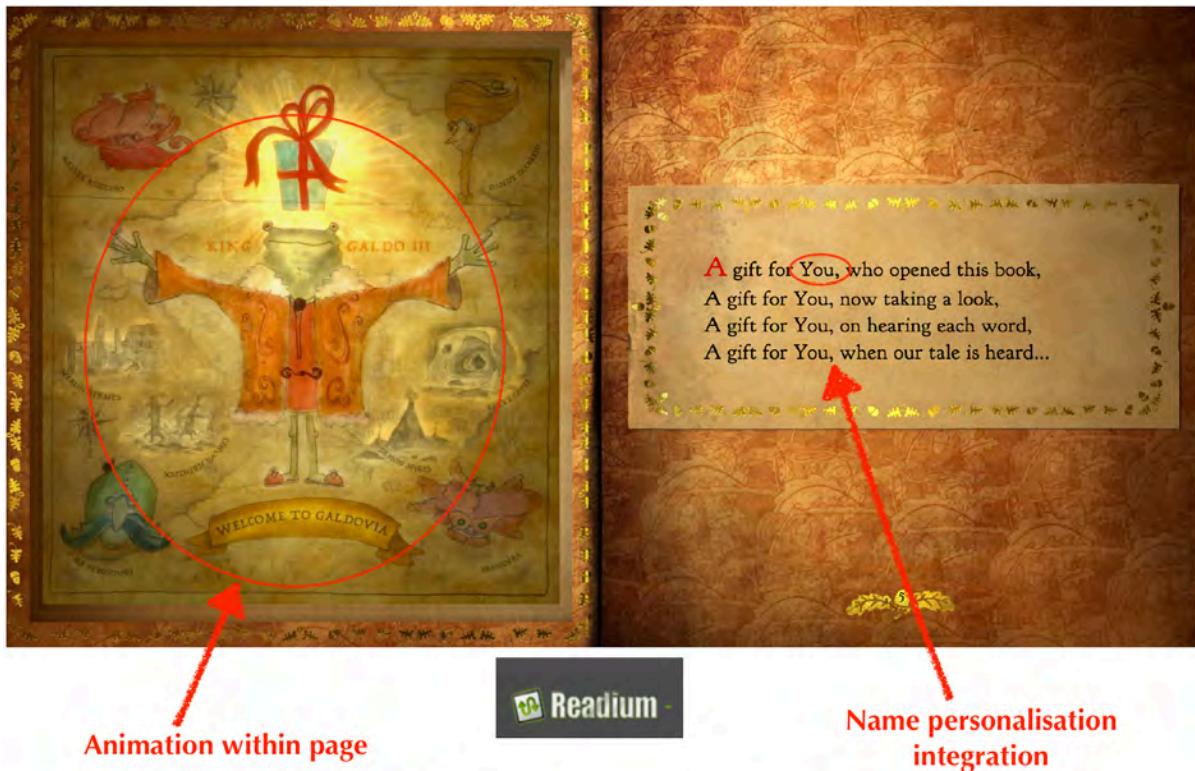
**Your Own Hero!** sample storyline: 1<sup>st</sup> person; interactive buttons to enhance the storyline and learning experience [no cape option used].

*Excerpt from Your Own Hero! by Tiffany Walker*

- **Enhanced eBook (ePub3)**

After much research, the Enhanced eBook was presented to me by publishing software expert consultant of Circular Software, Ken Jones, as a solution to almost all of the issues of complexity within YOH! An Enhanced eBook (ePub3), designed to easily integrate interactivity, video and audio, is considered by some to be the “future of textbooks and educational materials” (Jones, 2018; Itzkovitch, 2012). (See example below) It was also noted by Mr. Jones how there’s the Radium Foundation, which is an Open Source Foundation of software developers working collaboratively on technology that will allow ePub3 to become accessible via the open web and integrated into the digital publishing industry (Jones, 2018; Radium, 2018). This means that digital publishing will become easier and cheaper to do all around.





**4 Example pages of an Enhanced eBook (ePub3), Galdo's Gift.  
(Radium, Undated)**

- **The web app**

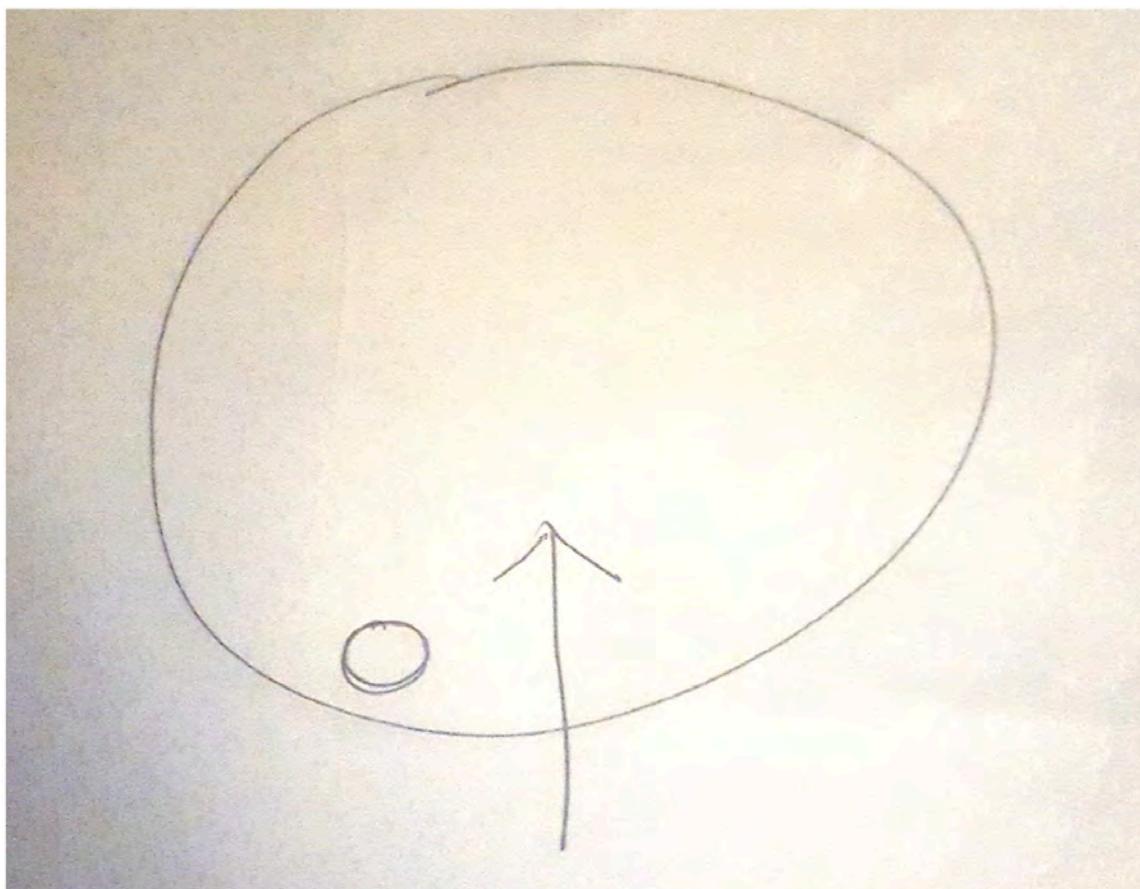
With an Enhanced ePub3 eBook creating the flexible infrastructure to contain and update the text, audio and interactivity capabilities of YOH!, the only remaining complexity was the hub-like infrastructure needed to house the ePub3 mechanism for mass use and store the consumer profiles/choices. This decision would also then have a trickle-down effect upon the accessibility across different operating systems for the purposes of discoverability/usage, which is then also linked to the financial start-up costs and ultimately the overall business strategy that would enable the ability to grow the concept.

Part of the dilemma—and expense—connected to YOH! was in how to pull all the personalisation/simulation/animation aspects together into a basic app, have user

profiles/passwords/networking capabilities, a capacity to update tech as needed, update new stories, *and* sell enough of the apps to turn a profit. Although I kept saying iPad as the device of choice, I hadn't realised how limiting that would be in terms of possible sales on other tablet operating systems and if a user preferred using their home computer as the device. If I continued to keep a narrow-mind and go with making *YOH!* into what is called a native app, where it can only be used on iOS, I cut out consumer sales I will need. I had been misled by some being told using a web-based platform would be too expensive, with programmers and coders racking up costs to where outsourcing the project to India for slave labour is the only way to make it happen. In actuality, as explained by Mr.Jones, going with what is called a Web App is a cost-effective way to ensure compatibility on multiple devices, allow for maintenance/new content updates, and save on memory of a given device since it is all stored online (Jones, 2018; Yeeply, 2017). Simply put, an app (e.g., ePub3/Enhanced eBook app) can be installed once online and anyone can work within it on whatever device they choose. Best known examples of this would be Google Docs [saved onto Google Drive], the writing app Evernote, and most notably is Netflix. (Yeeply, 2017) Yes, a developer would be needed for set-up/navigation purposes, but it is more manageable cost-wise. The only downside to consider if using a web app *platform* is that everything must be online, as opposed to native apps that are downloaded. A native app is an app that is designed only for a given operating system (Blair, 2017) and cannot work across different types of devices (i.e., something designed for iPhone isn't going to work on an Android). However, this has a positive side in that it doesn't take up storage space on your device *because* it is not downloaded.

In contrast, I had been told that what I was trying to do would be upwards of £250k for high-quality, and stripping down the variables of customization (e.g., the various symptoms

autistics present) would also have to happen. (Driscoll, 2018) I did agree the digital concept I was using for feasibility testing demonstrated the bigger envisioned conceptualization of YOH! and needed to be stripped down to a true MVP. I also appreciated his progressive and innovative approach to creating an app in an iterative fashion, with cost constraints at the forefront, as he diagrammed for me (*Ibid*). (See below). The design illustrates how you can have a big design concept (notated by the larger circle) that coincides with the job to be done (JTBD), but you take things in small, incremental stages (notated by the smaller circle) to cost-effectively tackle various tech hurdles in order to achieve the bigger goal; and through these constraints, new innovative ways of solving problems (tech, financially and otherwise) come about.



**Diagram indicating how to cost-effectively approach app design in incremental stages. (Driscoll, 2018)**

However, the customization of autistic-specific traits was a key element to the app so as to appeal to many types of consumers, as well as the app's initiative/USP to grow with the child changes and giving parents the ability to control the care for their child. Another eBook designer commented on how the complexities of customization presented an inability to truly give an upfront cost since to build it out, because making the variables work together is an iterative process (Stephenson, 2018). It was indicated how an Agile systematic approach called a "sprint", whereby a portion of the tech is determined and a goal is set for creating it over say a 2-week time frame, is put in motion for a set price (£4500/per 2wks); at which time it is determined if the goal was met and new goal can be set to further the development. (*Ibid*) So, roughly a £40k in 3-month estimate, though going over the estimated time frame and price is always expected. And this still leaves the platform for log-in, etc... hanging to be built. I did like the viewpoint that was taken when approaching app design, which correlates with production efficiency and money saving: have the vision, but learn how to translate a grand vision into feasible, doable chunks. (*Ibid*)

- ***The ePub3/web app solution***

There's a reason I got differing costing projections then what was presented by Jones (2018). Ken Jones has been a Technical Production Manager and has worked hands-on with publishing software in various circumstances and is constantly in the loop of all the software options and the capabilities within the options. With his input I was able to see how the digital format MVP of *Your Own Hero!* was possible for far less than the originally projected £250k; albeit, things may not be as pristine as envisioned and a few compromises made. A MVP could happen for a rounded-up costing of £20k in a span of 3-6 months, which includes one story with all the story/character customised variables, sans the room layout capability and licensed publisher character entities; and an ongoing running cost of

£500/month, per 500 books sold. Additional stories would be at around £2k since the story infrastructure was in place, but running costs would remain the same. So, the total for a MVP for the first year would be at about **£26k**. The one downside to also consider if using a web app platform is that everything must be online, as opposed to native apps that are downloaded. This is somewhat of downside due to wanting a product that was as mobile as the device it is being used on, but for the purposes of an MVP, I can live with it.

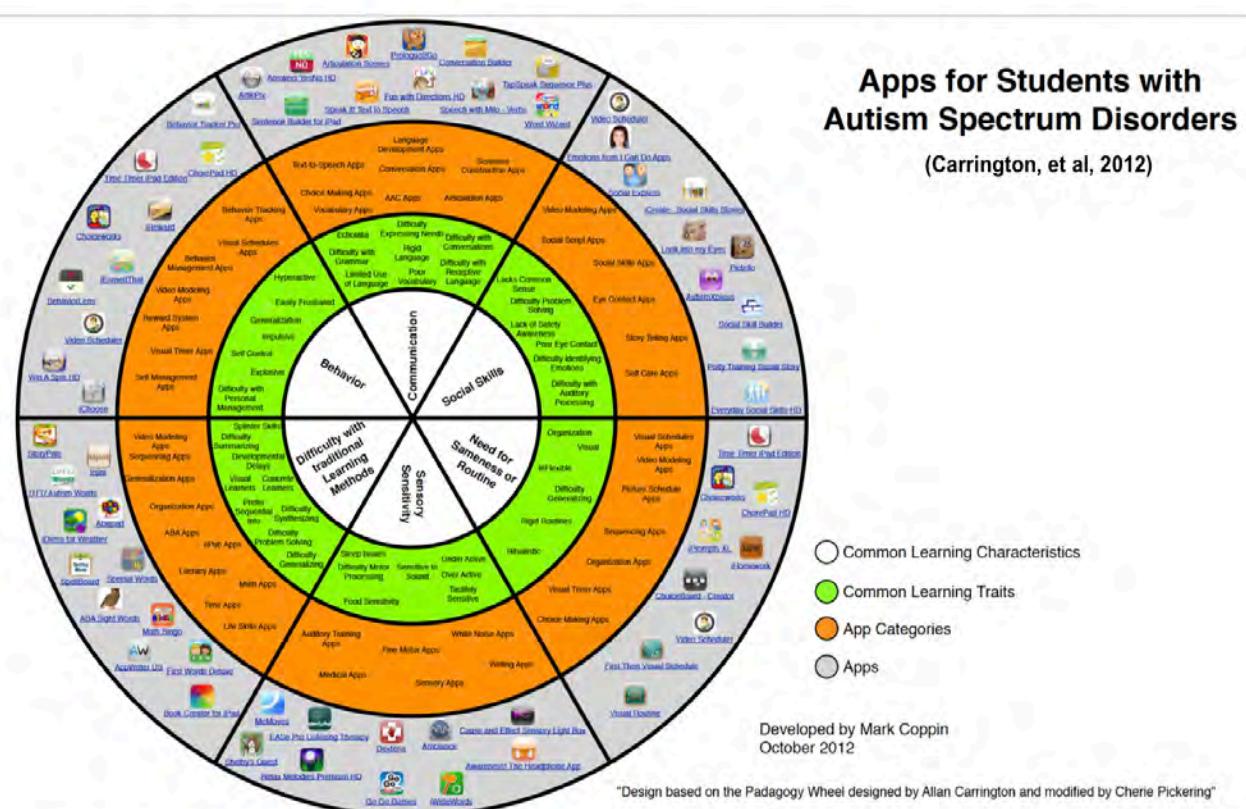
The compromises I mentioned above include using basic animals for avatars and not publisher character entities that would be tapped into that ‘special interest’/affinities autistics have for certain things (e.g., Disney characters, Gruffalo, Harry Potter). Again, I originally envisioned just normal animal characters and through my research noted above, animals in general are effective, supportive tools. The other compromise would be in the personalization/simulation aspect of the room layout and it not being tech and financially feasible within the startup launch. This is because in the use of ePub3, the background must remain static to all the other moving elements that would be changing. To enable that technology would require a more intense programming scenario that can’t be accounted at this point in time, in ePub3 format. Another compromise I can foresee is the stripping back of the symptoms, or “presentations”, as simulation options due to the intricacies in animating all of them in this form ePub3 animation. I had envisioned animation so as to provide that simulation effect, but the level of animation varies and is limited on ePub3, and to do a full-scale, Pixar-quality situation doesn’t seem feasible at this point in time.

