

The Effect of Fantasy Context on Emotion Word Learning

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Abstract

Emotional competency in childhood is related to many desirable outcomes, such as social and academic achievement. One facet of emotional competency is vocabulary, measured through understanding of knowledge corresponding to emotion words (receptive ability) and using emotion words in proper context (productive ability). Greater vocabulary supports children in identifying and regulating emotions. Much of the research on teaching emotions focuses on storybook interventions that are often fantastical in nature. Studies have compared fantasy and reality conditions on word acquisition, but no studies have focused on emotional vocabulary specifically. Prior research suggests that fantasy may provide an appropriate context for kids to learn and practice emotion regulatory processes. Understanding how to best teach emotion concepts will lead to more effective intervention strategies. The current study provides a comparison in emotional word acquisition between fantastical versus realistic contexts for children ages 4-6 (N = 51). Using three measures, a facial receptive, a situational receptive, and a productive, the study assessed whether condition influenced performance. The study found no condition differences for the facial receptive and productive measures. However, there was an effect of condition for the situational receptive, which was specific to the discouraged story. The study also assessed whether different measures of fantasy orientation influenced scores and found no effect for the Childhood Imagination Questionnaire (Gilpin et al., 2017) or the presence of an imaginary companion. Implications for each of these findings are discussed.

Emotional socialization occurs in both home and educational contexts and yields a multitude of beneficial outcomes for children. The primary caretakers' role in emotion socialization is strong (Warren & Stifter, 2008), but teachers should also encourage and facilitate emotion learning. Traditionally, schools have neglected social-emotional learning in favor of academic learning. However, research now supports a central role of emotional competency in social, behavioral, and educational outcomes (Garner & Waajid, 2012). Saarni (1999) refers to emotional competence as the ability to manipulate an emotional encounter for one's benefit. Emotional knowledge (and its accompanying vocabulary) is both a pre-requisite and a key component of emotional competency (Joseph & Strain, 2003). Thus, many empirically supported interventions have been developed to improve various aspects of emotional functioning.

An important aspect of interventions is the ability to engage children effectively. One way to do this is through fiction, which may help children's motivation and excitement about learning (Hopkins & Weisberg, 2017). The superiority of fantastical fiction vs. realistic fiction in learning is debated: on one hand, children may lack the ability to generalize information from fantasy contexts to real life (Hopkins & Weisberg, 2017). On the other, fantasy may excite and motivate children, thus facilitating better learning (Parker & Lepper, 1992). Additionally, Greater tendency towards playing fantastically, known as the fantasy-orientation trait, has been linked to better emotional outcomes (Gilpin et al., 2015). The author suggests that this is a result of children naturally exploring emotion in fantasy contexts, such as with an imaginary friend (Gilpin et al., 2015). So far, no studies have focused specifically on emotion word acquisition in fantastical vs. realistic contexts. The purpose of this study is to assess the effect of a fantastical vs. realistic narrative context in facilitating learning of a new emotional vocabulary word in

preschoolers. The following review focuses on emotional correlates, theory, and interventions, as well as the role fantasy may play in emotional and learning.

Outcomes of Emotional Competency

Greater emotional competency (EC) during childhood is related to success in other realms. Definitions of EC have varied slightly across studies. For instance, Denham et al. (2003) operationalized EC as emotional knowledge, expression, and regulation, while Garner and Estep (2001) measured it as situation knowledge, explanations for emotion, positive expression, and emotional intensity. Despite such differences, aspects of EC have been repeatedly linked to better social competency (Denham et al., 2012; Izard et al., 2001), including popularity among peers (Sette et al., 2017; Garner & Estep, 2001), socially appropriate behavior (Sette et al., 2017), and pro-sociality (Denham, 1986; Garner & Estep, 2001). Accurately expressing and interpreting facial emotions may be a particularly relevant aspect of EC in terms of social competence (Custrini & Feldman, 1989). Additionally, EC relates to cognitive ability (Garner & Waajid, 2012), academic competence (Izard et al., 2001), and other measures of early school success (Denham et al., 2012). Denham et al. (2012) found that emotional knowledge was related to the ability to self-regulate in the midst of emotional encounters. Emotional knowledge depends on emotional vocabulary to aid with labeling and categorization (Joseph & Strain, 2003).

Emotional vocabulary acts as a prerequisite for mechanisms that support healthy regulation and coping mechanisms. One example of such a mechanism is emotion differentiation, or the ability to identify and label complex emotions within oneself (Kashdan et al., 2015). Emotion differentiation supports emotional regulation, especially in high intensity negative experiences (Barrett et al., 2001), by categorizing situations with specific information

that helps individuals understand the antecedents of emotion better (Kashdan et al., 2015). Emotion differentiation tends to be low in people with disorders often associated with lower well-being and internalizing tendencies, such as Autism Spectrum Disorder (Erbas et al., 2013), and Major Depressive Disorder (Demiralp et al., 2012). In studies assessing coping skills, emotion differentiation negatively correlated with aggression in a sample of participants high in anger (Pond et al., 2012) and predicted lower levels of binge drinking as a response to emotional experiences (Kashdan et al., 2010). This supports the idea that emotion differentiation is itself a valuable coping strategy and lessens one's desire for other, unhealthy mechanisms (such as over-drinking). Attaining and strengthening emotion skills such as differentiation is a crucial yet highly variable aspect of a child's development.

Emotion Theory

Children's conceptual development of emotion has long interested researchers, with much of the literature focusing on the role of parents in this process. Parental socialization and expression of emotion strongly predicts emotion understanding in children (Denham, 1994). Specific dimensions of parenting, such as responsiveness and demandingness, influence children's emotional intelligence by either providing a nurturing environment for emotion or limiting emotional expression (Alegre, 2011). Additional parental variables that influence emotional self-awareness include the degree of emotional talk (Warren & Stifter, 2008) and acknowledgement of emotion (Lambie & Lindberg 2016) between a parent and child.

Knowledge of emotion increases in a fairly linear fashion throughout development (Pons et al., 2004; Baron-Cohen, 2010). Based on the understanding that emotion knowledge develops with age, Pons et al. (2004) created a model of easy, intermediate, and difficult emotion skills for which the emotions included in each group emerge at roughly the same age. Easy skills included

recognition of facial expressions and understanding of reminders and external causes of emotion. Intermediate skills included understanding the impact of belief and desire on emotion, as well as conceptualizing other's ability to hide emotion. Lastly, difficult skills included understanding moral implications of emotion, regulation skills, and recognizing mixed emotion. Mixed emotion is well studied in the literature because it emerges relatively late compared to other components of emotion understanding and presents clear limitations in therapeutic settings (Peng et al., 1991). Language about emotional "feeling states" first appears in the 2nd year (Bretherton & Beeghly, 1982), increases with age, and has been mapped both through maternal reports (Ridgeway et al., 1985) and comprehension tests (Baron-Cohen et al., 2010).

Language is deeply related to the conceptualization and experience of emotion. Psychological constructionist theory posits that language actively creates the experience of emotion through transforming physiological affectual sensations into distinct conceptions of emotion (Lindquist, 2017). A meta-analysis conducted by Brooks et al. (2017) provided evidence for the constructionist view by demonstrating that embedding emotion words into tasks activated brain regions associated with retrieval of semantic knowledge. This suggests that access to words impacts the ability to make meaning of the experience of emotion (Brooks et al., 2017). One study on patients with semantic dementia provided more direct evidence; the patients were able to sort emotion expressions according to valence but not specific emotion (Lindquist et al., 2014). This evidence contradicts the view that basic emotions are innate and recognizable without socialization, since the patients were unable to distinguish between supposed basic emotions, such as anger and sadness. Instead, this study supports the idea that vocabulary knowledge shapes perception of emotion in others (Lindquist et al., 2014). In a developmental sample, children with language disorders were less able to identify emotion after controlling for

general cognitive ability, suggesting that emotion conceptualization relies on language ability (Griffiths et al., 2020). Vocabulary is therefore essential for opening avenues to understand and regulate emotions in a nuanced way (Shablack et al., 2020).

Emotional vocabulary plays a key role in understanding emotion. Joseph & Strain (2003) argued that without emotional vocabulary, accurately perceiving emotion in self and others is impossible. The use of greater emotional vocabulary in reference to peer emotional states correlates with peer likability, likely because it facilitates better social interactions (Fabes et al., 2001). The ability to label emotion in a specific way relies on the breadth of one's affective vocabulary. Beck et al. (2012) found that language and emotional competency were correlated with one another, suggesting that there is an ability that similarly underscores both mechanisms. In one study, children with language disorders were at risk for less accurate recognition of emotion; the authors argued that this risk can and should be targeted with emotional vocabulary interventions (Griffiths et al., 2020). Research on educational interventions is detailed in the following section.

