

RUNNING HEAD: IMPACT OF EDUCATIONAL CLAIMS AND CUES

Marketing Genius:

The Impact of Educational Claims and Cues on Parents' Reactions to Infant/Toddler DVDs

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ABSTRACT

Infant/toddler-directed DVDs have become commonplace in American homes. Most of these DVDs carry direct claims or implied cues of educational benefit, despite complaints from the Campaign for Commercial Free Childhood and others regarding a lack of research to support them. This experiment tested the impact of DVD brand name, educational claim specificity, and a dimension of parents' personalities (i.e., regulatory focus orientation) on parents' perceptions of educational value and purchase intentions. Parents reacted similarly to specific and ambiguous educational statements, but were more likely to say that the DVD had educational value when the brand name had an educational cue. An interaction suggested that the effect of the claim outcome specificity depended on the claim verb specificity. Parents with a strong focus on pursuing possible rewards (promotion focus) had higher perceptions of educational value and stronger desires to purchase the DVD. Implications for policy and further research are discussed.

Marketing Genius: The Impact of Educational Claims and Cues on Parents' Reactions to Infant/Toddler DVDs

INTRODUCTION

In the spring of 2006 the child advocacy group, Campaign for Commercial Free Childhood (CCFC) filed a complaint with the Federal Trade Commission (FTC) alleging that two media production companies were marketing their products to parents under false pretenses (CCFC, 2006). The complaint named Baby Einstein and Brainy Baby as the offending companies. These production companies, relative giants in their field, each produce many “educational” media products designed for use with infants and toddlers. The crux of the argument made by representatives for the CCFC was that claims made by producers in reference to their products indicate that the videos can educate very young children, though such claims are devoid of any publicly available empirical support. Hence, according to the CCFC, the companies producing these media should face legal consequences for misleading consumers.

In particular, the CCFC cited two major issues with the products marketed by Baby Einstein and Brainy Baby. The first was the very fact that the DVDs and videos carried any claims of educational benefit for infant and toddler viewers. Specifically, the CCFC cited the Baby Einstein video *Baby Da Vinci*, the packaging of which claimed that “Your child will learn to identify her different body parts, and also discover each of her five senses...in Spanish, English and French!” In addition, a video produced by Brainy Baby makes the claim that “the educational content of Brainy Baby can help give your child a learning advantage!” (CCFC, 2006).

As the CCFC noted, existing research does not indicate consistent learning gains for infants and toddlers exposed to these media products (e.g., DeLoache et al., 2010; Linebarger

and Walker, 2005; Robb, Richert, and Wartella, 2009; Zimmerman, Christakis, and Meltzoff, 2007a); in fact, there is some evidence to suggest that these videos may actually delay language learning (Zimmerman, Christakis, and Meltzoff, 2007a). One recent experiment showed that children exposed to a video learned less than children whose parents were instructed to teach the same subject matter, yet the parents with videos believed their children actually learned more (DeLoache et al., 2010). As such, without any independently verifiable evidence of learning among young children, there appears to be no reasonable justification for these companies to claim that their products produce educational gains with infants or toddlers.

The second complaint issued by the CCFC was that the brand names and titles of the videos strongly suggest that children will experience substantial educational gains through viewing. For example, many of the videos available through Baby Einstein are named after prominent intellectual figures in western culture. Their individual DVDs/videos are named such things as Baby Mozart, Baby Bach, Baby Van Gogh and Baby Shakespeare – all under the brand name of “Baby Einstein”. The company’s tactic of using well-known intellectual figures in their product names is, according to the company’s founder, a deliberate strategy, aimed at associating their products with well-known geniuses (Hubler, 1999). The company Brainy Baby, while it tends not to use titles as provocative as Baby Einstein, used the slogan “a little genius in the making” in reference to their products (CCFC, 2006).

To counter the complaints made by CCFC, Baby Einstein and Brainy Baby changed the claims associated with their products on websites and DVD packaging. Instead of using words that conveyed certainty in their claims (e.g., this product will *teach* your child), the production companies switched to more indeterminate wording in their claims (e.g. this product will *inspire learning* in your child; this product will *introduce* your child to educational content). It seems

these alterations appeased the regulators at the FTC, as they ruled in December of 2007 that the marketing practices used by Baby Einstein and Brainy Baby did not unduly prey on unwitting parents. From the FTC's letter to CCFC:

“The substantiation required for claims about specific educational or cognitive development benefits that children will receive from using a particular product, however, differs from that required for claims that merely describe the product’s content. The latter type of claims e.g., claims that the product “exposes” or “introduces” children to particular content- are unlikely, by themselves, to convey an educational or developmental benefit claim that would require reliable scientific substantiation.” (Engle, 2007a, 2)

Notably, the FTC's ruling does not cite any research on how parents respond to different claims on infant/toddler DVD packaging, nor has any known research of this type been conducted to date. As such, the assertion by the FTC that the latter type of claim is not potentially problematic should be empirically tested. Furthermore, the ruling by the FTC did not address the use of titles which convey elements of genius (e.g. Baby Da Vinci), nor did their statement offer an opinion on the use of claims that contain ambiguous learning outcomes (e.g. product will encourage baby to “discover the world”). Evaluating the influence of these educational cues is particularly important in light of the vast number of infant/toddler media products that contain each of these features (see Fenstermacher et al., 2010; Garrison and Christakis, 2005).