Another thing not fully accounted for is the price amount required for story development and creation. Although I personally can write various stories, I would want to get vetted feedback from teachers and actual autistic people as to the best storylines that would reach

the most people, and potentially get actual writers that are autistic so as to maintain an accuracy/authenticity to the storytelling. I do think crowd sourcing stories and writers is a cost-effective starting point, but I would like to have a stable of writers with autism contributing to new material, thereby diversifying the literary landscape as well.

### 3:4.3 Competition

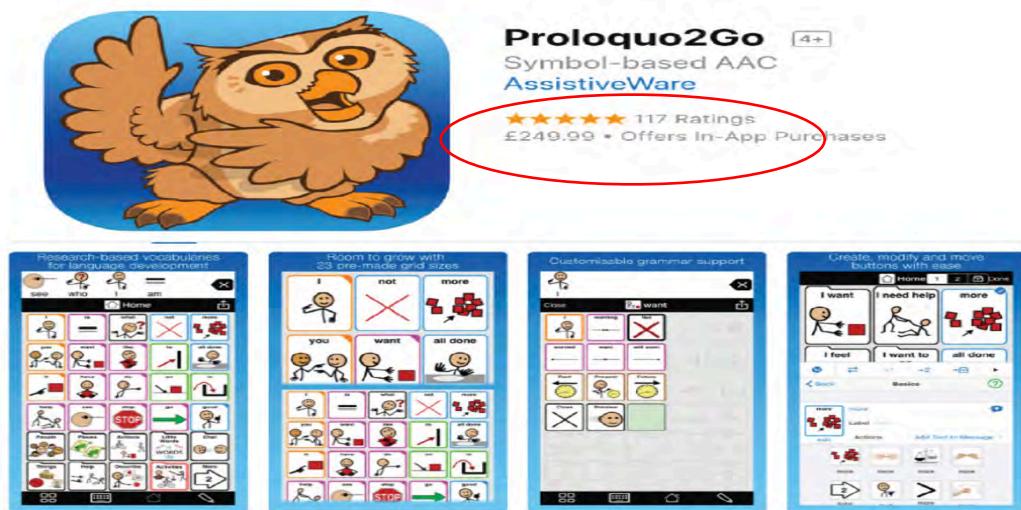
To further demonstrate the viability of the *Your Own Hero!* concept in a digital format, it must be shown how there isn't anything else like it on the market. In my *Proof of Concept* report (Walker, 2018, p. 16-18), I indicated how there are autistic-specific digital materials and then many more that are actually geared towards those with ADHD as well since they are interrelated, with ADHD being within the spectrum and often a comorbidity (see picture below).



Pedagogy wheel indicating the top apps connected to autistic-specific skill sets; averagely about 10 apps per skill. (Walker, 2018, p. 16)

The autistic-specific apps that are somewhat competition, also show the accepted price points for this market segment and the leaders in the market as well.

Below you will see a digital product geared towards lower-functioning, non-verbal autistics that need quick-reference pictures (like the PECS system mentioned within the AAC interventions under section 2:3.7) to bridge communication. The stick figures are meant to keep things simplified to enable that quick reference capability (see picture below). Note the price point is quite high and proving to be accepted due to its ranking in the iPhone apps. I had originally thought this price point that included in-app purchases would be the way to go for *Your Own Hero!* Where new stories could be purchased like video games at say \$50, similar to those pricings. I, however, shifted from this business model due to realizing the apparent direction of app purchases, and in knowing a consistent cash flow needed to be in place in order to continue to produce new materials.



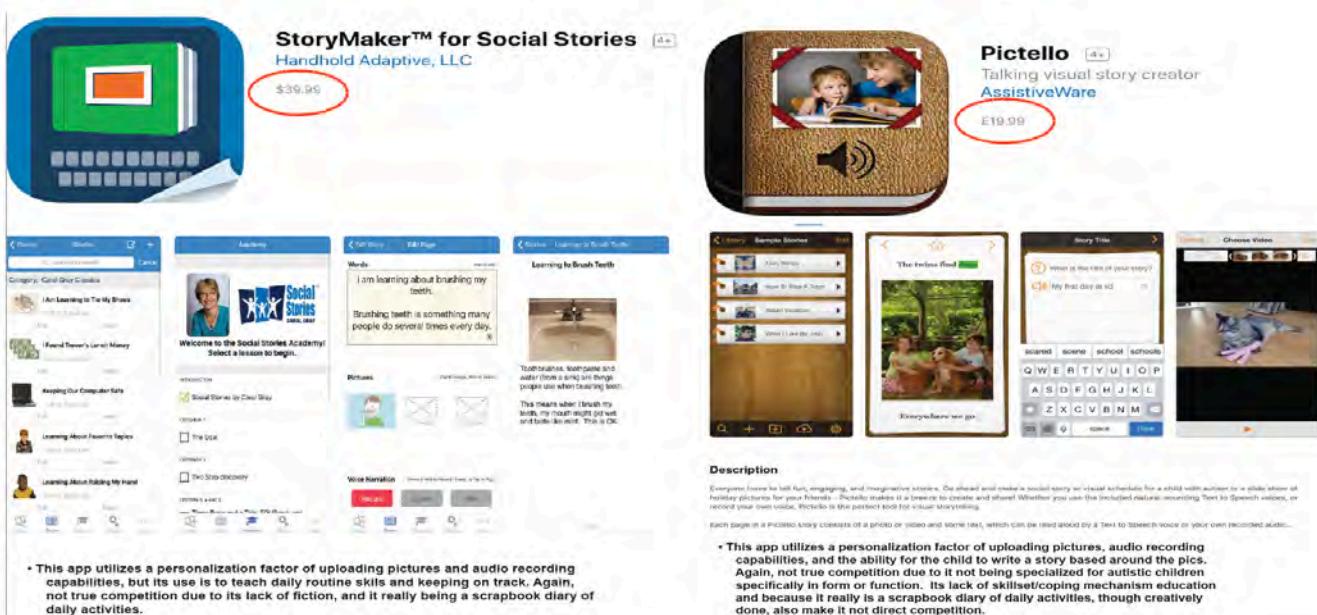
#### Description

Proloquo2Go is an award-winning symbol-based communication app that gives a voice to those who cannot speak. Over 175,000 people already use this AAC app as a powerful tool for expressing themselves and increasing their communication skills and language development. Its innovative features let users, parents, teachers and therapists quickly personalize the app.

- This app is a form of competition due to its complexity and intricacies of content and that it teaches skillsets and can grow with the autistic child. However, its overall aesthetic is far from anything personalized, or anywhere close to having a fictional moment to it. Its price point is probably in line with what *Your Own Hero!* will be.

**AssistiveWare leads in digital products for autistics. This app demonstrates a complexity and intricacy of content that grows with the child, which parallels that of *Your Own Hero!*, though it is meant for more communication-specific needs. (Walker, 2018, p. 17)**

Other competition listed in my *Proof of Concept*, indicate the viability of the personalised, in-context, social story aspect, as well as the modeling and exposure therapy that is inherent to social stories. All of which are part of the *Your Own Hero!* concept, however in a more fictionalised portrayal, with animated qualities. (See pictures below)

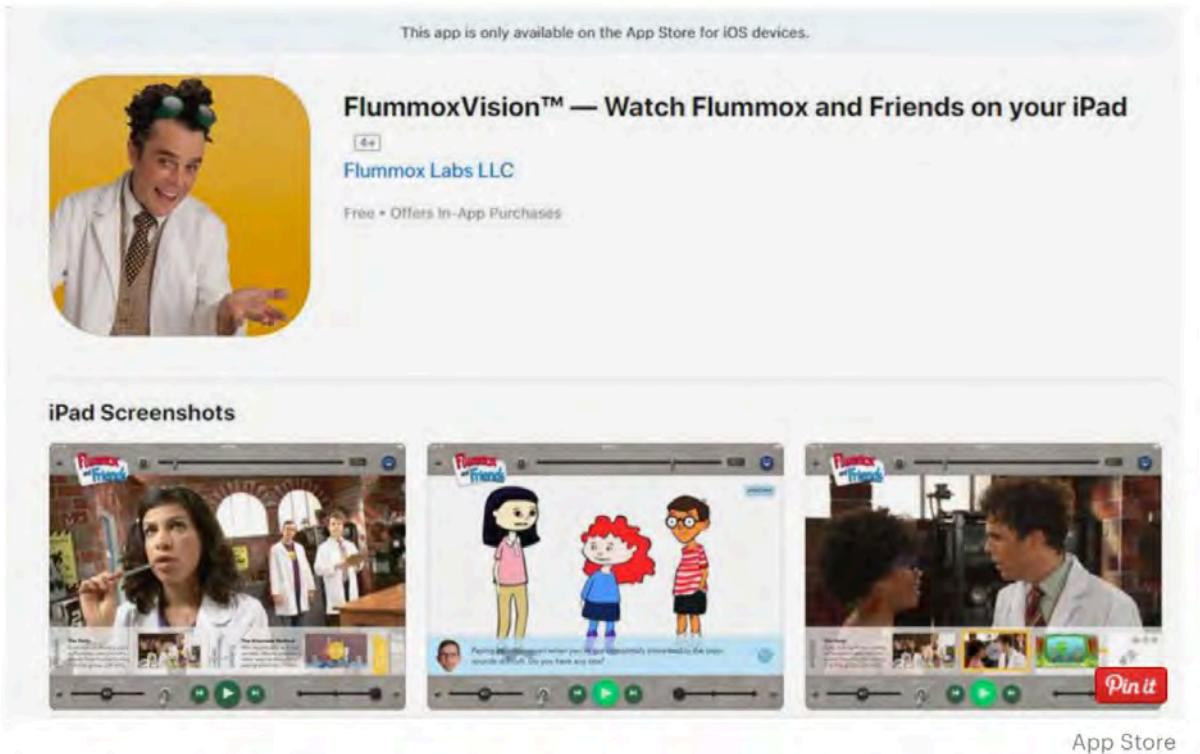


**Examples of competition where personalisation, modeling, exposure therapy and coinciding storytelling with audio is shown to be viable in the market segment; demonstrating an accepted, applicable price point.**  
**(Walker, 2018, p. 17-18)**

These apps also show a price point that is accepted, that of being in subscription form with in-app purchases, which is the direction I feel is best for continued financial longevity and cover the ongoing tech maintenance and story development connected with *Your Own Hero!* I must note that verifying the sales of the apps in order to find a top seller and at which price point has proven difficult. I resorted to going off of the tiered ranking of discoverability within the apps search as an indicator of what was selling, and the price connected to it.

In regards to fiction, autistic-specific storybook apps on the market that could be comparative to the *Your Own Hero!* concept, there aren't any recognised as of yet. Below is

an example of something *kind of* similar of intention in that it has peer modeling/role playing/exposure therapy happening within its TV sitcom framework, but it is not personalised storytelling within the context of a true-to-life scenarios. (See below)



**Example of autistic-specific app utilising fiction and social storytelling meant to help with behavioural and social skills; in a TV sitcom format with interactive components. (Nation, 2018)**

There are of course Interactive eBook apps that could do well with autistic children, but there aren't any *autistic-specific* apps like *Your Own Hero!* Once again, I'm demonstrating how this type of product would corner the market and inherently be viable due to that factor alone.

If time constraints of this major project weren't looming, I would want to find out the actual sales (and price point) for these digital products in order to make an informed, decision pin-pointing a more exact price point that *Your Own Hero!* should be in relation to these other

products, and base my MVP on that price point. That way a solid parameter would be in place as to the tech expenditures I should make, versus making assumptions that could lead tech expenditures creating a price point that consumers won't do. It should also be noted, that being *Your Own Hero!* is pitched as a supportive tool for skills learning through personalised fiction, I would want to do ample user-testing on a working prototype to actually demonstrate those claims and further present its viability within the market as an inclusion within a proper business case.

### **3:5 Strategic business planning**

For the purposes of this business case analysis, an outline of a business strategy should be identified. Amid trying to decide upon exactly what the MVP of the *Your Own Hero!* concept would be, trying to pinpoint a business model that would account for its development and production, as well as lay the foundation for long-term longevity was proving equally as difficult.

I knew from the research I had compiled, that the true MVP of *Your Own Hero!* to be used as a starting point in order to launch the concept was the book format I had originally envisioned (see section 3:3.1) This was based on the multiple forms of research I had done regarding the tech involved in the personalization and storyline variables. The print-on-demand book format keeps within a budgeted ratio between price point to Cost-of-Production to Return on Investment (RoI). This business model has also been proven to be successful through the personalised fiction books by Wonderbly (formally Lost My Name) and their selling of 2 million books worldwide (Watts, 2017).

However, for the purposes of this major project and creating a robust business case, I wanted to fully explore the feasibility and viability of the digital format of *Your Own Hero!*. In accomplishing this I re-evaluated the findings made in my *Proof of Concept* (Walker, 2018).