Learning Intervention Strategies

Understanding the factors that influence learning assists the development of meaningful intervention strategies. Providing context around a word is instrumental in vocabulary acquisition. Nachtigäller (2013) found that narratives were advantageous for word learning in children over isolated sentences. This is likely because children use context clues from their environment to infer the meaning of newly encountered information (Cain et al., 2003), and more information helps the learner better grasp the concept. In one study, context around an event significantly informed interpretations of emotion, even when facial expressions contradicted the context (Kayyal et al., 2015). When participants were presented with clearly

negative facial expressions but told that the photographed person had just won the Olympics, participants consistently placed more emphasis on the context as telling of the emotion.

Additionally, Shablack et al. found that informative sentence structure and appropriate situational evidence both promote emotion word acquisition (2020). This evidence suggests that interventions should pay attention to context in promoting emotion understanding.

Although emotion skills may develop independently, it also appears that aspects of emotional competency can be taught. Emotional competency programs tend to target many skills and last weeks or even months. Emotional intelligence programs have been successful in promoting aspects of emotional competence (Ulutaş & Ömeroğlu, 2007; Pons et al., 2002; Pons et al., 2019). Programs have been able to train children to acknowledge mixed emotions by walking children through the various situational elements of an emotional experience (Peng et al., 1992; Bennett & Hiscock, 1994). The social-emotional curriculum RULER, for instance, was able to improve academic performance just by targeting emotional competency and literacy (Brackett et al., 2012). Interventions around emotion have shown that these skills can be taught. Therefore, more research should focus on the most efficient ways to conduct them.

Interventions specific to emotional vocabulary have also produced valuable changes in emotion understanding, using both receptive and productive measures to assess word learning (Marulis & Nueman, 2010). A receptive measure is how well a child can understand a spoken or written word, while a productive measure is the ability to define or use a word in context. A meta-analysis on emotional vocabulary interventions by Marulis & Nueman (2010) found a large effect size on post-test measures of learning, even when they were brief. The most successful interventions used explicit explanations of new words (Marulis & Nueman, 2010). Explicit definitions have been repeatedly shown to improve vocabulary learning in storybook learning

sessions (Penno et al., 2002; Wilkinson & Houston-Price, 2013). A review by Galligane and Han (2015) suggested storybooks as an appropriate context to learn new emotion vocabulary because they teach kids the ability to discuss a situation abstractly and outside of their personal perspective. Joseph & Strain (2003) pointed out that storybooks additionally provide children a chance to label facial expressions by emotion, suggesting that photo context can be especially relevant for emotion word learning. Indeed, in a study promoting social-emotional vocabulary, storybooks acted as a relevant and effective tool for learning vocabulary (Poventud et al., 2015). Storybooks may work well because they engage and motivate children towards learning; fantasy may play a role in enhancing this effect.

Fantasy and Emotion

Fantasy orientation, or one's preference for fantasy or reality, has been linked to emotional competency (Gilpin et al., 2015). This may be a result of fantasy-oriented children practicing emotion expression longer and with more intensity (Gilpin et al., 2015). Seja & Russ (1999) found that fantasy play is more relevant for learning about other's emotions than one's own emotions, suggesting that the mechanism linking the two involves affective perspective taking. One aspect of fantasy orientation is the ability to pretend play. In a set of studies, pretend play ability was related to theory of mind, or the ability to understand that others have different perspectives than oneself (Taylor & Carlson, 1997). In turn, theory of mind abilities predicted emotion understanding three years later (Taylor et al., 2004). One study found that pretend play is additionally valuable for emotional regulatory ability even after controlling for verbal ability (Hoffman & Russ, 2012). One specific component of pretend play is imaginary friends. Around one in every four children has a form of an imaginary friend (Dasí et al., 2014), yet they often carry a stigma of social ineptitude (Harter & Chao, 1992) or even psychosis (Dasí et al., 2014).

Recently, however, imaginary friends have also been linked to measures of emotion understanding (Dasí et al., 2014). These findings have relevant implications for fantasy context supporting the development of emotion understanding and regulatory skills.

Fantasy Learning

The literature regarding learning is highly inconclusive about the superiority of fantasy versus reality contexts for learning, even on specific types of learning like word acquisition. In review, Strouse et al. (2018) suggest that fantastical context may restrict children's ability to transfer learned material to real life but that this hinderance depends mostly on individual development of reasoning. This difficulty in discernment and application of media to reality is known as the "reader's dilemma" (Hopkins & Weisberg, 2017). Children often make mistakes in rejecting information as not real, especially when it is presented within fantasy context (Woolley & Ghossainy, 2013). Their apparent skepticism may constrict the role of fantasy in teaching children new concepts. However, judgement of the reality status of emotional encounters may depend more on the valence of the emotion than on the actual ability for the encounter to happen (Carrick & Quas, 2006). Valence can affect recall of words because word processing differs according to valence (Tse & Altaribba, 2009). For example, children may prefer to believe that happy events can occur over scary events because it seems to protect them from having to confront the existence of negative-valence emotions (Carrick & Quas, 2006). Thus, children may be able to learn emotion equally well in fantastical contexts. Additionally, fantasy can enhance motivation for learning by making the material interesting (Parker & Lepper, 1992). These changes in motivation may lead to better performance on measurement of retention as well as in the ability to apply the learned material (Parker & Lepper, 1992). One explanation for the conflicting research around the role of fantasy is that the type and amount of fantasy has a large

impact on learning, yet various forms are often conflated in the literature (Hopkins and Weisberg, 2017).

Studies on word learning and fantasy are similarly conflicted. Strouse et al. (2018) hypothesized that realistic contexts would better support the ability to transfer a word to real life situations. Yet, a study by Weisberg, et al. (2015) found that fantasy context supported children's receptive ability as well as the realistic context did. Furthermore, children in the fantasy condition produced better productive measures of vocabulary understanding (Weisberg et al., 2015). The authors suggested that fantasy engages a deeper cognitive process than realistic contexts, making it useful for creativity-oriented productive ability (Weisberg et al., 2015). So far, no study has examined whether learning new emotion words differs in fantastical versus realistic fiction contexts.

Conclusions

Emotional competency is a set of skills related to better emotion understanding. These skills are associated with better social and academic outcomes (Denham et al, 2001; Izard et al., 2001). Thus, better emotional competency should be pursued as a desirable learning outcome. Emotional vocabulary aids the development of emotional competency through helping make meaning of emotion related sensations (Lindquist, 2017). Interpreting sensations by labeling them is the first step towards emotion regulation (Kashdan et al., 2015). Emotional competency can be improved through intervention (Pons et al., 2002). Incorporating previous research on intervention efficacy can improve future strategies. Tapping into children's tendency to practice emotion via fantasy play may be an appropriate and cohesive teaching strategy (Gilpin et al., 2015; Seja & Russ, 2019), yet no studies have used fantasy to teach emotion. The purpose of this study is to examine the effect of a fantastical context on children's emotion word learning. Based

on the review, fantastical context may act as a preferable means of teaching children emotion words.

Methods

Study Design Overview

This study compared two storybook contexts (fantasy and reality) on their effectiveness in teaching children new emotional vocabulary. In both conditions participants were shown the same two stories, one that portrayed a positive-valence emotion (carefree) and another portraying a negative-valence emotion (discouraged). The emotion words in the stories were chosen to be novel to the children, but not advanced enough to present difficulties in learning. When reading the stories, an explicit definition of the emotion was incorporated to enhance understanding of the word. Following each story, the child was asked to complete two measures of word understanding. In the receptive measure, the participant was asked to identify which face (out of four) corresponds best to the new word. This measure was modeled on the Peabody Picture Test (Dunn & Dunn, 2007). The productive measure was modeled on the New Word Definition Test Modified, where participants are prompted to tell the researcher all they know about a word (Weisberg et al., 2015). Fantasy orientation was assessed after the study through a parent report form developed by Gilpin et al. (2017); the participants was also asked about having an imaginary friend at the beginning of the study. For exploratory purposes, participants were asked how much they enjoyed the story and if they thought the events could happen in real life (reality status judgement). I hypothesized that A) context will have no effect on receptive measures of emotion word learning, B) fantasy context will improve scores on the productive measures of emotion word learning, and C) greater fantasy orientation will be associated with better learning on all measures in the fantasy condition.

Participants**Table 1****Demographic Characteristics**

Demographic	Condition	
	Fantasy	Reality
N	24	27
Age		
4-year-old	7	8
5-year-old	7	11
6-year-old	6	8
Gender		
Male	11	11
Female	13	16
Race		
White	16	15
Black or African-American	2	3
Asian	1	2
Other	4	7
N/A	1	0
Ethnicity		
Hispanic/Latinx	19	23
Non-Hispanic/Latinx	4	3
N/A	1	1
Parent 1 Education		
High school diploma	0	0
Some college	0	2
Associate's degree	2	3
Bachelor's or 4-year degree	8	5
Graduate/professional degree	13	17
N/A	1	0
IC presence		
Had an IC	17	23
Didn't have an IC	7	3
N/A	0	1

Note. Data are frequencies. IC refers to Imaginary Companion.