Given the timely, weighty, and currently unresolved questions regarding how parents evaluate educational cues associated with infant/toddler media, this study examines the extent to which factors regarding the educational cues on DVD packaging and factors of consumers

themselves impact parents' reactions to DVDs produced for infants and toddlers. Using an experimental design with a nationally representative sample of parents with young children, the present research sought to determine whether parents evaluate products more favorably if the claim offers specific educational learning verbs and outcomes compared to more ambiguous statements. Further, this study investigates whether parents evaluate products more favorably if the brand name suggests superior intellect. Finally, this research examines the extent to which certain parents (i.e., promotion-focused) may be more persuaded by each of these educational cues than others.

Factors of the Product

Specificity of Claims

While no known research has examined parents' interpretations of various educational cues on infant/toddler DVD packaging, it is clear that educational claims used on these products range in the specificity of both the stated extent of learning and the specificity of skills or knowledge that will be learned from viewing (see Fenstermacher et al., 2010). For example, statements on the original Baby Da Vinci video included "Your child will learn to identify her different body parts, and also discover each of her five senses." In contrast, this claim was altered to the less definite statement: "Encourages baby to identify their eyes, ears, hands, feet and more. Exposes little ones to words in English, Spanish and French". As previously noted, this softening of educational claims by baby media producers seems to have appeased the FTC. It is not clear, however, that parents would in fact interpret more ambiguous educational statements differently from more explicitly worded educational claims.

Although research has not directly investigated parents' reactions to these different types of claims, broader literature regarding consumers' processing of advertising claims can offer

some insights. This body of work indicates that there may not be differences in consumers' interpretations of claims ranging in specificity. Consumers often interpret general and ambiguous claims about products--even those which are illogical--to be true (Maronick & Andrews, 1999; Oliver, 1979). In fact, some research suggests that the less definite claims, as defined by the FTC, are potentially just as misleading to parents as those which state a definitive outcome (Harris et al., 1993). Also disconcerting are findings that indicate that consumers' positive attitudes resulting from such claims can be quite unalterable despite non-confirmatory experiences with the product (Oliver, 1979).

The literature suggests that some consumers may be more susceptible to ambiguous and misleading claims than others. For example, consumers with higher levels of personal involvement with the product or the implied outcomes in claims are particularly motivated to process ambiguous claims as more definitive statements (Johar, 1995; Kardes, 1988). What is more, consumers inclined to read the marketing claims in a favorable light are also more likely to infer positive outcomes from incomplete claims (Johar, 1995; Kardes, 1988). For instance, in an experiment conducted by Sawyer and Howard (1991), the researchers compared a group of consumers that were personally involved in the products to a group of non-involved consumers¹ by having them evaluate advertising claims. Participants were asked to evaluate claims that were either open-ended (i.e. the ad implied a product-based inference) or close-ended (i.e. the ad made an explicit inference about the product). They found that involved participants who were exposed to open-ended claims were much more likely to possess a positive attitude towards the product and indicated a greater willingness to purchase the product, than participants in the other three conditions. Participants in this condition were also more likely to retain their positive orientations to the product over time, while those in the other three conditions did not.

Based on these findings it seems that parents may be even more likely than the average consumer to process even ambiguous educational cues as suggesting educational benefit from infant/toddler DVDs, since these products deal with a subject that is of high personal relevance to them: their child's intellectual development. As noted by Thomas (2007), parents are extremely eager to provide their children with educational experiences when they are young, in the hopes that these experiences will pay dividends in the future. Educational videos offer these precise types of experiences at little apparent cost to either the parent or the child. For example, in a national survey of parents with young children, respondents were eight times more likely to believe that educational videos, like Baby Einstein, were important for a child's intellectual development than to believe that these videos were unimportant (Rideout, Vandewater & Wartella, 2003). In another survey of parents with young children, the vast majority of respondents (94%) did not know that a panel of experts (the AAP) advised against exposing children under two to screen media (Rideout, 2004). It seems then that parents are more likely to view baby videos as providing great rewards with minimal risk.

Considering these findings from consumer research and what is known about parents' perceptions of infant/toddler video products, it is reasonable to expect that parents will not distinguish between explicit and ambiguous educational cues on infant/toddler DVD packaging. In this study we were interested in possible differences based on the specificity of the learning verb used in educational cues, as well as the specificity of the learning outcome. We propose the following hypotheses:

Hypothesis 1a: There will be no difference in the perceived educational value of the DVD among participants who view DVD packaging with a specific learning verb (i.e., "teaches") compared to those who view packaging with an ambiguous learning verb (i.e., "inspires").