### **3:5.1 Revenue models**

I initially re-evaluated the particular revenue models that would inherently affect 1.) the consumer perception of the value of *Your Own Hero!* so as to buy the product at all; 2.) the overall cash flow for continued viability. (See below)

- 1.) Flat fee [\$/£20-249]
- 2.) Subscription: monthly/yearly [19.99+mthly/150.+yrly]
- 3.) Free OR Flat Fee & in-app purchases. [1.99 and up]

### **3 potential revenue models as listed in *Your Own Hero! Proof of Concept* (Walker, 2018, p. 18)**

I initially thought that with all the tech involved and the fact *Your Own Hero!* is meant to be a lasting item and grow with the child, a larger flat fee of say £150 would be best. Then with each new story that was presented beyond the initial story launched, YOH! would be £50 much like how video games have been sold. I moved from that model fairly early on due to foreseeing story development and tech maintenance being an ongoing need. I also saw the undeniable shift to streaming content and the subliminal efficacy of automatic transactions. With that, I moved toward a subscription-based model with in-app purchasing, though deciding on that price point and what exactly would be the in-app purchase has been an on-going process even now.

After speaking with many in the publishing tech industry, as partially described above, I knew I needed to strip down the fully expanded conceptualization of *Your Own Hero!* I was demonstrating in my feasibility test down to just one initial concept. (See below) But even within that strip down to *Hero Stories*, more needed potentially stripping down and I was presented the idea of modularity by Nick Barreto of Canello (2018). By creating a very basic story schematic, I could charge less in the initial subscription price, and then offer more personalization options as in-app options (*Ibid*). Thereby, having a price point that actually ends up to being a larger price and thus covering the costs of tech that way. So, I could start with an initial app price of £19.99 and have in-app prices that could bring a final purchase price to possibly £40 depending on how many modulating in-app stop points to have.



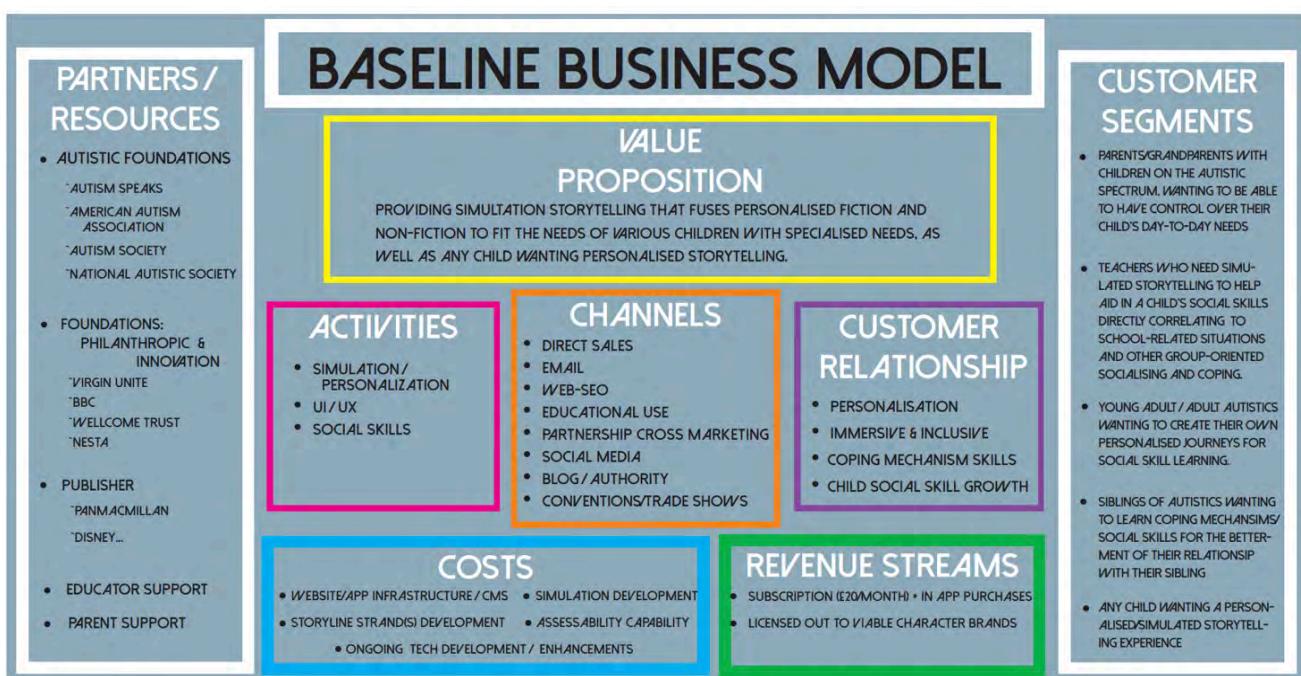
**Example of stripping down the *Your Own Hero!* prototype into a more feasible MVP by only offering the initially conceptualised basic storylines.  
(Walker, 2018)**

My final thoughts were indeed to move forward with a subscription model, charging £19.99 with in-app purchases; however, I didn't want to take away from the philanthropic aspect of the simulation purposes so I feel at this point only the modulation of more stories and the

uploading of the room layout should be the reasonable in-app stop points. Being that the room layout capability is the factor that would raise costs, it seems applicable to make that an in-app stop-point.

### 3:5.2 Business models

After numerous interviews with people in education, publishing and tech/business, I found myself being told again and again how expensive this type of product would be to actually produce. This is in addition to being told how common apps have shown to not make money because of the tech involved and how consumers expect them to be free. This is not to mention that publishers leave digital last on the list of things to budget for in bringing a book to market and therefore want/need things as cheap as possible (Cryer and Halliday, 2018). With that knowledge and with knowing *Your Own Hero!* is capturing a niche market segment and therefore of a philanthropic nature, I started to think outside the box as to how to get the seed money together. Below is an initial business model chart I put together in the start, however, this model has changed since putting it together.



Original business model schematic for *Your Own Hero!*

## • ***Foundations***

Yes, I had thought that *Your Own Hero!* was of such a unique nature that a conglomerate publishing company (e.g., Macmillan) or production company (e.g., Disney) would see not only the viability in the brand and company expansion opportunities, but also see the philanthropic value in producing this product and the recognition for doing something that no one else is doing. However, my investigation showed me how those factors really didn't matter. In my *Proof of Concept* (Walker, 2018), I acknowledged how gaining the "stamp of approval" and/or sponsorship by a credible autistic society would bring an added value as well as be the potential seed money for *Your Own Hero!*. However, my research into foundations such as UK's National Autistic Society (NAS) and the US's Autism Speaks and Autism Society showed me how although they would be a viable marketing channel for *YOH!* in being able to list the book under their resource listing, giving an actual stamp of approval is not really done due to limited resources to vet the product (New, 2018). It was also noted how funding is usually done for more bio-medical research for finding causation, etc...and not for business ventures such as this, though grants are given to communities that are looking to expand their autistic-resources (*Ibid*). Though it was noted that in the US *each* state allocates funding for social purposes, and *YOH!* would be something considered (*Ibid*). I can't speak on the processes within the UK due to the UK's NAS being extremely unhelpful in all aspects of exploration, whereas the US foundations got back to me quickly and wanted to help.

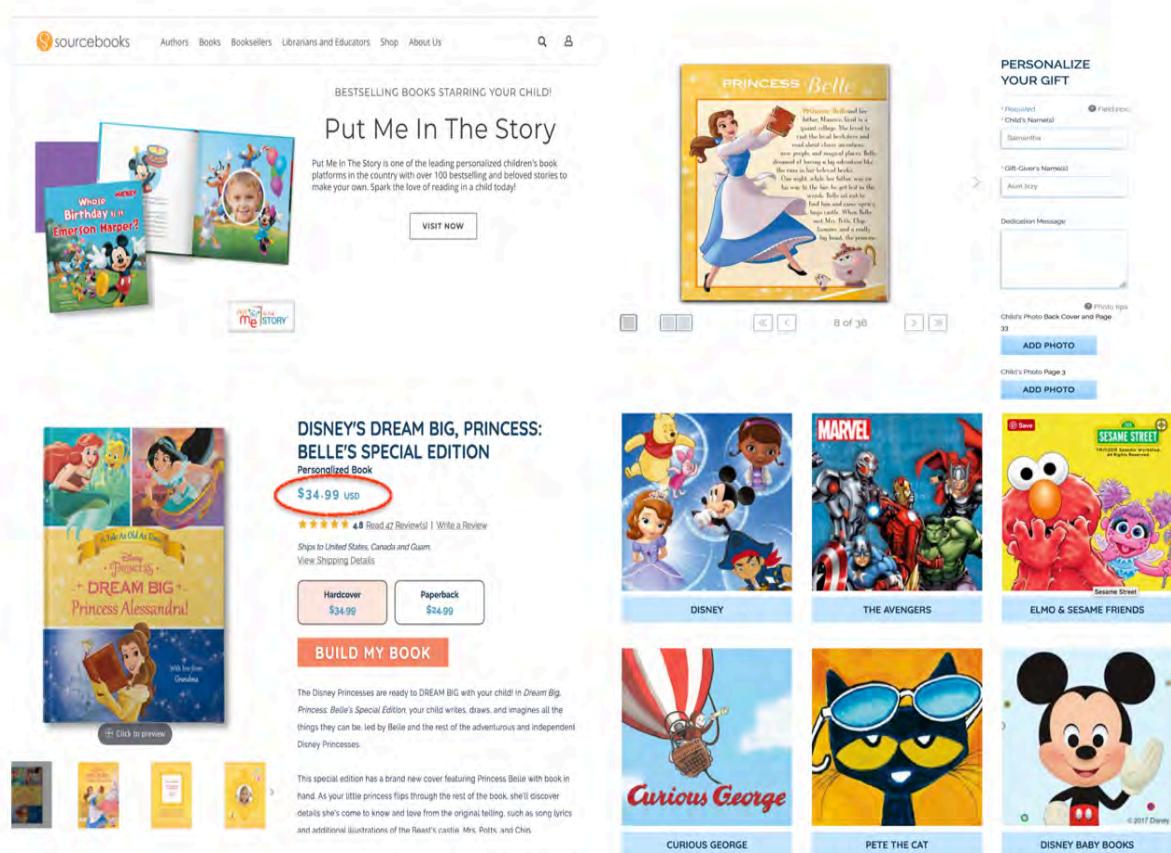
I began to go further with my ideas of foundations and grants, thinking someone like Richard Branson has his Virgin Unite foundation and is noted as even having a flight simulation already in use for those with autism that are going to fly Virgin. I also thought what a great brand expansion all around to pair up with a publisher to bring this app to

market, as well as having a whole *Virgin Unite Books* imprint of sorts for many other types of publications available in-flight and beyond? This way, funding would be a joint venture/joint partnership, and more in-line with what publishers can afford, and it could be considered as monies partially spent on marketing as well since there would be the built-in market channel and marketing provided via another company. This was described as the most applicable avenue for publishers by Jeremy Trevathan of Macmillan (2018). However, my attempts to connect with Virgin Unite within the time constraints of this major project proved not possible. On a side note, my research indicated that even going the route of foundation sponsorship/grants would require, in some cases, a joint partnership of other funding. Meaning a foundation would be more likely to grant funds to a company/product that shows to already having validated interest/funding in place by another entity because it would view it as a more viable investment. (Deacon, 2018)

- ***Licensing***

Tech complexities aside, the major hurdle to *Your Own Hero!*, if it was to be in its *full* envisioned state, was the animal characters that were brand entities belonging to specific publishers. It was clear from my research that a publisher would not just do a product like this no matter what the philanthropic value was to it. It was presented that I could then just license out from the companies the characters and because it was for a good cause I would get a price to reflect the endeavor. For example, it was mentioned that Disney would possibly license out a character for about \$30k for a 3-year period with royalties, and then renegotiate at that point if to see what the monetary results were so as to up the licensing fee or keep it as is (Huang, 2018). Being that this may be the situation for all publishing companies, I kept going back to the notion of just doing this project myself, with of course the help of some seed money hopefully from a willing donor, and take it to where it can go.

An angle to this was also presented to me where what if I just come up with the template for the simulation/tech mechanism and then have entities come to me to utilize my system and thereby it is a win-win for all. Of course, this was presented to me in terms of it being in the book format with its cost-effective print-on-demand capabilities (McLean, 2018). The example of what Source Books does with their *Put Me in the Story* imprint. (See below)



## **Example of SourceBooks and their print-on-demand, personalised template books, where various publisher entities license from SourceBooks this concept. (SourceBooks, Undated)**

This popular book series proves that personalization is key for ultimate consumer engagement (Myers, Undated), and that I could indeed just create the concept and open up the profitability by having *all* publishers with character brands pay into the *Your Own Hero!*

concept, not just one publishing company—making this a win-win for everyone. This could even be a concept one of the autistic foundations could implement if they were to produce this themselves and literally create a form of passive income to last for a very long time.

### **3:6 Final summation**

After thoroughly researching the market segment needs of the autistic community, the various subtypes of autistic publications, and the current market trends and statistics of autistic materials within the field of publishing, I have shown substantial evidence indicating the market and economic scope and the feasibility and viability of *YOH!*.

*YOH!* is feasible in terms of fulfilling the autistic need of emotional inclusion and skills teaching that can be provided through autistic-specific non-fiction and fiction materials. It is also shown that having more materials available would integrate autistics into a more socially conducive environment by positively introducing neurotypical children to autism via readily available material explaining autism, as well as autistic-specific storytelling being mixed into the mainstream story offerings so as to become part of everyday life. It was also determined that there is a demand for eBook, adapted and skills type material, which *Your Own Hero!* ticks all of those boxes since it fuses fiction and non-fiction, is of an eBook-esque nature, and adapted due to the app being designed the user-specific needs of an autistic. It was also confirmed that parents of autistic children will pay more, however a defined amount still needs time to be decided upon through further research.

The end result of my investigation is that even if *Your Own Hero!* stayed in a physical book format, the concept would indeed be a viable product. This is based on the huge increase in the diagnoses of autism constituting an inevitable consumer need of materials, combined

with the overall lack of priority all publishers (except for Jessica Kingsley Publishers/Hachette) currently have for autistic materials, including the education sector. *Your Own Hero!* is also a very feasible product in terms of catering to the niche market of ASD through its personalizing aspect and its user-specific storylines and skills. These USPs accommodate the many variations of the newly outlined ASD criteria/diagnosis, thus opening up the scope of consumers and reaching those that might not otherwise have been captured.

If constraints of this dissertation permitted, I would've discussed the value of *Your Own Hero!* and its tangible and intangible USPs on a larger scale through Bourdieu's *Forms of Capital* theory (1986). Briefly, this theory best explains the cultural, social and economic capital to be gained in all angles of this product. The philanthropic and educational aspect—cultural capital—alone constitute its worthiness of having the concept brought to production in either book or digital format. The long-term, cyclical economic potential is waiting to be seized because taking part in a product like *Your Own Hero!* would literally corner the market for the publisher who takes it on, thereby creating not only the social capital of credible standing of being the first to do this type of product, but also in the economic capital from meeting the surging demand of a product that accommodates so many people.