Children were divided by age and then randomly assigned to either the fantasy or reality condition. Participants were recruited through the Children's Research Center database based on

the age criteria. Children with a diagnosed language disorder were excluded from recruitment. Children who produced an adequate definition of at least one of the target words were still run in the study (to ensure that they felt included), but their data was excluded from analysis. There were four children excluded from all analyses due to providing a correct definition. Parents of participants virtually signed an informed consent form. The parents completed demographics concerning the child's race and ethnicity, as well as both parent's education levels. Families were entered into a drawing for a \$25 gift card as compensation for their participation.

Materials

Word Selection

The emotion words, carefree and discouraged, were selected by the following process of elimination. Words understood by 0% of children ages 4-6 were initially selected based on an emotion word comprehension survey (Baron-Cohen et al., 2010). Next, the selection was narrowed by eliminating words that the study found were understood by less than 10% of children ages 7-8. This was intended to ensure the words would not be too difficult for the target age range to understand. To further narrow the selection, words with a second meaning were eliminated (e.g. discomfort, which also describes a physical sensation). The final words were chosen based on their proximity to easy-to-understand emotion concepts, such as happy, sad, angry, and fearful. Two uniquely valenced words (carefree and discouraged) were chosen to assess whether valence influences learning.

Storybooks

A total of four storybooks were created in Microsoft Word (Appendix A). The books contained manipulations on the words they taught and the use of fantasy. Two books, a fantasy and reality version, were created with the same story about a girl who feels carefree. Similarly,

two books, a fantasy and reality version, were created with a story about a boy who feel discouraged. The emotions were introduced through a main character's perspective in a social situation and were supplemented with an explicit definition upon first mention.

Measures

In order to investigate the link between fantasy context, fantasy orientation, and learning, the study included four previously established measures and one measure developed specifically for the study. Previously established measures were modified to best fit this study. Two measures correspond to fantasy orientation, and three correspond to word learning.

Fantasy Orientation

To measure fantasy orientation, this study utilized a slightly modified version of the Childhood Imagination Questionnaire (CIQ) (Gilpin et al., 2017) to assess parents' knowledge of their child's preference towards fantasy or reality. The original CIQ is a 14-item parent or teacher report questionnaire on a five-point Likert scale (see Appendix B). The CIQ was modified by omitting four questions. Reasons for excluding questions were repetitiveness, only pertaining to teacher observations, and overlapping completely with the second measure of fantasy orientation (IC presence). One example of a question is "how often does this child involve imaginary (invisible) props in their play?" (Gilpin et al., 2017). Answers are scored on a five-point Likert scale. Possible answers include never (1), rarely (2), occasionally (3), frequently (4), and almost every day (5). There are three subscales often used for scoring the CIQ: sociodramatic play, imagination companions and impersonation, and imaginary play. For the purposes of this study, participants were assigned one score by adding points across all domains of fantasy orientation. There are currently no reliability or validity scores available for this measure.

Presence of Imaginary Companion

To assess the presence of an imaginary companion (IC) in a child's life, a child self-report measure adapted from Taylor et al. (1993) was used. Since some parents may not be aware of their child's IC, this measure was included as a separate indicator of fantasy orientation. The measure utilized a short script to ask the child about their IC:

Now I am going to ask you some questions about friends, OK? Some friends are real like the kids who live on your street, the ones you play with, or are in your class. And some friends are pretend friends. Pretend friends are ones that are make believe, that you pretend are real. Do you have a pretend friend?

If children answer yes, they were asked "what is your friend's name?" and "what does your friend look like?" and "how often do you play with your friend?". To make sure the IC isn't a friend from real life, this information was confirmed with parents at the end of the study. If the description clearly matched a real friend, the child was not considered to have an IC. This measure is coded as binary – the participant will be given a 1 for having an IC and a 0 for not having an IC. There are currently no reliability or validity scores available for this measure.

Facial Receptive Measure

To assess receptive ability, or the ability to understand a word being presented, a measure modeled after the Peabody Picture Vocabulary Test (PPVT) was used. The PPVT is a commonly used measure of general receptive vocabulary with excellent test-retest reliability (.92-.96) and internal consistency (.94) (Dunn & Dunn, 2007). The adaptation of the PPVT used in this study is akin to an emotional adaptation used by Declercq et al. (2019), which uses facial expressions to depict emotion. Though cartoon faces (Pons et al., 2004) have also been used in assessing

receptive emotional understanding in children, this study uses real child faces because of their greater social relevance (Rosset et al., 2018). The images were taken from the Developmental Emotional Faces Stimulus Set, which has high internal validity (.86) (Meuwissen et al., 2017). The set of faces differed by word, but both sets correspond to angry, fearful, happy, and sad emotions (see Appendix C). Children were asked to indicate which face corresponds to the target words. The correct response for “carefree” is the happy face, and the correct response for “discouraged” is the sad face. The correct response was coded as a 1, and incorrect answers were coded as a 0. This task is referred to as the facial receptive.

Situational Receptive Measure

A second receptive measure, the situational receptive (see Appendix D), was added after observing a potential ceiling effect in the pilot data for the previously described facial receptive task. This task was therefore created to capture greater variance in participant’s abilities to receptively recognize emotion. To avoid confusion, this task will be referred to as the while the former will be referred to as the facial receptive task. For each story, the children were presented with four scenarios and asked to identify if the scenario would elicit the emotion that the story was about. The questions were prefaced with this script:

Now, I am going to tell you four things that happened to a kid named Sam/Riley. Some of them would make Sam/Riley feel carefree/discouraged, and some wouldn’t. After I read each one, you can tell me if you think it would make Sam feel carefree/discouraged or not.

An example of a scenario presented for carefree was “Sam and his friend wanted to play with the same toy. They fought over it for a minute but he let his friend have it.” An example of a scenario presented for discouraged was: “Riley is tired from playing, so she really wants to take

a nap.” For each set, there was one scenario where the correct answer was yes, and for the other three the correct answer was no. Correct answers were coded as a 1, and incorrect answers were coded as a 0.

Productive Measure

To assess productive ability, or one’s ability to use a word correctly, an adaptation of the New Word Definition Test-Modified (NWDT-M) was used (Weisberg et al., 2015). This measure currently has no reliability or validity scores available. The goal of the NWDT-M is to elicit all information a child has about a word. Since Weisberg et al. (2015) used the NWDT-M to inquire about tangible objects, the questions used in this study were modified to best elicit emotional information. Questions asked during this task included “what does it mean to feel discouraged/carefree?”, “can you tell me about a time when someone might feel discouraged/carefree?”, and “can you tell me anything else about that? Or could you tell me about another time when someone might feel discouraged/carefree?” as a follow up to the second question. These questions were chosen to uncover general and situational knowledge. Children were primed to give their best guess instead of answering “I don’t know”. Each question was worth one point. The points were totaled for a continuous score up to 3. Information units include synonyms or similar emotions, physiological manifestations, situations that might cause the emotion, or responses to the emotion. Correct answers included any answer that provided any component of the definition, or any synonym, or a negative of an antonym (e.g. “not worried” for carefree). Any word that was used in the story to describe the emotion was also counted as correct.

Exploratory Variables

Two extra questions were included in the interview for exploratory purposes. Specific intentions for these variables are detailed in the statistical analysis section. To assess reality status judgement for each of the stories, participants were asked “do you think what happened in this story could happen in real life?” and given the answer choices of yes, no, or maybe. To assess level of liking for each of the stories, participants were asked “did you like this story?”. If a participant answered yes, they were asked the follow up question of “how much did you like this story?” and given the answer choices “a little”, “a medium amount”, or “a lot”.

Procedures

The parent filled out the consent form for their child ahead of time. The study took place over Zoom. The parents were able to observe the study if they chose. Each parent filled out a small number of demographic questions including the child’s race and ethnicity, as well as both parents’ education levels. Next, the child completed the imaginary companion task. They were then asked if they knew either of the target words (carefree and discouraged). If they answered yes, they were asked to give a definition. If the definition was correct, they were still included in the study, but their data was excluded from analysis. Participants were then read one of the two books for their condition, which was supplemented with a clear definition of the emotion. The books were counterbalanced to avoid an order effect. After the first book, the children completed the receptive and productive measures. The children were asked about their reality status judgement and enjoyment of the book content for exploratory purposes. They were then allowed to ask questions about the story content if they pleased. Procedures were repeated in an identical manner for the second book. Following the books and their accompanying measures, parents also filled out the CIQ. If the child indicated they have an imaginary companion, the parents were

then asked if the description corresponds to a real child. If the parent indicates the companion described is a real friend, the child was marked as not having an imaginary companion. The parents and children were then debriefed, emailed a thank you, and entered into a drawing for a \$25 gift card.

Statistical Analysis

Data were analyzed in JAMOVI and plotted in R-Studio. Preliminary analyses were conducted to determine whether to analyze each set of measures separated by emotion valence or to lump data from both stories together. For the preliminary analyses, the independent variable was emotion valence, and the dependent variable was scores on each of the learning measures (facial receptive, situational receptive, and productive). A chi-square test of independence was used for the facial receptive measure, a one-way ANOVA was used for the situational receptive measure, and a separate one-way ANOVA was used for the productive measure. The productive and facial receptive measures were then combined, while the situational receptive measure was divided by emotion valence for subsequent analyses (see Results section for details).