Through my research, I've had some interesting ups and downs because of the fact I'm using a fictionalised story, personalised through simulation (i.e., "personalised fiction"), in a digital format, where I'm ticking several of the boxes discussed above (fiction, skills, adapted). I have gotten positive reactions because there isn't anything like this on the market, and negative reactions because the money needed to curate the technology seems too expensive. But from the beginning, the driving impetus for me coming up with the

concept was: "Why can't an autistic person be the hero of a story?" Autistic children can and do read books revolving around neuro-typical people, communication and situational events like *Harry Potter* and the like, and I'm not arguing that they should only be reading books with an autistic-focus. What I'm saying is that there are two sides of inclusion and social integration. If there aren't any true, story-driven fiction books that feature a strong autistic protagonist in stories that revolve around *their* dealings of peoples and events, then are they really able to ever feel a sense of inclusion. In the same way these neuro-typical books were written in a way for neurotypical people to connect with their innermost desires and dreams, can that really be said for those with autism if their experiences aren't represented on the page? And in regards to social integration, if books with strong autistic protagonists don't exist, how is empathy and understanding from neurotypicals ever going to happen? In the same way that books have brought about a more cultured understanding of many things such as social status (*Pride and Prejudice*, Austen), race (*I Know Why The Caged Bird Sings*, Anjelou), gender (*I Am J*, Beam)—and still going strong with the fight for even more materials (e.g. the BAME movement)—can that really be said for the autistic community?

# CHAPTER 4 | APPENDIX

## **4:1 Your Own Hero! Proof of Concept (Walker, 2017)**

# Your Own Hero!

A simulation storybook-app where your Autistic child becomes the Hero of their very own story!



Tiffany Walker  
170036494

PBM011: Designing Interactive Media  
Proof of Concept

URL: <https://marvelapp.com/3a3db92>  
PASSWORD: ABrindlecorp

WORD COUNT: 2810

## INTRODUCTION:

### THE ELEVATOR PITCH

Your Own Hero! is a simulation storybook-app that creates a customized, immersive experience for an autistic child to be the hero of stories that teach coping mechanisms, and includes the whole family. The app adapts to the child's development, and allows parents to have better control over their child's needs.

### APP OVERVIEW

Your Own Hero! is a storybook app that combines the concepts of *Lost My Name*, *Zelda*, and aural innovations for a customised, immersive, simulation experience for an autistic child to be the hero of her own story that is inclusive of the whole family. The story options will be researched scenarios that are common triggers for various degrees of the autistic child, which will enable the child to learn social and behavioural skillsets, which are subject topics within the autistic non-fiction genre. (Carrington, et al, 2012; Ducarre, 2017)

Your Own Hero! utilizes the concept of using the child's name and likeness [similar to *Lost My Name*], but it takes it further to where you are able to upload the whole family that will then be put into animated form, as well as arranging the setting of given story to match the family's home. The aural innovation will be utilized by having 2 buttons available for family members/parents to record whatever the autistic child likes, whether it be of a soothing nature for difficult parts of the story, or a fun word that just adds to the story. The stories available will allow for the child to simulate an experience and watch how the "hero" that looks just like them, with their

name, learns how to conquer the situation, thereby teaching coping mechanisms/social skillsets. It also will allow for the siblings to be included in the scenarios so they are guided through the simulation and potential needs of their autistic sibling as well. There'll also be options for the siblings to have their own storylines for reversed simulations and choose-your-own-story (similar to Zelda) variations in order for them to learn better coping mechanisms for themselves, as well as with dealing with their autistic sibling.

The app, which will be adept for the specific needs and user experience required by autistics (DigitalSynopsis, Undated), will allow the autistic child to be themselves in the storyline with a hero-cape option, or if they better relate to animals [as studies have shown] (Pearson, 2013), there will be options for them to proceed through the story as the animal avatar and not themselves. It will also allow for the child to choose if they want to have a companion for their story, whether it be their sibling, friend, or their favourite avatar. There will also be options to choose the symptoms and severity of the autism so that the storyline can adjust to those needs.

The app may initially be managed by the parent, but as the autistic child grows and becomes more autonomous, they themselves can take over and utilize the choose-your-own story options that will have more young adult storylines and simulations. All these elements combined, allow parents the ability to take control of their child's learning/development moment-to-moment, and assist in the day-to-day needs of their child for immediate support, and literally grow with child.

## CONCEPT IDEATION

I started developing this personalised/simulation-app concept, where I'm fusing both fiction and non-fiction elements to create a realm of skillset learning, self-esteem validation, and imagination, after witnessing first-hand the triggers and symptoms of my friend's daughter, just barely 2-years-old, on Christmas Day, and the process it took to get to a calm state for parents and child alike. I recognized the "higher purpose" of finding a product to help the autistic child better navigate scenarios, or better known as the "Job To Be Done" [JTBD] (Silverstein, 2012, pp. 3), by the end of the night. I *unknowingly* moved forward doing many of the "Techniques" Silverstein (2012) notates, in almost the order he lists, skipping only a few.

After several weeks of going in and out of replays of that Christmas day situation, I found myself "Imaginary Brainstorming" (Silverstein, 2012, 140) variations of products (books, audio, apps) and potential outcomes, and happened upon an ad for *Lost My Name*, the children's book that personalises the whole story to match the child's name, and pick a semi-likeness of a little boy/girl, and a customized, print-on-demand book comes in the mail—a perfect gift—worth the price because of how personalised it is. I then thought about all the games I used to love, or ones that really made a lasting impression on me emotionally or educationally, and realized they all were games where I thought I was really immersed *IN* the story and had to think out my next steps. From the starting point of *Lost My Name*, me visualizing the dealings of an autistic child and the parent's side of dealing with the child, "Technique 19", SCAMPER, took place to formulate *Your Own Hero!*. (Silverstein, 2012, pp133)

## TARGET MARKET:

My target market is the autistic person, aged 2 into young adult, as well as their families since this app is meant to be a simulation, and help the autistic child learn skillsets and coping mechanisms to better integrate into family situations. After I went through “atomizing content”, and “finalizing [all the] elements” (Wachter-Boettcher, 2012) I envisioned for this app—otherwise known as “ideal innovation”, where I start with the perfect solution in mind and work backward from there” (Silverstein, 2012)—I realized just how complex and potentially intricate *Your Own Hero! (Y.O.H.)* would be with storylines and animation. I then decided to break my target market into 2 categories of target audiences: 1.) Minimal Viable Product Target Audience, so as to capture the immediate purpose of aiding the autistic child with basic stories. 2.) “Ideal Innovation” Target Audience, which encompasses the other envisioned users of the app I had from the start.

In the MVP category, you will see it just includes the autistic child (2+16) and the family members that will be a part of the decision-making for what storyline most relevant to the child. In the “Ideal Innovation” category, you will see where I then considered even older autistics for when the *Zelda*-like choose-your-own-story iteration takes place. There is also the sibling being included in “playing” the app, and then further iterations on, the use by teachers for added curriculum for even school-setting storylines.

## •USER PROFILES:

MVP  
Target Audience

**Various Spectrum Autistic Kids**

- Autistic children 2+, various spectrum autistics.
- Children that need fiction stories that feature autistic child as protagonist, leading a story.
- Children that need variations of supportive methods to read in terms of family/friend/animal/audio options.
- Children that need storylines that teach them skills e.g.) coping mechanisms in a personalized way.

**Beth, 28, Parent**

- Busy Mom with part-time job.
- Needs assistance teaching autistic daughter, 4-yrs-old, socializing skills & how to deal with every day triggers.
- Would like to be able to have material that she can read with her child, but also allow her child to do on her own.

**Sally, 67, Grandparent**

- Grandmother,
- Grandparent who watches the autistic grandchild (2) and needs material that can assist with coping mechanisms they can't teach, and can learn with child.
- Would like material that can help with every day events.

"IDEAL INNOVATION"  
Extended Target Audience

**Dan, 46, Parent**

- Dad, Owns his own company.
- Has a young adult autistic child (18) & would like reading material that keeps challenging his child, but still reinforces coping mechanisms.
- Would like material that allows his child to explore choices & autonomy in safe, fictionalized storylines for autistic YA.

**Cathy/Ben, Teachers**

- Teachers of autistic-integrated classes.
- Teachers in need of personalized reading material for autistic child to focus on topics most relevant to their needs, during larger class scenarios/triggers.
- Teachers wanting digital support to curriculum, and allows for autistic child's family to be included for extra support.

## FEATURES & FUNCTIONALITY:

### •USPs:

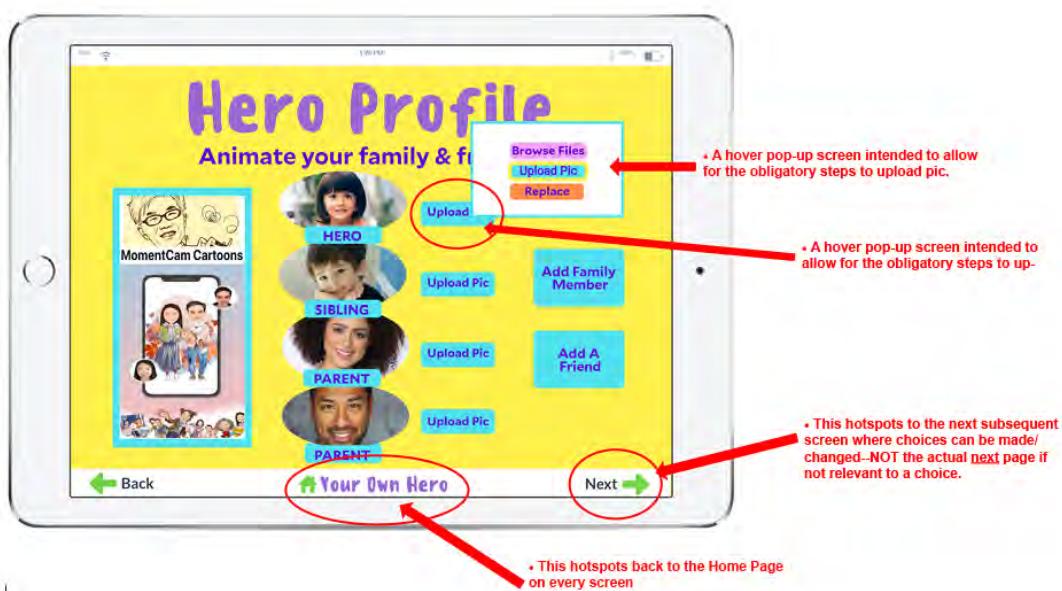


### •KEY FEATURES / DEVELOPMENT & TESTING: See Appendix 2a-c.

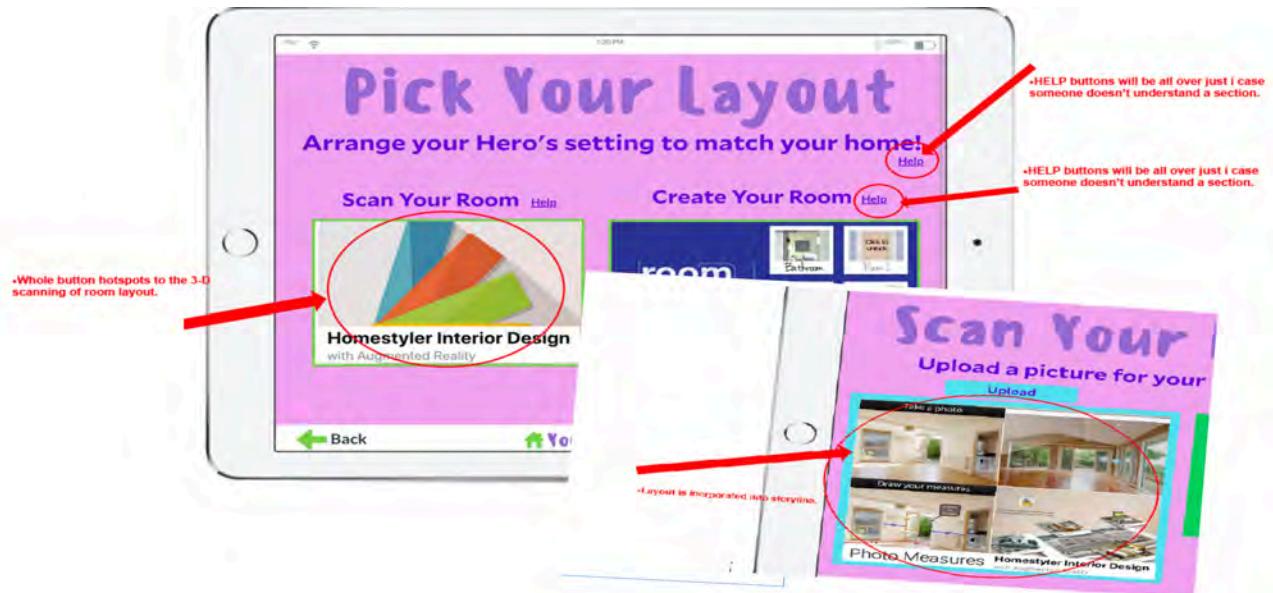


#### Personalisation / Simulation Experience:

1.) Scan/Upload pictures (& name-done on other app screen) of child and family to animate into the storyline. Change pictures as your child grows, or whenever you like.



2.) Scan/Upload picture of the room in your home that coincides with the room(s) in the storyline and configure it into the storyline. Choosing pre-styled layout is also an option if the autistic child needs an option for less stimulation .

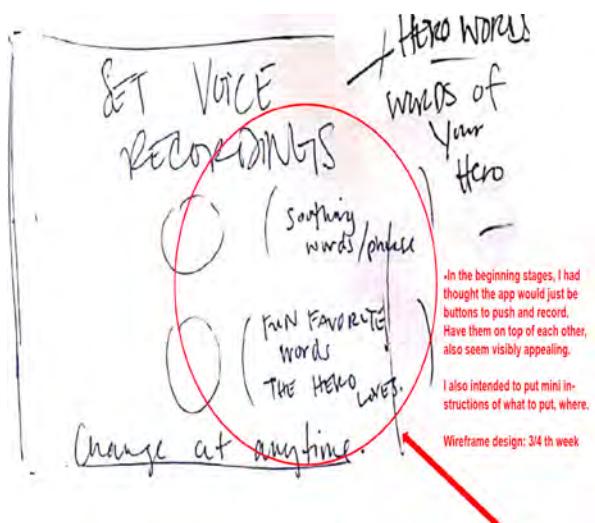


3.) Audio Recording capabilities for either soothing messages for your child, or fun words timed and linked to parts of the story. Change at any time.