Condition Differences

To assess the effect of condition, a series of one-way ANOVAs were conducted where the independent variable was condition, and the dependent variable was scores on each of the learning measures. Four separate ANOVAs were conducted to assess condition differences on the combined facial receptive, the combined productive, the carefree situational receptive, and the discouraged situational receptive.

The Effect of Fantasy Orientation

To assess the effect of fantasy orientation as measured by the Childhood Imagination Questionnaire (CIQ) (Gilpin et al., 2017), four linear regressions were conducted with CIQ score

as a covariate and condition as a factor. The dependent variables used were the four learning measures (combined facial receptive, combined productive, carefree situational receptive, and discouraged situational receptive). The model builder was used to observe effect of condition, CIQ score, and the interaction between condition and CIQ score.

To assess the effect of fantasy orientation as measured by the presence of an imaginary companion, four two-way ANOVAs were conducted. For each ANOVA, the independent variables were condition and imaginary companion presence, and the dependent variable was each of the learning measures. Analyses included main effects of both variables as well as the interaction effects between condition and imaginary companion presence.

Exploratory Analyses

To assess whether condition predicted reality status judgement, two chi-square tests of independence were conducted – one for the discouraged story and one for the carefree story. For each, the independent variable was condition, and the dependent variable was reality status judgement. Similarly, a chi-square test of independence was conducted to assess whether emotion valence predicted reality status judgement. For this test the independent variable was emotion valence, and the dependent variable was reality status judgement. Finally, to assess whether level of liking predicted scores on any of the measures, four linear regressions were conducted with level of liking as a factor and scores on each of the learning measures as the dependent variables.

Results

Preliminary Analyses

Each participant was shown two stories, one where the character felt “carefree” and one where they felt “discouraged”. To determine if there were differences in learning based on emotion valence, several tests were conducted. A chi-square test of independence showed that emotion valence did not influence scores on the facial receptive measure [$\chi^2(1, N = 102) = 0, p = 1$]. A one-way within subjects ANOVA demonstrated that the effect of emotion valence was not significant for the productive measure [$F(1, 97.6) = .26, p = .62$]. Scores on these measures, which were previously separated by emotion valence, were therefore combined to become one score. Finally, a one-way within subjects ANOVA effect of emotion valence was significant for the situational receptive measure [$F(1, 82.7) = 8.91, p < .01$]. This measure was separated by emotion valence in all subsequent analyses to determine the specific location of any effects.

Responses for the productive measure were independently and condition-blindly double coded. Between the two coders, there were 31 inconsistencies out of 258 responses total. Inconsistencies were resolved through careful discussion. Intercoder reliability was calculated at 87.29%, which was considered acceptable for the purposes of this study.

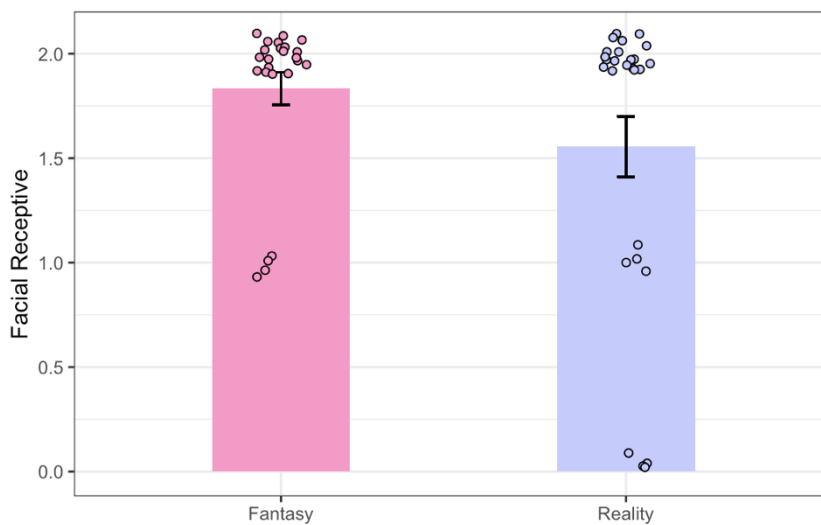
Condition Differences in Receptive and Productive Measures

To test the effect of condition on learning measures, four one-way ANOVAs with condition as the independent variable were conducted. For the combined facial receptive measure, the effect of condition was not significant [$F(1, 39.5) = 2.38, p = .098$] (see Figure 1). For the combined productive, the effect of condition was not significant [$F(1, 47.6) = .01, p = .91$] (see Figure 2). For the carefree situational receptive, the effect of condition was not significant [$F(1, 40.0) = 2.54, p = .12$] (see Figure 3). Finally, for the discouraged situational

receptive, the effect of condition was significant, with participants in the fantasy condition scoring higher than those in the reality condition [$F(1, 36.5) = 37 p = <.001$]. This difference can be observed in Figure 4.

Figure 1

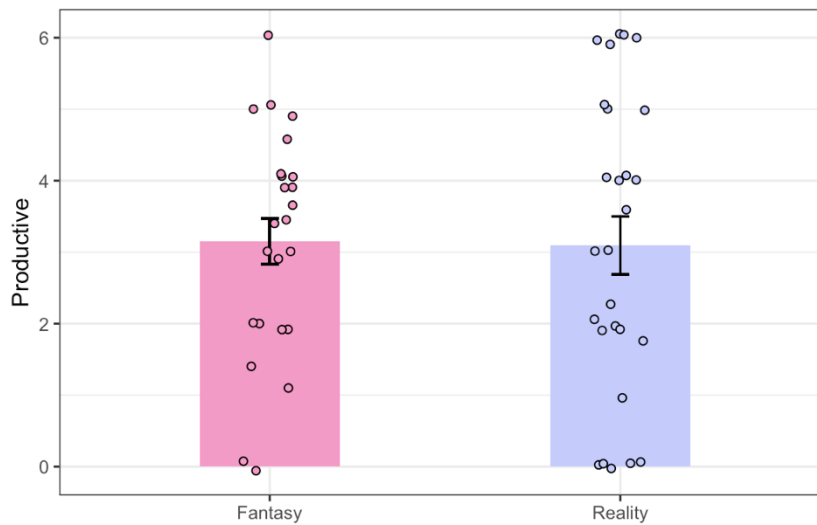
The Effect of Fantasy and Reality Contexts on Facial Receptive Scores



Note. Data are $M \pm SD$.

Figure 2

The Effect of Fantasy and Reality Contexts on Productive Scores

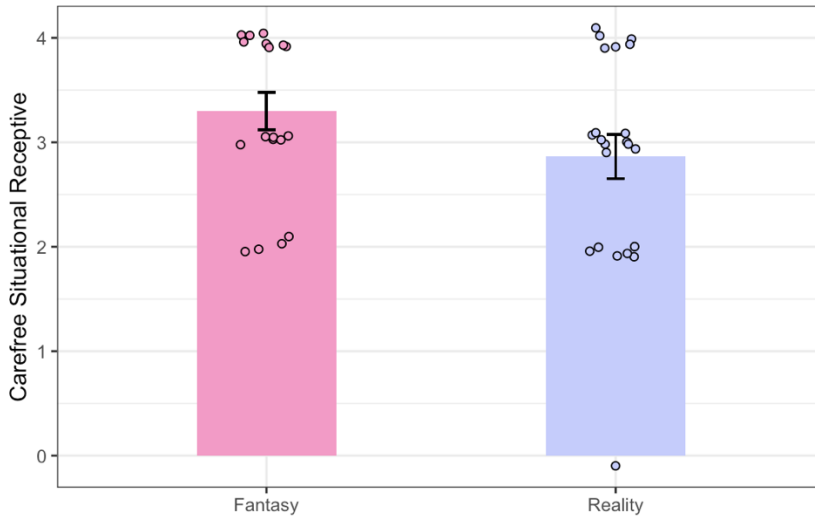


Note. Data are $M \pm SD$.

Figure 3

The Effect of Fantasy and Reality Contexts on Carefree

Situational Receptive Scores

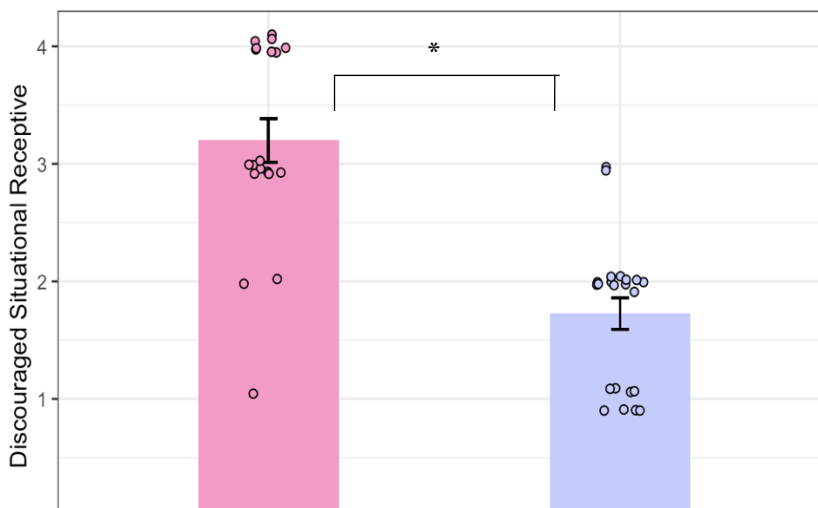


Note. Data are $M \pm SD$.