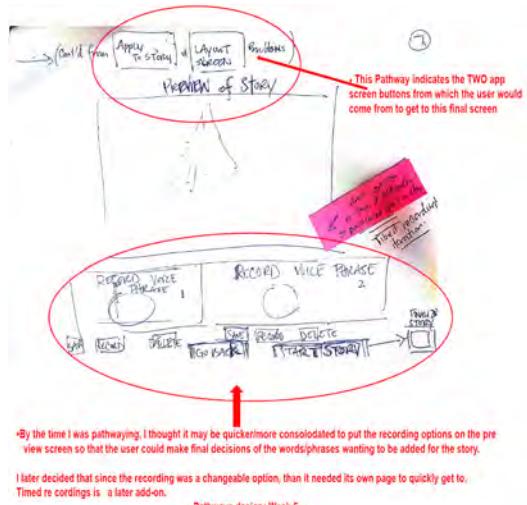


### \*\*\*WIREFRAME : PATHWAYS — DEVELOPMENT COMPARISON

Wireframe

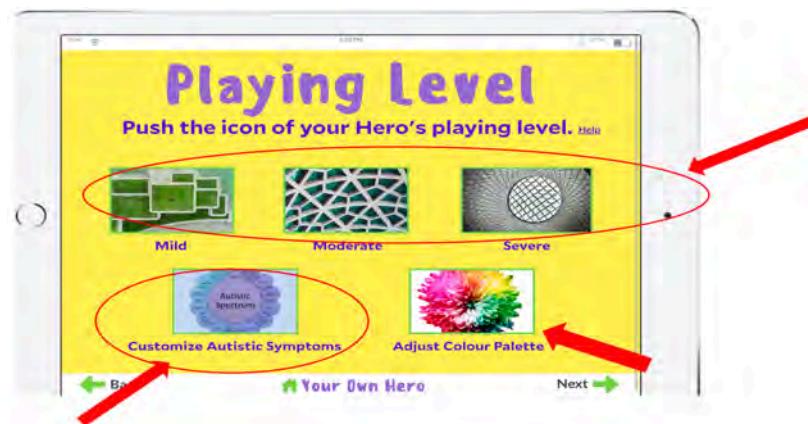


Pathway



### Tailored-Made Autistic User-Experience:

- 1.) Customize spectrum levels, symptoms, and colour palette. Change at any time and the storyline adjust

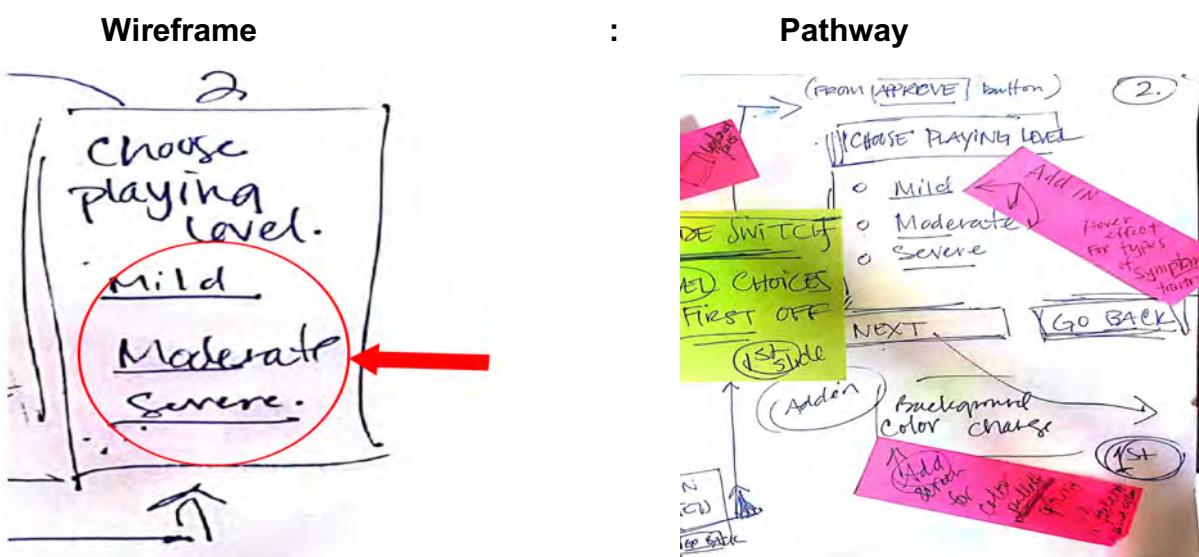


Mild Colours for Autistics



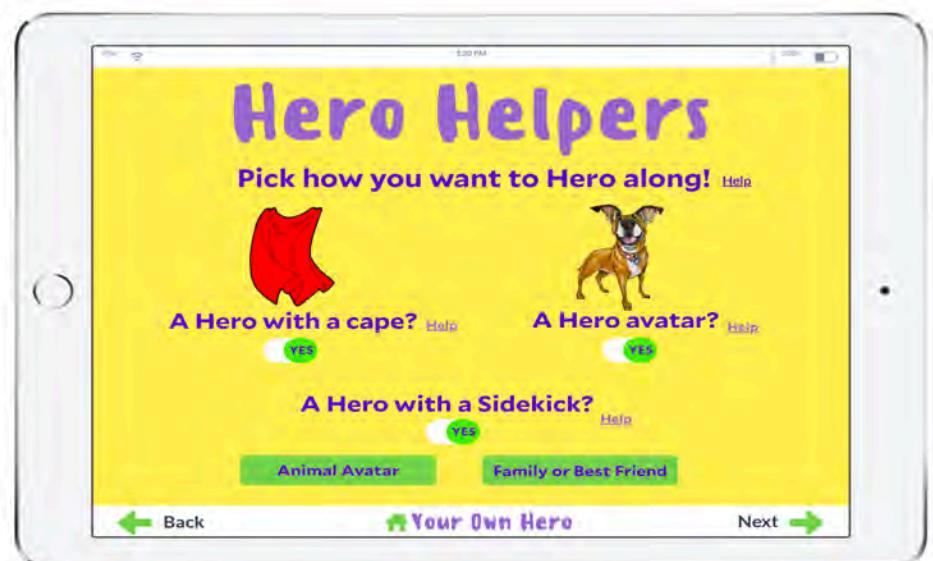
\*\*\*I want this to be a hover option pop-up over EACH Level

### \*\*\*WIREFRAME : PATHWAYS — DEVELOPMENT COMPARISON

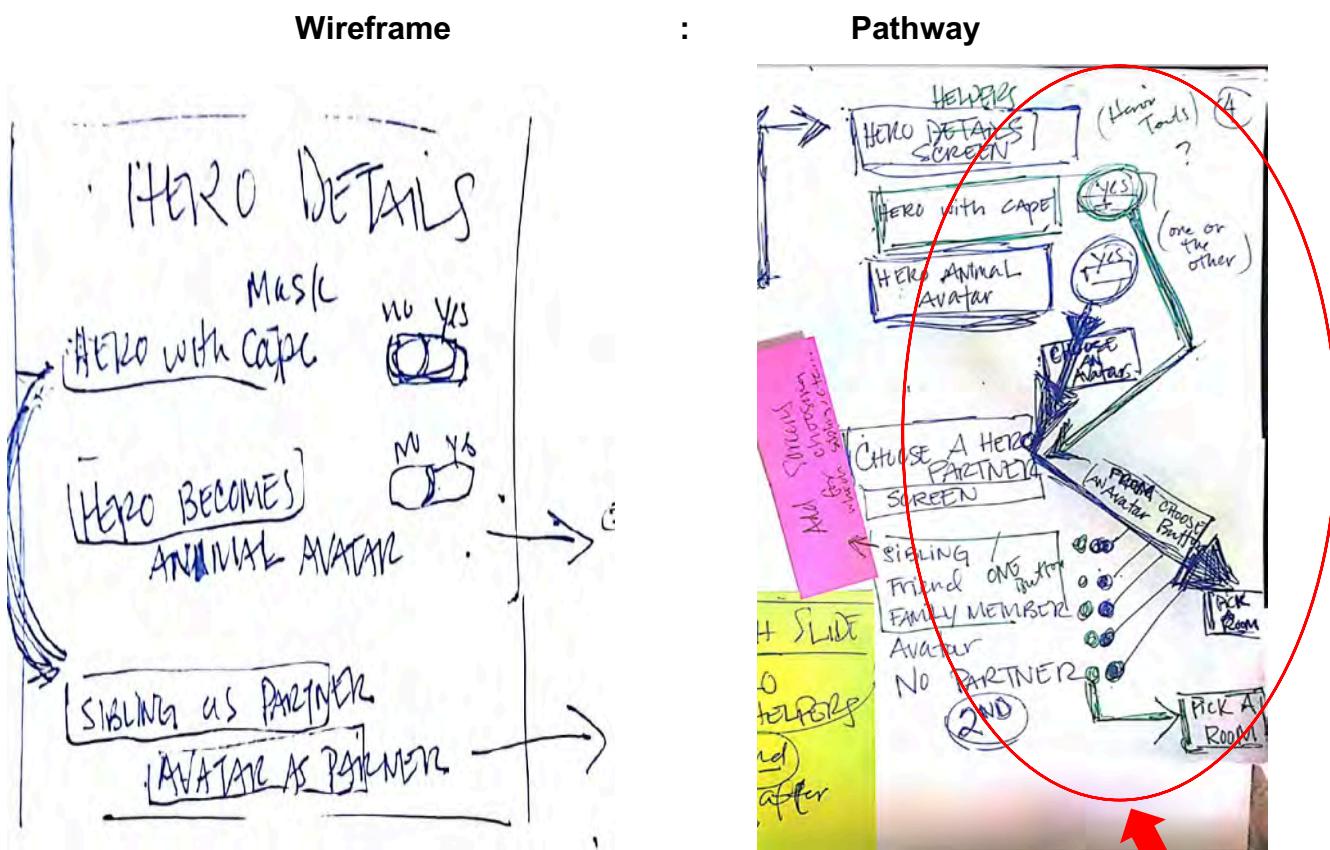


\*\*Simple buttons, but many off-shoots: complexity grows

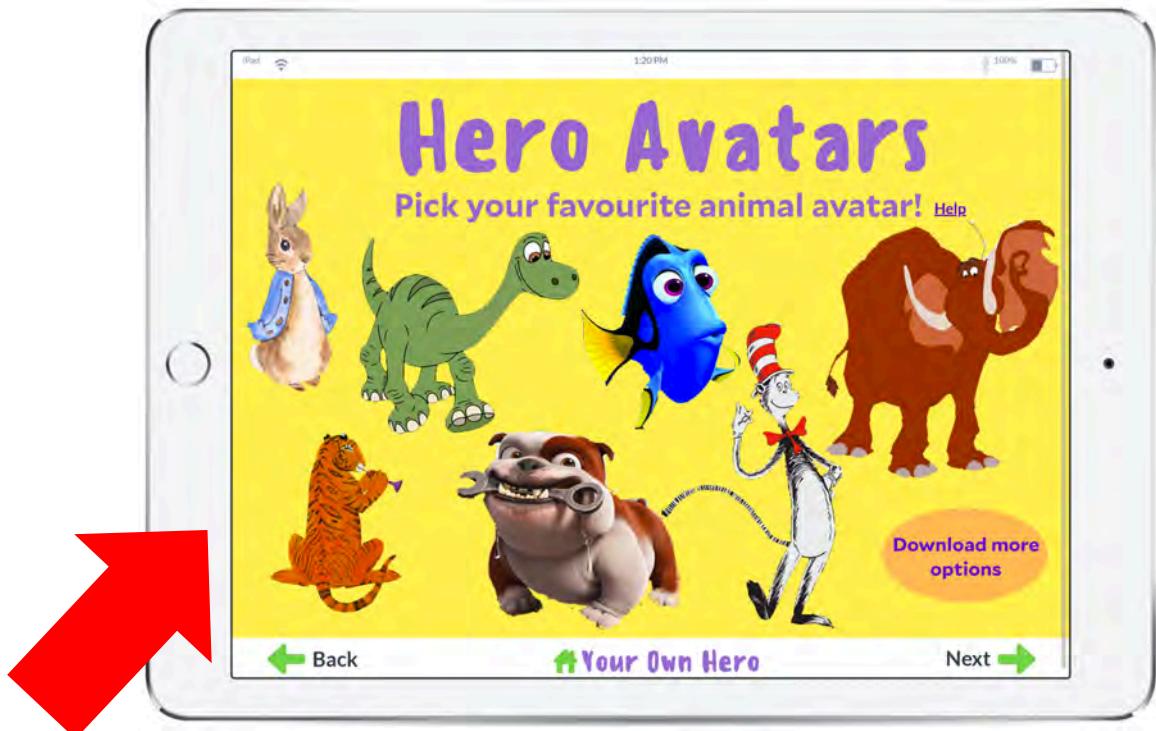
### 2.) Use of animal characters as avatars for autistic-specific assistance



### \*\*\*WIREFRAME : PATHWAYS — DEVELOPMENT COMPARISON

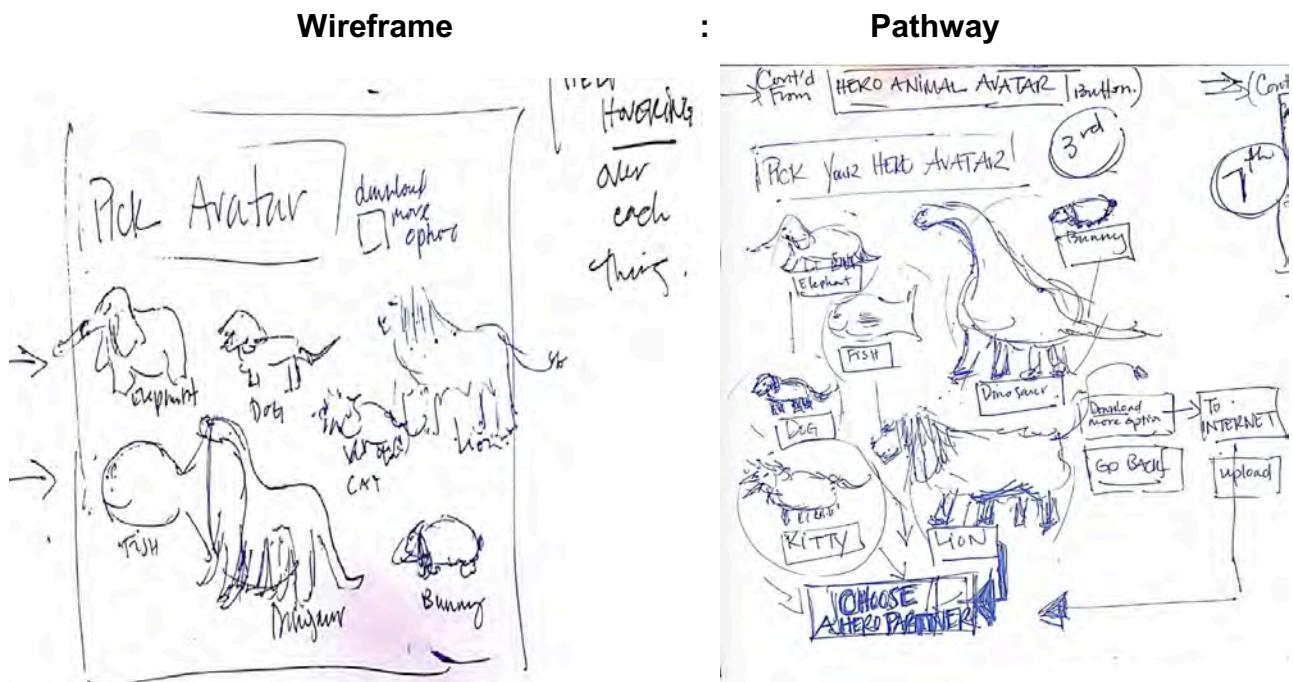


\*\*Simple buttons, but many off-shoots



Publishing opportunities by way of popular animal characters presented themselves beyond actual pictures of animals as originally conceived.

### \*\*\*WIREFRAME : PATHWAYS — DEVELOPMENT COMPARISON



3.) Researched storylines to choose from in order to customize the skillset storyline simulation.

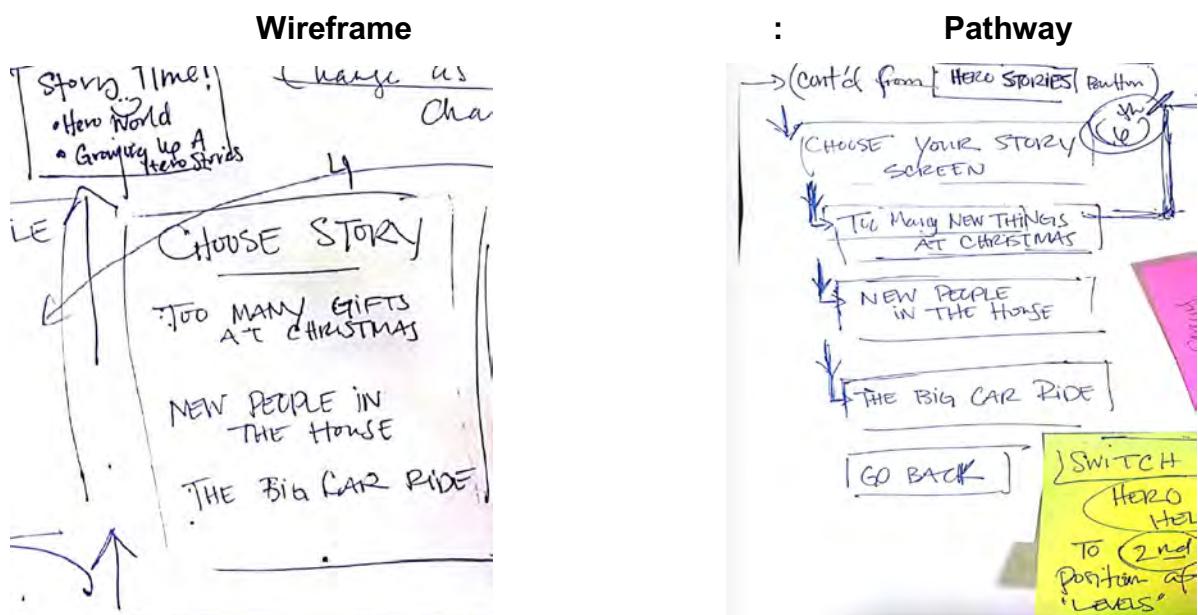
### The MVP

Publisher opportunity for  
mainstay children's brand



Growing Storyline Off-shoots with *Zelda*-esque options for older Y/A autistics. *\*\* This happened because of first user experience where she commented on why only parents used it.*

### \*\*\*WIREFRAME : PATHWAYS — DEVELOPMENT COMPARISON



# Your Own Hero!

## Future Iterations

- More Interactivity:
  - behaviour choices options
  - reward system option
    - (Parent can pick from options)
  - coinciding downloadable extras
    - (in-app purchase)
  - stop points with prompts for parents to discuss issues being seen
- Word Highlighting as child reads.
- Audio story reading
- Behaviour tracking
- School Storylines; Utilized in school

## BUSINESS CASE:

It was evident very early on, even on just a basic level, the overall lack of autistic materials available when compared to all that's available for everyday children. However, further investigation confirmed not only the need for "quality literature" for autistic children for self-esteem/inclusivity purposes, but also confirmed exactly how low autistic books were being publishing, with 64 books over **24-years** [1993-2017] and very few in other languages beyond English. It was also noted low levels of books for children 0-3 and 9-10, as well as skillset-focused books. (Ducarre, 2017) [See Appendix 3a-g.]

Further highlighting the rapidly growing need for materials were statistics indicating the astronomical, **119%** increase of autism over 10-years [2000-2010/USA], from 1-in-150 births to 1-in-58 births, and it now being labeled the fastest growing developmental

disability. (AutisticSociety, 2014) And despite research simplifying autism, saying how it's only 1% of the whole population, the financial ramifications indicate an expensive reality with it listing autistic-lifespan costs at \$2.4mn, and it costing up to \$66bn annually for child services in the US alone. (AutisticSociety, 2014) In review of these findings, there is a clearly defined need for more autistic-centric material from both a public need and literary innovation standpoint.

## SWOT ANALYSIS:

### **STRENGTHS**

- Fulfills a need for autistic-focused materials (digital & fiction & skills).
- Personalized
- Gives parents/children control of their day-to-day needs.
- App grows with child.

### **WEAKNESSES**

- Tech/Storyline development potentially cost-prohibitive.
- Distinct needs of autistics can't be met completely.
- Niche audience=lower purchasing power; limits publisher's interest to invest.

### **OPPORTUNITIES**

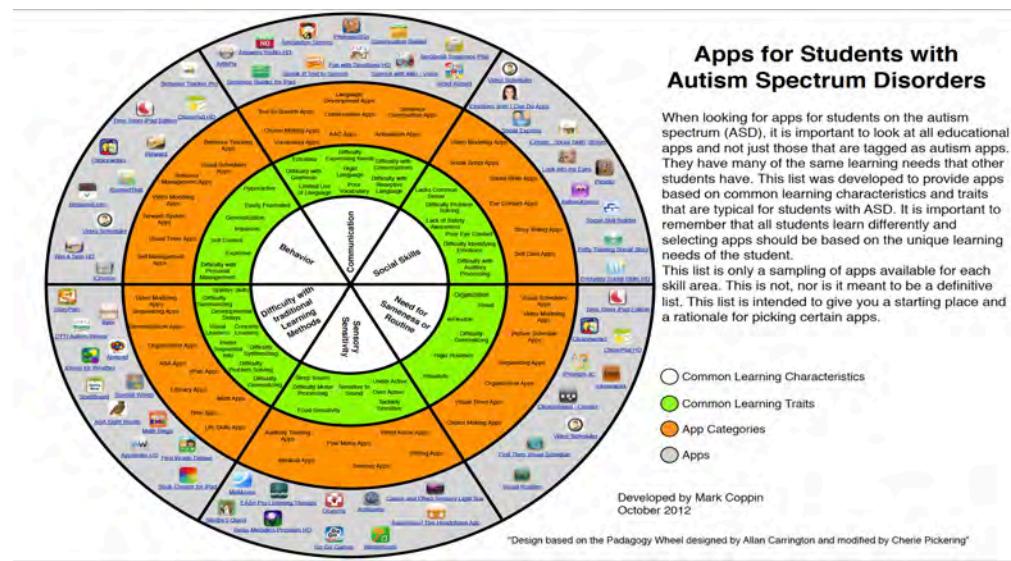
- Break barriers of innovation & disability literature.
- Publisher can be the first to tap into unexploited market.
- Extension of publisher literature brands.
- Extension of users & storylines.

### **THREATS**

- Tech advancements make app cost-prohibitive, or obsolete.
- Licensing of well-known animated animals. (\*\*depending on biz model used.)

## •COMPETITION

(Carrington, et al, 2012)



In review of the autistic literature between fiction/non-fiction and the digital apps available, there really isn't direct competition with Y.O.H.! because of its content being of a personalised/simulation format, blending fiction/non-fiction elements, in a digital format. As the app pedagogy indicates, there are 6 subject matters within the autistic non-fiction genre, but really only a handful of apps per subject, and none that blend fiction. See Appendix 1a-b. 1.)



- This is a paperback book, which is only competition in the way of it utilizing the "Superhero" concept and cape. The actual content of the book is just explaining different behaviours and not a true story.

2.)

The screenshot displays the Proloquo2Go app interface. At the top is a large, friendly owl icon. Below it, the app's name "Proloquo2Go" is followed by a "4+" rating indicator. Underneath the name, it says "Symbol-based AAC AssistiveWare". A "117 Ratings" badge is shown, along with a price of "£249.99" and a note about "Offers In-App Purchases". The main area shows four different communication boards:

- Research-based vocabularies for language development:** A grid of symbols related to daily life and objects.
- Room to grow with 23 pre-made grids sizes:** A grid where users can drag icons into boxes.
- Customizable grammar support:** A screen showing how symbols can be combined to form sentences.
- Create, modify, and move buttons with ease:** A screen showing a toolbar for editing message buttons.

#### Description

Proloquo2Go is an award-winning symbol-based communication app that gives a voice to those who cannot speak. Over 175,000 people already use this AAC app as a powerful tool for expressing themselves and increasing their communication skills and language development. Its innovative features let users, parents, teachers and therapists quickly personalize the app.

- This app is a form of competition due to its complexity and intricacies of content and that it teaches skillsets and can grow with the autistic child. However, its overall aesthetic is far from anything personalized, or anywhere close to having a fictional moment to it. Its price point is probably in line with what Your Own Hero! will be.

3.)

The screenshot shows the StoryMaker™ for Social Stories app. At the top is a green book icon. Below it, the app's name "StoryMaker™ for Social Stories" and developer "Handhold Adaptive, LLC" are displayed, along with a "\$39.99" price tag.

The interface includes three main sections:

- Stories:** A list of existing stories like "I Found Trevor's Lunch Money", "Keeping Our Computer Safe", "Learning About Favorite Topics", and "Learning About Raising My Hand".
- Academy:** A section titled "Welcome to the Social Stories Academy! Select a lesson to begin." It shows a thumbnail of Carol Gray and the "Social Stories" logo.
- Edit Story:** A detailed view of a story titled "Learning to Brush Teeth". It includes:
  - Words:** "I am learning about brushing my teeth." and "Brushing teeth is something many people do several times every day."
  - Pictures:** A small image of a toothbrush.
  - Voice Narration:** A recording button.
  - Text:** "Toothbrushes, toothpaste and water from a sink are things people use when brushing teeth." and "This means when I brush my teeth, my mouth might get wet and taste like mint. This is OK."

• This app utilizes a personalization factor of uploading pictures and audio recording capabilities, but its use is to teach daily routine skills and keeping on track. Again, not true competition due to its lack of fiction, and it really being a scrapbook diary of daily activities.

4.)



#### Description

Everyone loves to tell fun, engaging, and imaginative stories. Go ahead and make a social story or visual schedule for a child with autism or a slide show of holiday pictures for your friends - Pictello makes it a breeze to create and share! Whether you use the included natural-sounding Text to Speech voices, or record your own voice, Pictello is the perfect tool for visual storytelling.

Each page in a Pictello story consists of a photo or video and some text, which can be read aloud by a Text to Speech voice or your own recorded audio...

- This app utilizes a personalization factor of uploading pictures, audio recording capabilities, and the ability for the child to write a story based around the pics. Again, not true competition due to it not being specialized for autistic children specifically in form or function. Its lack of skillset/coping mechanism education and because it really is a scrapbook diary of daily activities, though creatively done, also make it not direct competition.

## •REVENUE MODELS

Research has shown that autistic-specific materials are more in-depth and intricate, creating a price-point that is higher than apps, which customers are willing to pay. (Ducarre, 2017). Seeing what competitors are charging, 3 methods are most common:

- 1.) Flat fee [\$/£20-249]
- 2.) Subscription: monthly/yearly [19.99+mthly/150.+yrly]
- 3.) Free OR Flat Fee & in-app purchases. [1.99 and up]

For Y.O.H., it seems wisest to create a subscription scenario so as to create a quicker ROI and cash-flow in general. But my initial thought was having a large flat-fee and have any

new stories be sold similar to how video games are sold. I had also considered that if my partnership was with a conglomerate (e.g. Disney), the app could become free for the purpose of “Value-Add” and its use for direct-consumer relations, community building, and brand connection. (Faherty, 2012)

## •BUSINESS MODEL / MARKET POSITIONING

My initial desire with *Your Own Hero!* app was to somehow bring it to market myself. However, the technological logistics alone were definitely not something I could tackle on my own no matter how emotionally connected I was to the concept and innovation; and there were the long-term financial needs to consider that went beyond my means. On a larger scale, as much as I felt *Your Own Hero!* was demonstrating the momentum of what Leibtag lists in *The Digital Crown* as “Rule #1: Design for them, build for them, and sell to them”, there was the “external focus” aspect connected to this rule that I was lacking. (2013, pp.35) Although I might understand the autistic community and market on a large extent to where my “Workable Knowledge” of “rigorous, relevant data” allow me to evolve into a “Workable Wondering” phase where I am utilizing that knowledge into state of innovation (Zaltman and Zaltman, pp.14), I’m certainly not a known entity within the autistic community and don’t know the publishing industry enough as it is connected to the autistic community in order to make the significant impact needed for this app to rightfully succeed and do it justice.

With that, I looked at 2 business model options that would bring benefits, as well as fulfill the “external focus” criteria needed for an optimal business schematic that would ensure the likelihood of financial and product longevity. (Leibtag, 2013):

- Sponsorship-Partnership:

As described in Business Case Studies (Undated), a sponsorship-partnership with an established entity related to the chosen product has multi-fold benefits for both sides. In this case, I have considered partnering with the non-profit organisation The National Autistic Society, which is the most prominent entity within the UK autistic community. Beyond the benefits bullet-pointed, the downside to choosing this route is in the fact it isn't a full-blown publisher and outsourcing would have to happen for the many aspects needed for Y.O.H!, such as CMS technology, app design, writing, and potential negotiating licenses for any popular animal characters needed if we decide to go beyond natural looking animal avatars. This could be problematic in the way of license cost, or it might work out that publishers would want to "donate" the use of one of their characters out of goodwill and philanthropic purposes, which ultimately brings them what Thompson calls "Social Capital" and "Symbolic Capital" (2012, pp.6). Meaning their company becomes elevated socially with how they care about customers, which can turn to customer loyalty; and their company values are symbolically personified through the gesture, which can also lead to customer loyalty in terms of trusting a company over others.