Figure 4

The Effect of Fantasy and Reality Contexts on Carefree

Situational Receptive Scores



Note. Data are $M \pm SD$. * $p < .05$

The Effect of Fantasy Orientation on Learning Measures

To examine the effect of fantasy orientation (in conjunction with condition) on learning measures, a series of tests were run. Four multiple regressions were run with fantasy orientation (as measured by the CIQ) and condition as predictors and each of the learning measures as outcome variables. Additionally, four two-way ANOVAs were run with IC presence and condition as independent variables and each of the learning measures as dependent variables. Main and interaction effects for fantasy orientation (with condition) are shown in Table 2. Main and interaction effects for IC presence (with condition) are shown in Table 3.

Table 2

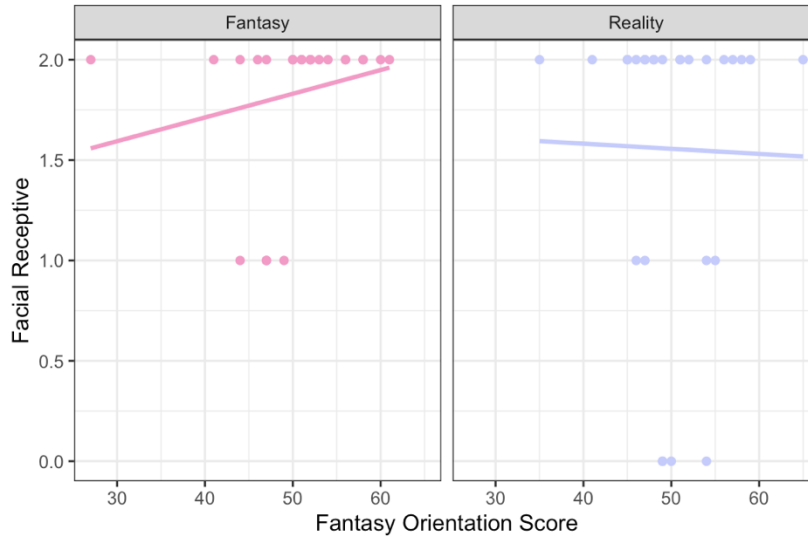
Fantasy Orientation

	R ²	df1	df2	F	p
Combined Facial Receptive					
Fantasy Orientation	.003	1	49	.16	.694
Condition * Fantasy Orientation ^a	.06	3	47	1.01	.396
Combined Productive					
Fantasy Orientation	.03	1	49	1.39	.244
Condition * Fantasy Orientation ^b	.04	3	47	.64	.595
Discouraged Situational Receptive					
Fantasy Orientation	.001	1	41	.05	.833
Condition * Fantasy Orientation ^c	.48	3	39	12.21	<.001*
Carefree Situational Receptive					
Fantasy Orientation	.08	1	41	3.65	.063
Condition * Fantasy Orientation ^d	.17	3	39	2.63	.063

Note. *p < .001 ^aSeen in Figure 5 ^bSeen in Figure 6 ^cSeen in Figure 7 ^dSeen in Figure 8

Figure 5

The Relationship between Fantasy Orientation and Scores on the Facial Receptive Measure



Note. Data are grouped by condition. Fantasy Orientation Score refers to a sum of Likert scale items from the Childhood Imagination Questionnaire (Gilpin et al., 2017).

Figure 6

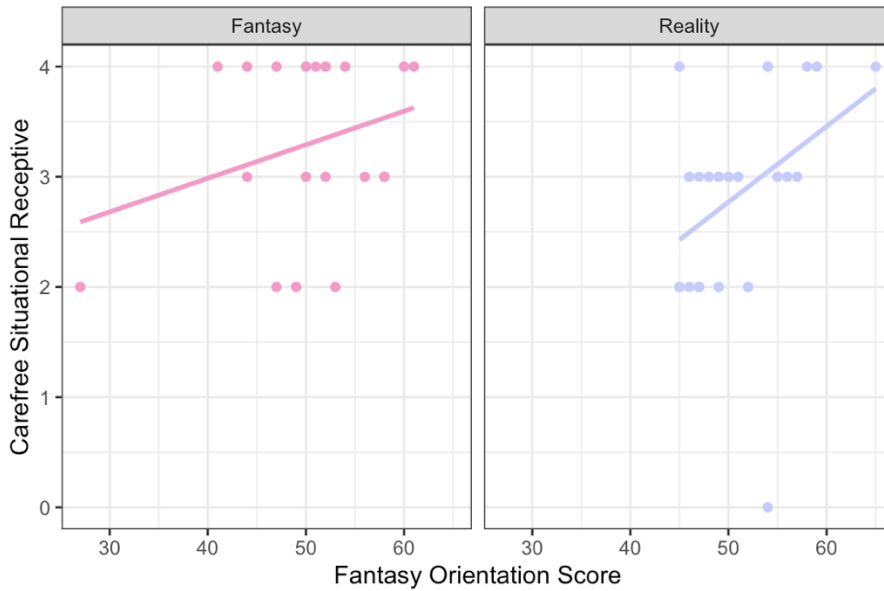
The Relationship between Fantasy Orientation and Scores on the Productive Measure



Note. Data are grouped by condition. Fantasy Orientation Score refers to a sum of Likert scale items from the Childhood Imagination Questionnaire (Gilpin et al., 2017).

Figure 7

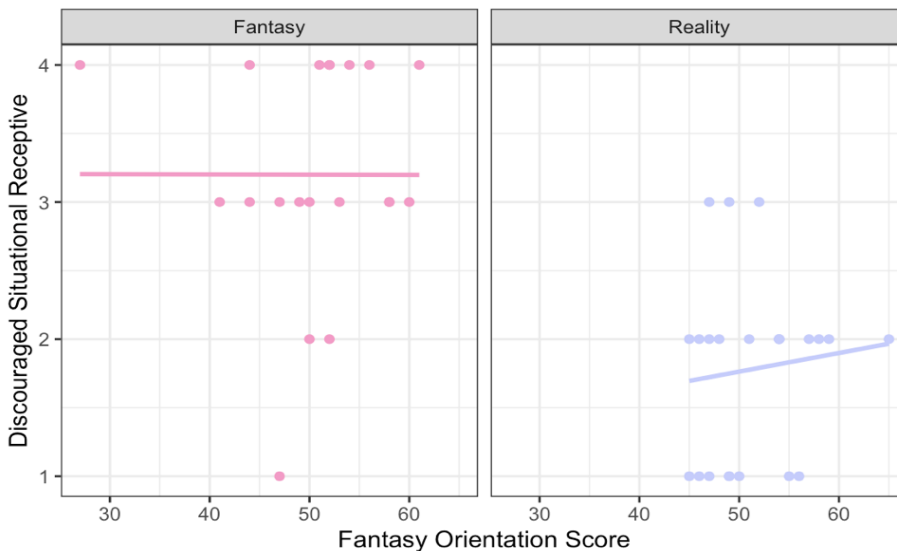
The Relationship between Fantasy Orientation and Scores on the Carefree Situational Receptive Measure



Note. Data are grouped by condition. Fantasy Orientation Score refers to a sum of Likert scale items from the Childhood Imagination Questionnaire (Gilpin et al., 2017).

Figure 8

The Relationship between Fantasy Orientation and Scores on the Discouraged Situational Receptive Measure



Note. Data are grouped by condition. Fantasy Orientation Score refers to a sum of Likert scale items from the Childhood Imagination Questionnaire (Gilpin et al., 2017)

Table 3

Imaginary Companion (IC) Presence

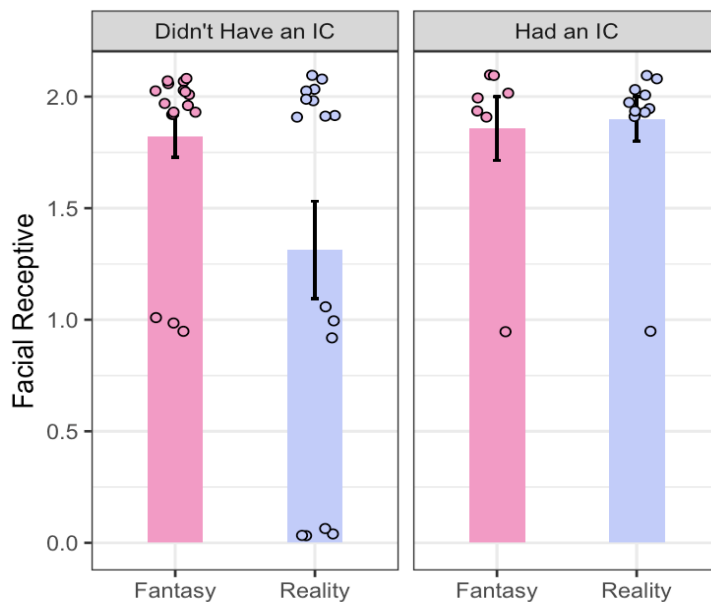
	F	df1	df2	p
Combined Facial Receptive				
IC Presence	3.11	1	46	.084
Condition * IC Presence ^a	2.47	1	46	.123
Combined Productive				
IC Presence	3.03	1	46	.088
Condition * IC Presence ^b	.00	1	46	.985
Discouraged Situational Receptive				
IC Presence	.00	1	38	.965
Condition * IC Presence ^c	.55	1	38	.325
Carefree Situational Receptive				
IC Presence	.73	1	38	.398
Condition * IC Presence ^d	1.1	1	38	.3