- Financial Foundation [money; expertise; facilities]
  - Credibility
    - Symbolic Capital
    - Intellectual Capital
    - Social Capital
  - Target Audience [organized & tracked]
  - Mutual, cross-over Advertising
  - Built-in target B2B connections
- (Thompson, 2012, pp.6)



- Credibility
    - Symbolic Capital
    - Intellectual Capital
    - Social Capital
  - A "value-add" to NAS (Faherty, 2013)
  - Mutual, cross-over advertising
- ]
- (Thompson, 2012, pp.6)

- Joint-Venture Partnership:

When considering this business model, beyond recognizing the financial and international benefits (Kokemuller, Undated) that come with a joint-venture partnership, there are 2 avenues to consider:

### MAIN STREAM PUBLISHER



A mainstream publisher, with a literary stable of book characters to fully flesh out the storyline opportunities and exploit brand extension, is one possibility. However, orchestrating the technology needs is a potential problem.

### “VERTICALLY INTEGRATED” CORPORATION



A “vertically-integrated” corporation (Gilbert, 2015) that has the publishing/entertainment/technology infrastructure already in place to handle the digital innovations, as well as the book characters needed, is another way to go. The truly best option does seem to be the Disney because the company can do every aspect of *Your Own Hero!*, but I could see the autistic-focus losing out with the overly corporate world of Disney potentially only working towards financial gains.

In overview, combining forces between both the NAS and either publishing option would really create the most synergistic momentum and create a viable product on all fronts. The bigger thing for me to really think about is the probability of me being pushed out of the product altogether due to not undertaking things myself and the mightier powers that be.

### CONCLUSION:

It is clear that *Your Own Hero!* is viable on many levels. Its “Value Quotient”, as defined by Silverstein in *The Innovator’s Toolkit*, is high due to it filling the “gap in the market” (2012, pp.27) of autistic literature in both its focused storylines, where it intertwines fiction and non-fiction elements; and its digital interface, where it answers the “technology push” (Tidd and

Bessant, pp.391) of personalized and interactive reading material to match its unique end-users. The viability in terms of the overall target market, although still considered niche, is also notable due to statistics indicating autism is an increasing growing steadily year-on-year 6-15% (Autism Society-US), and the coinciding need for more supportive materials that will bridge the gap between timely and affordable therapy options for families. This of course then parallels with the viability within a publishing house and the brand extension potential for any of the possible animal/character tie-ins.

Public need, innovations, and overall viability aside, *Your Own Hero!* faces several hurdles that may prove too difficult to overcome in order to bring to market. One hurdle is the complexity of the content being orchestrated within any type of simulation/personalisation app. Due to the wide range of autistic “spectrum” symptoms/triggers that will *then* need to interconnect within a given storyline *and* personalised character options, an advanced level of technology and CMS will certainly be required to handle the intricacies of these movable storyline and animation variables. The idea of balancing “flexibility and complexity” in the design model is prominent since there is truth in the phrase “flexibility comes at a price” and the maintenance that will require. (Wachter-Boettcher, 2012, pp.56) These factors considered, there is a potential for the technology to be just too cost-prohibitive to move forward. Or, the tech aspect may be on track for the most part, but the autistic spectrum is indeed too complex to capture and personalise for the simulation effect —defeating the whole purpose of the app altogether and cutting the target market.

The other hurdle to consider, and probably the most important, is the business model to adopt that is best for a RoI, as well as product longevity. Dovetailed to that aspect is the licensing of any of the characters utilized in *Your Own Hero!* if it is not possible to partner

with a mainstream publisher. This decision alone could make or break the outcome of the app altogether in that having a company such as Disney step in would literally solve all of the app's potential limitations, and fulfill the 8 "best criteria of success" as indicated by Tidd and Bessant (2009, pp.396): "product advantage; market knowledge; clear product definition; risk assessment; project organization; project resources; proficiency of execution; top management support."

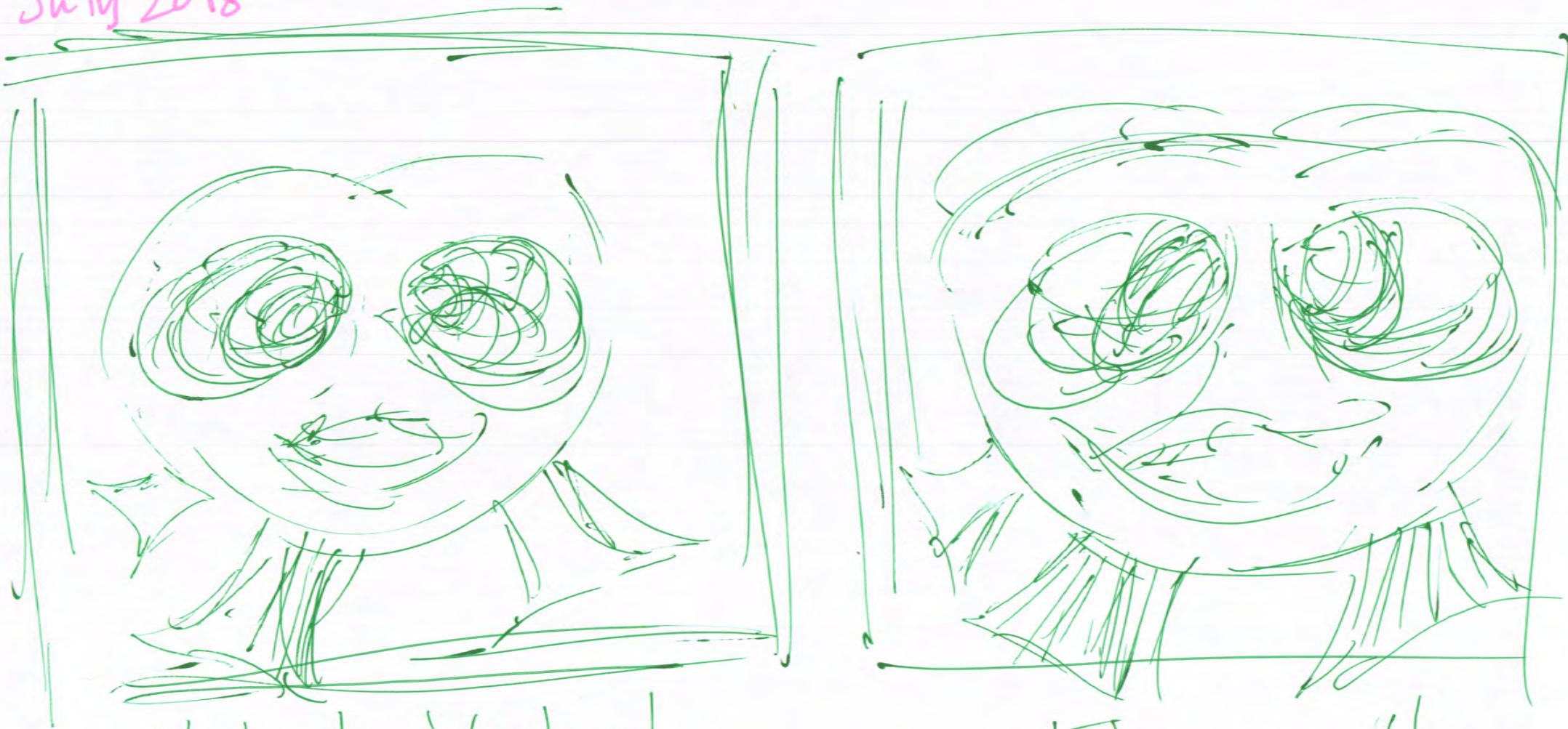
All things considered, *Your Own Hero!* does need more research in order to fine-tune the actual simulation/personalisation aspects, as well as hammer out any logistical glitches on the technology/financial front. However, that said, the innovation this app presents is something that should move forward whether it happens with *Your Own Hero!* or not, because it provides a needed publishing model that provides a service to the autistic community enabling a growth in social skills and integration, as well as giving the gift of immersive storytelling.

**4:2 *Your Own Hero!* 1<sup>st</sup> person narrative sketch out of an interactive storyline variation with child and animal avatar option chosen, but no cape.**

1st person narrative version: explains different parts to Xmas

2nd Draft. (Explains Xmas; - no cape) Push button/  
interactive!

July 2018



Yoo-hoo! Yoo-hoo!

Evelyn!

Evelyn!

2.

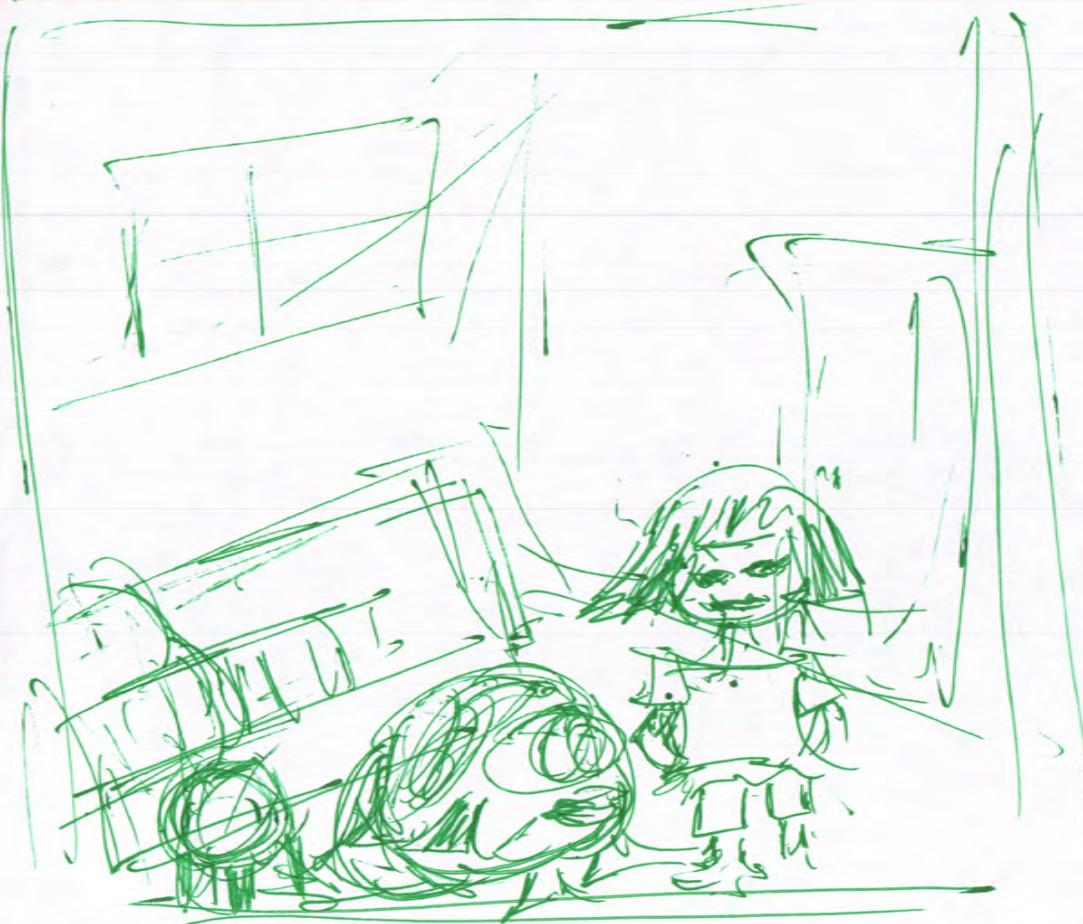


YES, I'm here!



Christmas  
is  
Coming!

Bedroom or blank/white setting <sup>(too save)</sup>  
~~for~~

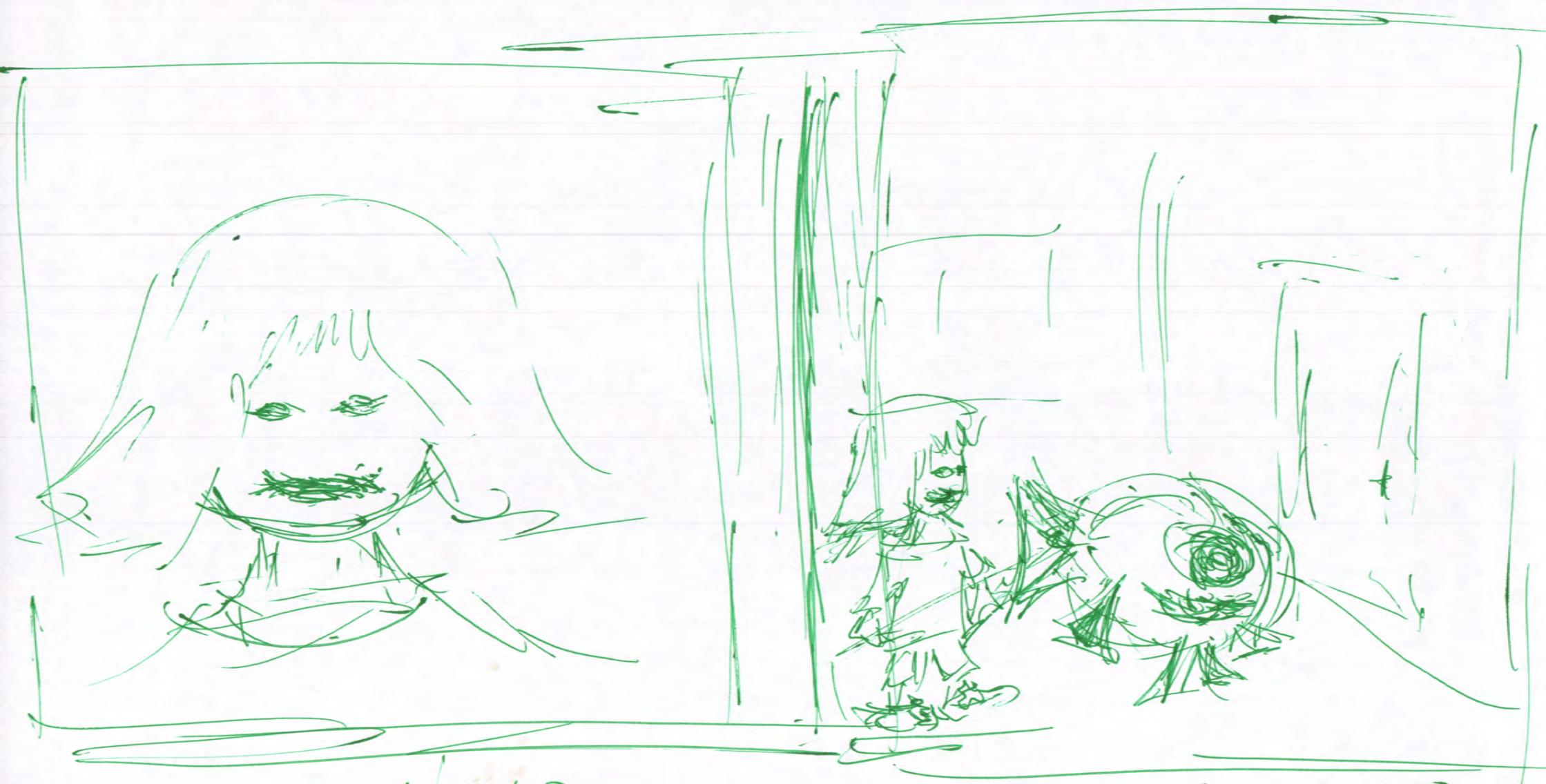


— WHAT : IS Christmas?