Note. ^aSeen in Figure 9 ^bSeen in Figure 10 ^cSeen in Figure 11 ^dSeen in Figure 12

Figure 9

The Effect of Imaginary Companion Presence on the Facial

Receptive Measure

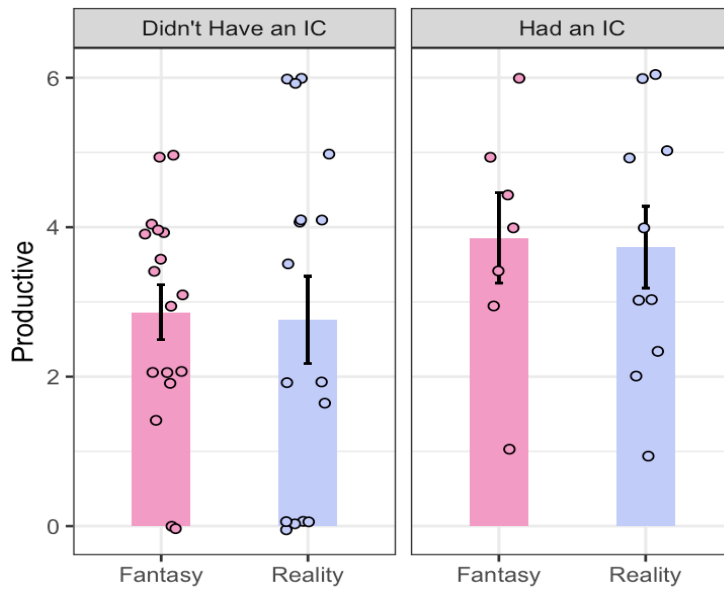


Note. Data are $M \pm SD$. Figure shows the interaction

between condition and having an imaginary companion.

Figure 10

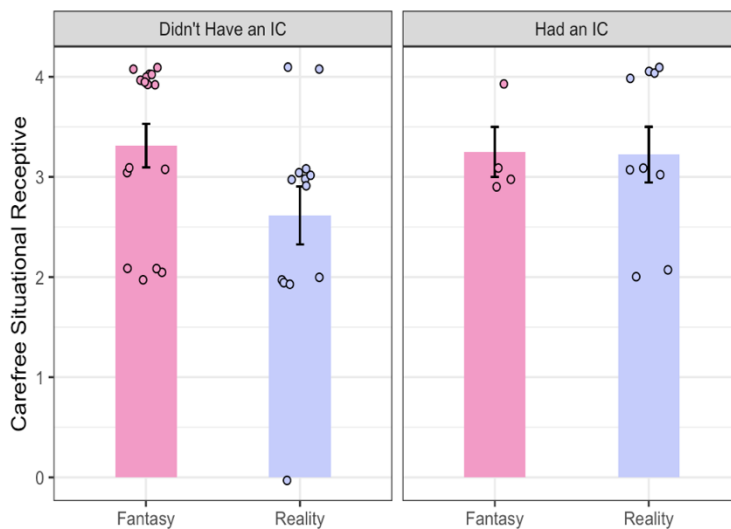
The Effect of Imaginary Companion Presence on the Productive Measure



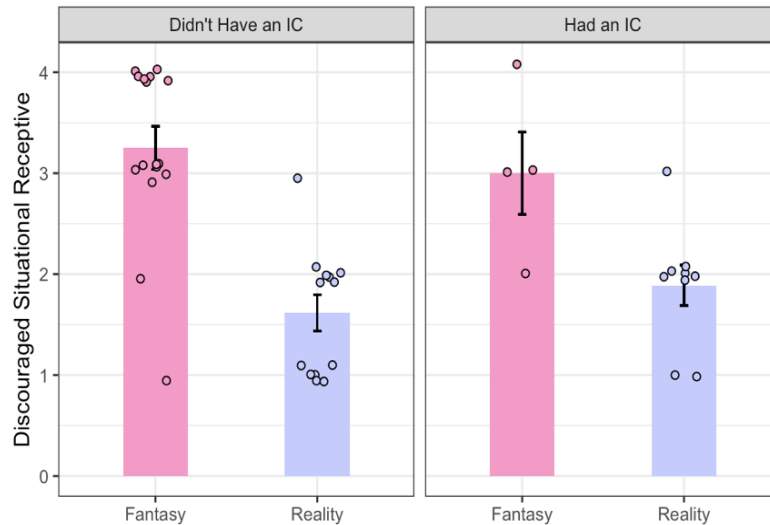
Note. Data are $M \pm SD$. Figure shows the interaction between condition and having an imaginary companion.

Figure 11

The Effect of Imaginary Companion Presence on the Carefree Situational Receptive Measure



Note. Data are $M \pm SD$. Figure shows the interaction between condition and having an imaginary companion.

Figure 12*The Effect of Imaginary Companion Presence on the**Discouraged Situational Receptive Measure*

Note. Data are $M \pm SD$. Figure shows the interaction between condition and having an imaginary companion.

Exploratory Analyses

There were three questions investigated through exploratory analyses. The first question was whether condition predicted reality status judgement. For the discouraged story, a chi-square test of independence showed that condition did not influence reality status judgement [$\chi^2(2, N = 51) = 3.23, p = .199$]. For the carefree story, a chi-square test of independence again showed that condition did not influence reality status judgement [$\chi^2(2, N = 51) = 3.28, p = .194$]. The next question was whether emotion valence predicted reality status judgement. A chi-square test of independence showed that emotion valence did not influence reality status judgement [$\chi^2(2, N = 102) = .0723, p = .97$]. The final question was whether level of liking for a story predicted scores on any of its corresponding learning measures. For the discouraged story, level of liking did not predict scores on the facial receptive [$R^2 = .02, F(3, 47) = .386, p = .76$] or the productive [$R^2 = .121, F(3, 47) = 2.15, p = .11$]. However, level of liking for the discouraged story did predict

scores for the situational receptive [$R^2 = .44$, $F(3, 39) = 3.04$ $p < .05$]. For the carefree story, level of liking did not predict performance on the facial receptive [$R^2 = .01$, $F(3, 47) = .14$ $p = .94$], the productive [$R^2 = .04$, $F(3, 47) = .684$ $p = .57$], or the situational receptive [$R^2 = .04$, $F(3, 39) = .64$ $p = .59$].

Discussion

Condition Differences

Although there was a range in the amount of difference between conditions, participants in the fantasy condition consistently scored higher than participants in the reality condition. These findings, although only significant in the instance of the discouraged situational receptive, support the idea that fantasy is generally an appropriate context to teach emotion words. Specificities to each measure are detailed below.

Facial Receptive

Hypothesis A predicted that there would be no condition differences for the receptive measures. In support of hypothesis A, there was no significant condition difference for the facial receptive measure. This finding could be due to a true lack of condition differences, however, given the observable ceiling effect it is likely that this measure was simply not sensitive enough to capture the necessary variability to observe differences if they existed. As a result of observing a ceiling effect after piloting, the second receptive measure – known as the situational receptive – was added to capture more variability in receptive understanding.

As seen in Figure 1, most participants in both conditions were able to identify both facial emotions. It is therefore likely that this measure was not well-suited to the age range and ability of the sample demographic. One interesting takeaway, however, was that participants were able to consistently identify the new emotion in a facial context after just one encounter with the definition. This suggests that children can generalize knowledge about emotions from storybooks into real life contexts, regardless of whether the book was reality or fantasy based. Furthermore, this finding is in accordance with previous research that found that fantasy context is as supportive as realistic context for receptive understanding of new words (Weisberg et al., 2015).

Productive

Hypothesis B predicted that there would be significant condition differences for the productive measure. Contrary to hypothesis B, there was no significant condition difference for the productive measure. This hypothesis was formulated mostly in response to findings from Weisberg et al., where results showed that fantasy context was significantly better than realistic context for promoting new word learning (2015). Interestingly, the margin of difference between the fantasy and reality conditions was the smallest for this measure (see Figure 2). These findings suggest that fantasy and reality are comparable in their ability to support the productive domain of new word learning.

Situational Receptive

As mentioned before, the situational receptive was a measure added after piloting the study, hence why it has a smaller number of participants included in analyses ($n = 43$). Item analysis revealed that the questions were not equally difficult. This was intentional and reflected the effort to capture more variability than the facial receptive. The analysis also showed that the carefree questions may have been slightly easier than the discouraged questions. However, this could be a result of carefree being a less complicated emotion than discouraged, and not necessarily a reflection of the measure. More work needs to be done to verify the efficacy and validity of a situational receptive measure. Regardless, these limitations do not explain the condition differences in the measure, as all questions were the same between conditions.

Hypothesis A predicted that there would be no condition differences for the receptive measures. In support of hypothesis A, there was no significant condition difference in the carefree story's situational receptive measure. However, contrary to hypothesis A, there was a significant condition difference in the discouraged story's situational receptive, with fantasy

condition participants scoring higher than reality condition participants. This finding represents an interesting interaction effect between emotion valence and condition that produced a condition difference only for the discouraged story. It is important to note that this could be a result of story details, for instance the character in the realistic discouraged story was a Black male, while the child in the realistic carefree story was a white female. Given that the sample was mostly female and white, this explanation can't be completely discounted, although analysis revealed that there weren't significant differences in performance on the discouraged situational receptive based on gender [$F(1, 33.4) = 1.09, p = .303$], or race [$F(3, 6.91) = .478, p = .708$]. One speculation is that fantasy could be preferable for teaching negative valence emotions because it softens the blow of unpleasant emotional concepts and experiences, making it easier for children to absorb these concepts without being overwhelmed. However, the data does not provide sufficient insight into why this interaction occurred, and a follow up study would be needed to determine the reason behind this condition difference.

Fantasy Orientation

Childhood Imagination Questionnaire

Hypothesis C predicted that for participants in the fantasy condition, there would be a positive relationship between fantasy orientation and scores on each of the measures. Contrary to hypothesis C, fantasy orientation as measured by the Childhood Imagination Questionnaire did not significantly predict performance on any of the measures (Gilpin et al., 2017). While most of the slopes were positive as seen in Figures 5, 6, 7 and 8, indicating that the trend was higher scores with higher fantasy orientation, this did not reach significance. Although the significant p -value (see Table 2) between condition and fantasy orientation for the discouraged situational receptive appears to represent an interaction effect, further investigation revealed that the

significance of this model was due to condition only. This finding suggests that previous research that found a correlation of fantasy orientation and emotion regulation may not be generalizable to other domains of emotional competency, such as learning new emotion words (Gilpin et al., 2015; Hoffman & Russ, 2012). Learning new emotion words may instead largely involve other cognitive abilities that are separate from fantasy orientation.

One specific limitation of the methodology of the Childhood Imagination Questionnaire is that it is a parent report form. Although parents are generally aware of their child's behavior, they may not be fully tuned in to the specific ways in which they play. For instance, prior research suggests that 25-33% of parents who have kids with imaginary companions are unaware of the imaginary companion in their child's life (Schmechel, 1975; Taylor, 1993). This notable discrepancy between parent understanding and the child's play suggests that parents may not always be the most accurate reporters for fantasy orientation. In addition, parents may not be around in moments where sociodramatic play is common, such as in school.

Imaginary Companion Presence

Contrary to hypothesis C, there were no significant differences in performance on any of the measures dependent on whether a participant had an imaginary companion (IC) or not. Again, this suggests that previous research on emotion understanding and imaginary companions may not generalize to learning new emotion words (Dasí et al., 2014). This finding could also be due to specific limitations of current IC methodology. For example, children may not always tell the truth when asked about their IC. Shy children may not feel comfortable sharing their IC with a stranger, while outgoing children may feel encouraged to make up an IC for the purpose of conversation. For instance, one research assistant reported that directly after introducing themselves, the participant said they had an IC with the same name as the RA. It is unclear

whether simply asking the child and the parent about the IC is the best way to investigate IC presence, at least in the context of this study. 1/3 of the children in this sample were marked as having an IC. When compared to previous research that only 1/4 of children have an IC ((Dasí et al., 2014), this could suggest a study-specific flaw in measuring IC presence. Another potential reason for this finding could be that age confounded the effect of IC presence. Age and IC presence were weakly correlated at $-.194$, meaning that younger children were slightly more likely to have an IC. Since older children tended to perform better on the measures, this could have obscured the data on the effect of IC presence.

Exploratory Analyses

Three exploratory areas were investigated with secondary analyses. There were no specific hypotheses created in regards to the exploratory questions. First, analysis found that condition did not influence reality status judgement, meaning that participants were equally likely to rate the story as possible in real life regardless of whether they received a fantastical or realistic story. This suggests that children's perception of whether storybook events are realistic doesn't hinge on whether fantastical elements are involved. Although this may seem counterintuitive, previous research has suggested that reality status judgement of emotional content may rest more on emotional valence of the event portrayed (Carrick & Quas, 2006). Thus, we also investigated whether emotion valence influenced reality status judgement but found that there was no effect there either. This contradicts Carrick & Quas' finding that participants were less likely to rate negative emotional events as being able to occur in real life (2006). Finally, participants rating of how much they liked the story did not predict performance on any measure, except for the discouraged liking predicting performance on the discouraged situational receptive. One possible explanation for the significant finding is that stories that kids

like more will better engage them, leading to deeper learning. However, the non-significant findings suggest that this is not always the case.

Limitations

General limitations of the study include time restraints that limited the sample size to a small sample of 51 participants, with only 24 participants in the fantasy condition. In addition, the experimental manipulation was designed to be minimal (only changing character identity) since previous research has suggested that too much fantasy can actually inhibit learning (Strouse et al., 2018; Hopkins & Weisberg, 2017). This choice may have backfired by not providing enough statistical power to see a difference in a smaller sample. In addition, since stories were not matched to participant by gender and race, analysis can't completely exclude the idea that identity variables were at play in the results. The scope of this study also didn't allow for investigation of age differences, which could provide developmental insight into how children learn emotions.

Future Directions

Future research should fill in the gaps of this study by either controlling for or including variables such as age, gender, race, and socio-economic status. Research should focus on the level of fantasy as a key manipulation to determine the amount of fantasy that is best suited to teaching emotion. This study only changed the type of characters used in the story, so future research should assess the impact of fantastical settings and events. In addition, future research should assess differences in long-term gains through follow up studies. Longitudinal research would bolster knowledge around advantages for fantasy versus reality context.

While the current study supports the idea that it is possible to teach new emotion words through storybooks, and that fantasy is just as good or possibly better than reality at teaching

new emotion words, much remains undiscovered about the best method for promoting emotion learning through fantasy.

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Appendix A

Storybooks

*underlined words are words only present in the fantasy condition

“Carefree”

Fantasy



Reality



This is Erin. She just got done with her last day of monster school! Erin was just planning to go home and watch her favorite show when her friend Jessie walked up to her.



With a big smile, Jessie asked Erin if she would want to come over and play. Erin was super excited to go to Jessie’s house because Jessie always had the best toys and loved to share.



Erin walked over to her mom who was waiting to pick her up. She asked if it was okay to go with Jessie instead today. Her mom said “Of course! Happy last day of school!”



When the kids got to Jessie’s house, they played with lots of fun toys outside. It was a really sunny day, but it wasn’t too hot. Jessie’s mom brought them lemonade to stay cool. At Jessie’s house, Erin felt carefree. Carefree is when you feel relaxed and you have no worries. Carefree is a lot like being happy.



Jessie showed Erin her new pet bunny named Max. Max was super cute and fluffy!



Before Erin had to go, Jessie’s mom gave her a delicious donut. “Thanks so much” said Erin, “these are my favorite!”



Erin had a great time at Jessie’s house. When you feel carefree like Erin, you have nothing to worry about and you can play all day. Erin is really looking forward to the rest of summer!

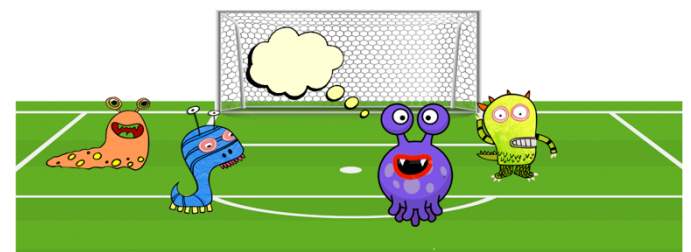
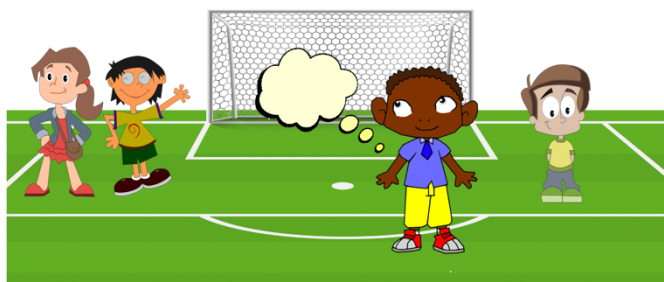
“Discouraged”



This is Charlie. Charlie is a monster who plays soccer with his friends every day after school. They had been playing for a few minutes when something happened.