3.  
Christmas is a time  
WHERE MANY NEW THINGS  
HAPPEN ALL AROUND  
you.

4.



... Like What??

~~THERE ARE~~ presents,  
~~and a Christmas tree,~~  
~~and decorations~~

(Fun 'ping' sound effect)  
When pushed

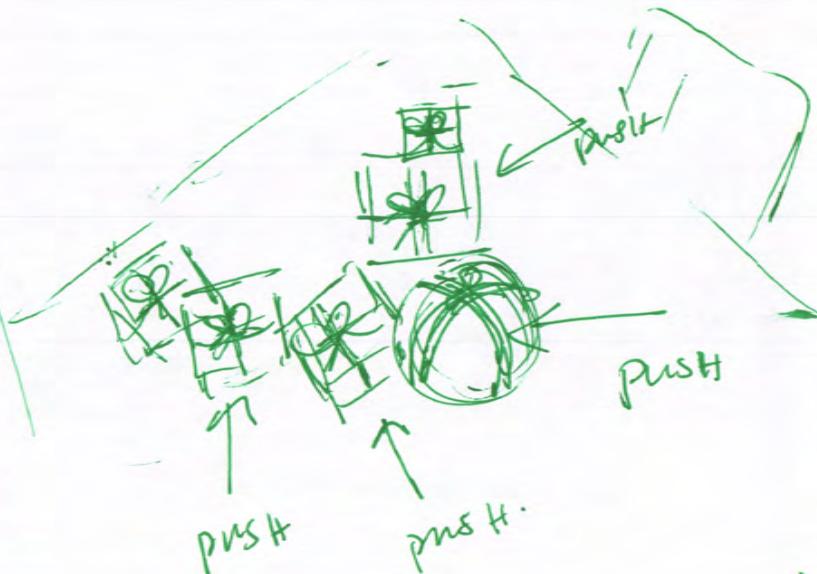
There are...



Push on button

Different fun bings,  
pings & boings for  
each present 5.

BUT your presents are  
wrapped up in pretty  
paper for you to unwrap!



Presents are toys and  
clothing for you and  
Ben and Mama and  
Mummy! BUT

WHEN EACH GIFT IS PUSHED A CLOSE UP occurs.

fun 'boing'  
sound when present is  
pushed

(ZOOM IN)



This present is a...

6.  
the sound of  
a paper being ripped  
(a present being opened)



BALL!  
FOR ~~you and Ben~~  
~~to play with!~~

1.

— Happy music overlaid — with fun sound effects



THERE ~~IS~~ A Tree !



For you and BEN  
to play with !

Push ball to get to back to front page... until \* it is final gift and links to next song strand.  
Push button

FESTIVE SOUND

when pushed

festive jungle

bell music overlay  
over the action

8.

Push Tree

Push tree

Push tree

MAMA

and

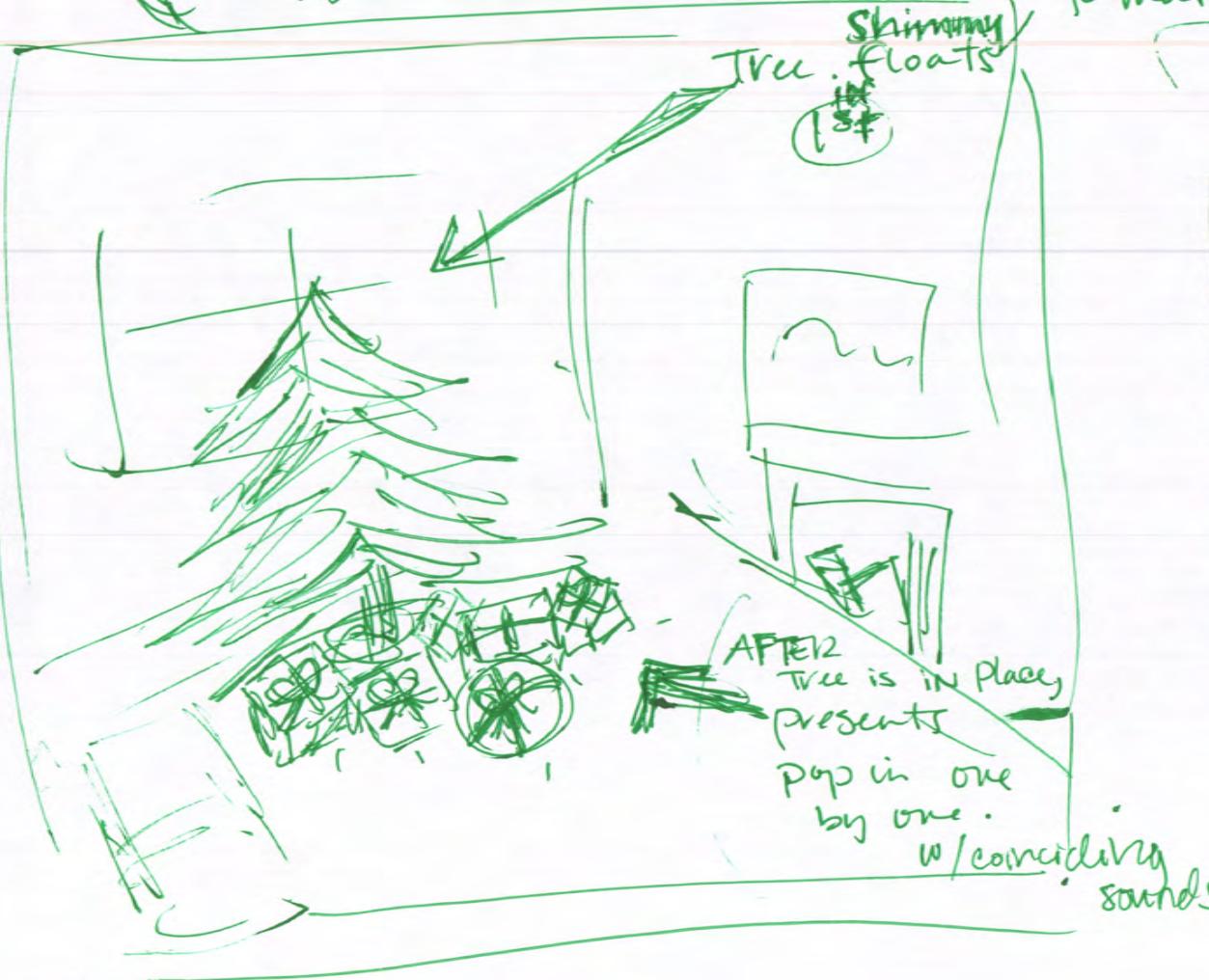
MUMMY  
are WHO

put

the

tree in the Living room  
for you and Ben to see.

(jingle sound for tree shimmy into place)  
Boings, pongs, pings, etc. sound effects per gift  
to match.



Festive sound effect: light  
PUSH. q.

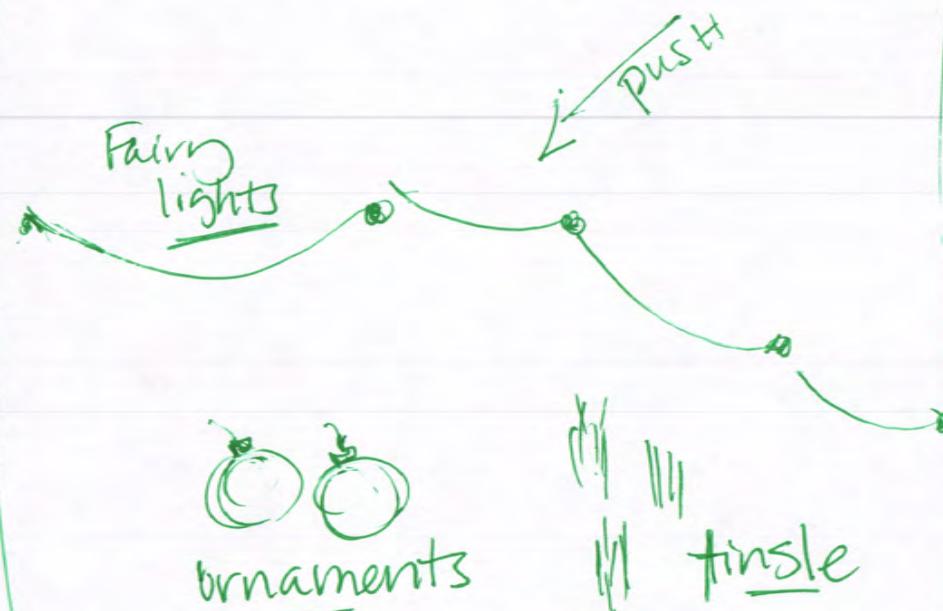
And there are . . .



PUSH ANY OF THE DECORATIONS  
And light chimes / tubular bowls /  
water chimes [Sound effects] →

10.

NEW THINGS FOR:



Mummy helps  
with fairy lights.

\* Any of the decorations pushed will lead to the same next screen where fairy lights start of the decorations

(Sound effects continue per decoration)

11. A



Mama will help you  
and Ben put all the  
sparkly ornaments on  
the tree!

And Mummy will  
help with the  
final touches of  
tinsle.

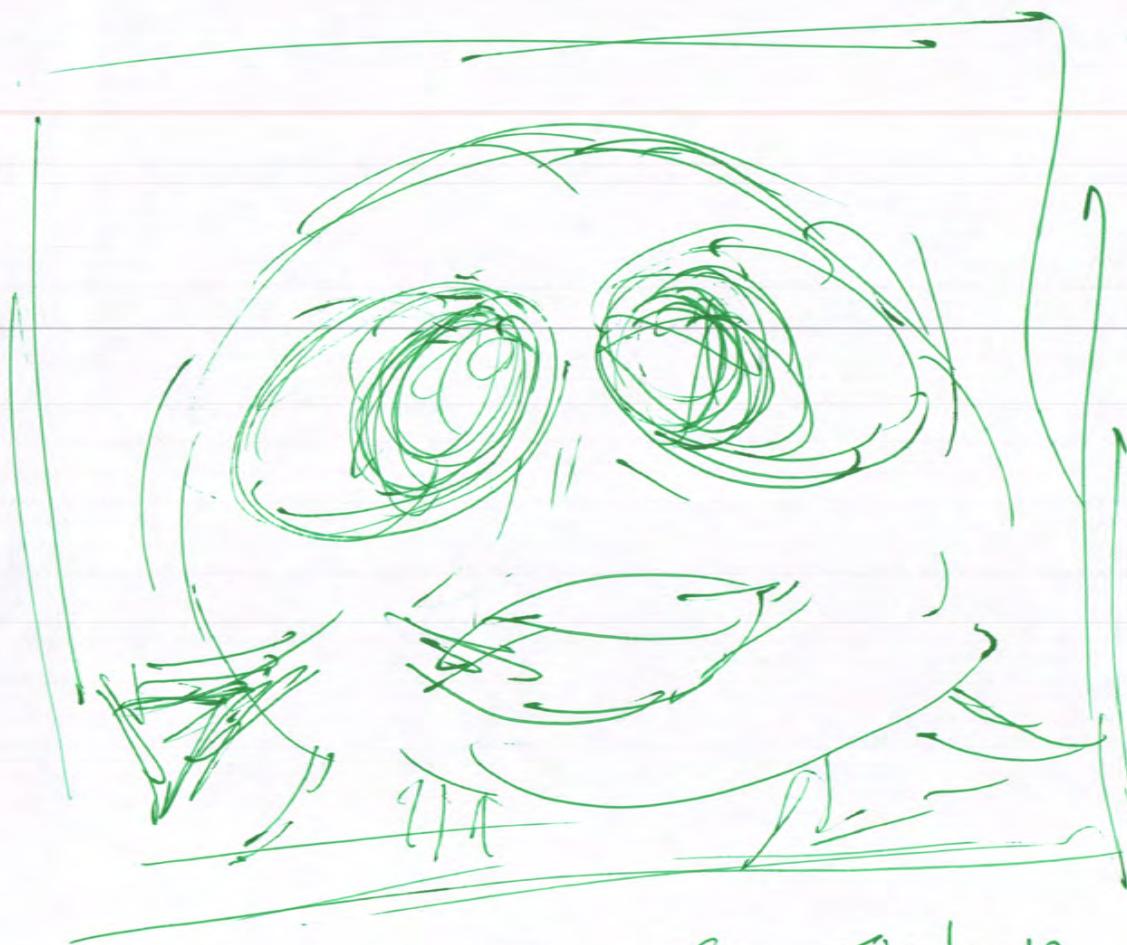
From pushing Evelyn & Ben characters  
Sound effect of sparkler noise  
(overlaid w/ Evelyn action)



Evelyn



Ben



So as you see Evelyn,  
Christmas time means  
many new things  
happening all around you.



And the living you  
see every day  
may surprise you  
by not looking  
the same as  
you remember it to be.



... so it can become  
a sparkling room  
of Christmas cheer.

(sound effects continue)  
for pop-ins. gifts



And nothing to  
fear.

## 4:3 APP SPECS

# YOUR OWN HERO!

## APP SPECS

### **PROGRAMMER/CODER NEEDS:**

#### **Initial navigation grid / Tech CSM :**

- basic app ? OR cloud platform ?
- password, story and profile standardised
- Tech updates/ maintenance

#### **Infrastructure for change-out of:**

- **Storylines**

- With Family

- With Avatar

- With Individual/Cape options

- With rewards

- **Simulation / cartoonised-animation**

- People

- Rooms

- Severity Levels

- Various spectrum “presentations”

- “Reward” element

- Name(s) Integration into storyline

**Audio Overlay**

**Sound effects inserted**

**Parent's audio sync**

**Accessibility Requirements**

**Foreign Language capabilities**

**Colour adjustments**

**Highlighting of words**

**\*\*Once infrastructure is in place cost will be offset**

**\*\*New tech/updates are only potential mainframe costs**

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