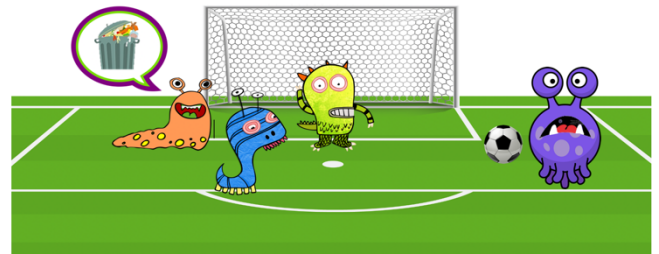
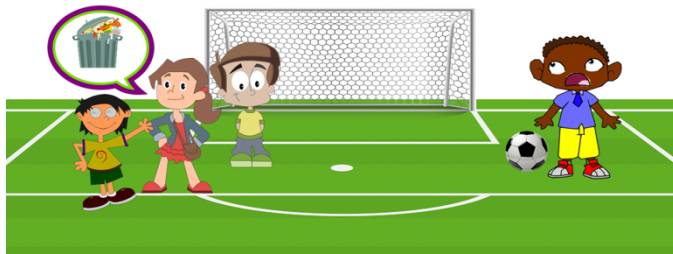
The ball got kicked super high and flew over the fence into the street. Everyone went to look for it, but the ball had disappeared. It was nowhere to be found. Everyone was really upset because the game had just started.



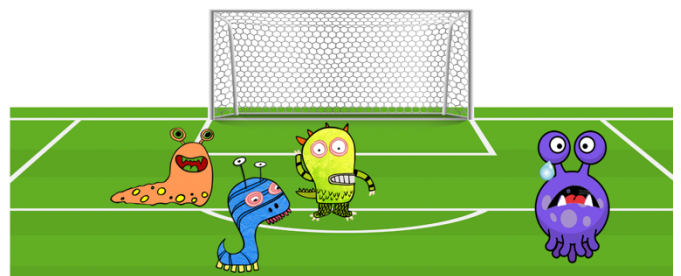
Nobody knew what to do. Suddenly, Charlie had an idea.



Charlie ran home and grabbed an old soccer ball with lots of holes. He used a ton of tape and tried to pump it back up. It worked! Charlie was so excited to show his friends the ball and save the day.



But when Charlie got back, his friends didn't seem happy about the new ball. "This won't work" said one friend. "This was not a good idea" said the other. They gave Charlie the ball back and told him he should just throw it away. This made Charlie feel really discouraged.



Discouraged is when you feel left down after something doesn't work out. Discouraged is a lot like being sad. When you feel discouraged like Charlie, you might want to cry or be alone.



Charlie decided to take a deep breath and gave his mom a hug when he got home. He told her how he felt when his friends weren't very nice to him. Charlie knows that feeling discouraged can be really hard, but it won't last forever.

Appendix B

Child Imagination Questionnaire

	Never	Rarely	Occasionally	Frequently	Almost everyday
1. How often do you observe this child interacting with an imaginary friend?	1	2	3	4	5
2. How often does this child engage in pretend interactions with invisible characters when playing alone?	1	2	3	4	5
3. How often does this child come up with a play script on their own ("Let's pretend to be...")?	1	2	3	4	5
4. How often does this child engage in pretend play (role play, imaginative play) during free-play time?	1	2	3	4	5
5. How often does this child engage in pretend play on the playground?	1	2	3	4	5
6. How often is this child's pretend play reality based (pretend to be mommy, pretend to be fire-fighter, pretend to talk on the phone, etc.)?	1	2	3	4	5
7. How often is this child's pretend play imaginative (pretend to be princesses, superheroes, pretend to fly, etc.)?	1	2	3	4	5
8. How often does this child use props or articles of clothing to enhance their pretend play?	1	2	3	4	5
9. How often does this child impersonate another character from a book, TV show, etc.?	1	2	3	4	5
10. When this child plays with other children, how often does the play involve interactions with invisible imaginary others?	1	2	3	4	5
11. How often does this child interact with characters from books or TV shows during their pretend play?	1	2	3	4	5
12. When given a choice, how often does this child self-select fantastical toys, books, games or media (Dr. Seuss, Disney Princesses, Superheroes, etc.)?	1	2	3	4	5
13. How often does this child involve imaginary (invisible) props in their play (e.g., imaginary phone, sword, horse, toy)?	1	2	3	4	5
14. How often does this child try to engage their peers in their imaginative play?	1	2	3	4	5

SCORING INFORMATION

3 subscales:

Sociodramatic Play (Pretense) 6 questions: 3, 4, 5, 6, 8

Imagination Companions and Impersonation 5 questions: 1, 2, 9, 10, 11

Imaginary (Fantastical) Play 4 questions: 7, 12, 13, 14

Scoring: average the scores in each subscale, with average scores ranging from 1-5. Higher scores indicate higher propensity towards this type of imaginary play.

Appendix C

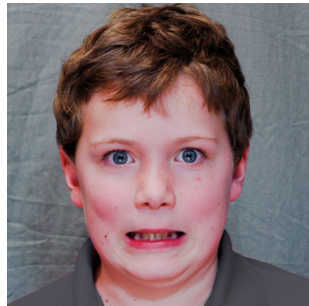
Faces from the DEFSS

(* = correct answer)

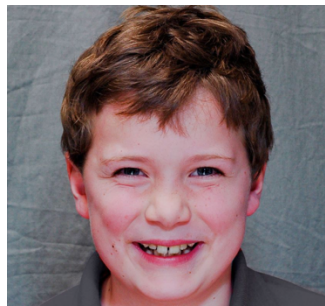
“Discouraged”



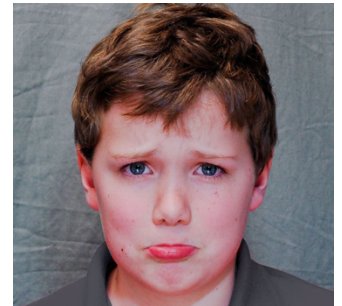
Angry



Fearful

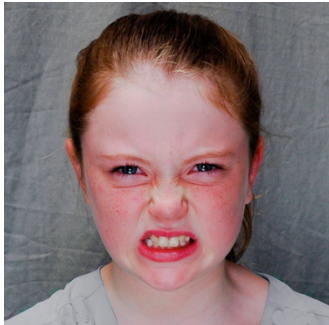


Happy

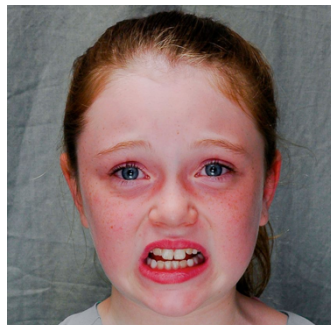


* Sad

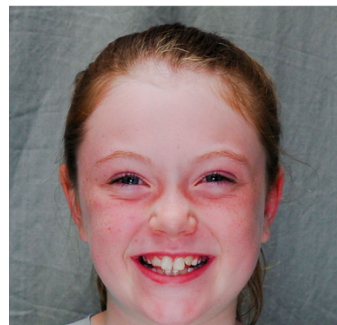
“Carefree”



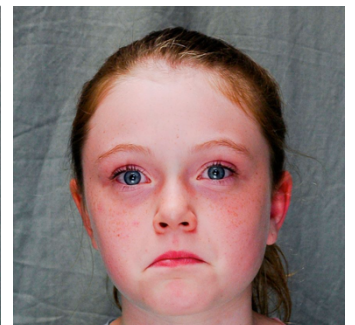
Angry



Fearful



* Happy



Sad

Appendix D
Situational Receptive Task

Discouraged

“Now, I am going to tell you four things that happened to a kid named Riley. Some of them would make Riley feel discouraged and some wouldn’t. After I read each one, you can tell me if you think it would make Riley feel discouraged or not. OK?”

1. Riley is tired from playing, so she really wants to take a nap. Would this make Riley feel discouraged?
 - a. Answer: No
2. Riley tried super hard to make her mom a nice card for her birthday, but when she gave it to her, her mom was too busy on the phone to notice. Would this make Riley feel discouraged?
 - a. Answer: Yes
3. Riley has a kitty that she gets to pet. The kitty has long orange hair that is super soft. Would this make Riley feel discouraged?
 - a. Answer: No
4. Riley is playing a game with her dad and they had a tie. Would this make Riley feel discouraged?
 - a. Answer: No

Carefree

“Now, I am going to tell you four things that happened to a kid named Sam. Some of them would make Sam feel carefree and some wouldn’t. After I read each one, you can tell me if you think it would make Sam feel carefree or not. OK?”

1. Sam and his friend wanted to play with the same toy. They fought over it for a minute but he let his friend have it. Would this make Sam feel carefree?
 - a. Answer: No
2. Sam got to go on vacation this summer to the beach. He had so much fun playing in the sand. Would this make Sam feel carefree?
 - a. Answer: Yes
3. 2 years ago, Sam had a baby sister. He loved his new sister but he missed his mommy a lot. Would this make Sam feel carefree?
 - a. Answer: No
4. Sam fell off his bike and hurt his knee. Would this make Sam feel carefree?
 - a. Answer: No