Hypothesis 1b: There will be no difference in the desire to purchase the DVD among participants who view DVD packaging with a specific learning verb (i.e., “teaches”) compared to those who view packaging with an ambiguous learning verb (i.e., “inspires”).

Hypothesis 2a: There will be no difference in perceptions of the educational value of the DVD among participants who view DVD packaging with a specific learning outcome (i.e., “letter identification and 20 vocabulary words”) compared to those who view packaging with an ambiguous learning verb (i.e., “verbal exploration and symbolic language concepts”).

Hypothesis 2b: There will be no difference in the desire to purchase the DVD among participants who view DVD packaging with a specific learning outcome (i.e., “letter identification and 20 vocabulary words”) compared to those who view packaging with an ambiguous learning verb (i.e., “verbal exploration and symbolic language concepts”).

Brand Names

Another aspect regarding the marketing of these products that was mentioned by the CCFC, yet was not addressed by the FTC, was the use of brand names and titles that connote learning (e.g. *Brainy Baby*, *Baby Einstein*). Logically, it is reasonable to expect that brand names with such powerful references to intellect and brain development might have an impact on consumers (Garrison and Christakis, 2005). Yet, perhaps because this connection brand name and product qualities is so intuitive, there have been very few empirical tests of the relationship between brand name and preference towards the product (Bao, Shao, and Rivers, 2008). The studies that have investigated the influence of brand names on product preference show a clear pattern: the more a brand name connotes beneficial attributes of the product’s content; the more likely consumers are to purchase the product (Bao, Shao, and Rivers, 2008; Lutz and Lutz, 1977; Mehrabian and de Wetter, 1987). Furthermore, the more positive a brand name’s connotation is the more likely a consumer is to purchase the product (Bao, Shao, and Rivers, 2008; Mehrabian and de Wetter, 1987). As such, we expect that a stronger educational cue in the brand name of an

infant/toddler DVD will result in higher perceptions of educational value and purchase intentions among parents.

Hypothesis 3a: Participants who view the DVD with a strong educational cue in the title (i.e., “Lil Genius”) will rate videos to be more educational than those who view the DVD packaging with no educational cue in the title (i.e., “Lil Munchkins”).

Hypothesis 3b: Participants who view the DVD with a strong educational cue in the title (i.e., “Lil Genius”) will have a higher intent to purchase the DVD than those who view the DVD packaging with no educational cue in the title (i.e., “Lil Munchkins”).

Factor of the Parent

Regulatory Focus Orientation

One personality dimension that may impact parents’ reactions to marketing features on infant/toddler DVDs is their chronic regulatory focus orientation. This dimension, studied frequently in health and consumer behavior research, is predicated on the premise that an individual has two distinct internal self-regulation systems for satisfying different classes of goals that arise (Higgins, 1997; Higgins et al., 2001). One class of goals includes those pertaining to the individuals’ growth, reward, and nurturance needs. The promotion self-regulation system works to satisfy these types of goals by spurring the individual to pursue his or her desires (Camacho, Higgins, and Luger, 2003). The second class includes goals regarding protection, safety and security. A person’s prevention self-regulation system is activated to fulfill security needs by prompting him or her to perform obligations and responsibilities (Camacho et al., 2003).

Studies have found that while prevention and promotion self-regulation systems exist within each individual and can be activated situationally based on the needs and goals that arise at a given time, individuals also have a chronic orientation towards a particular focus. Specifically, some individuals have a greater sensitivity and motivation to pursue the possibility

of rewards (i.e., promotion focus orientation). These individuals are generally more eager to pursue possible desirable outcomes, even when the certainty of obtaining those rewards is unknown. Conversely, other people are more driven to avoid failures or negative outcomes. In the face of uncertain outcomes, these “prevention focused” people are generally more likely to be more cautious and on-guard against erring and encountering undesirable results, and thus tend to pursue outcomes that have a low perceived risk of unfavorable results (Camacho et al., 2003, p. 499).

Additional research has shown that message-wording often interacts with regulatory focus to influence individuals’ responses. “Gain-framed” messages present information in terms of the probability that some action will result in favorable outcomes or rewards (e.g., that watching a video will boost a child’s brain development). Conversely, messages that are “loss-framed” pitch persuasive information in terms of the likelihood of avoiding undesirable outcomes or failures (e.g., that watching a video will keep a child from missing out on brain development opportunities). Studies regarding the “regulatory fit” between individuals’ personalities and message frames have found that those with a chronic promotion focus are more readily persuaded by information presented in a gain-framed message due to the “fit” between their tendency to seek out positive outcomes and the frame of the message (e.g., Florack and Scarabis, 2006; Keller, 2006; Lee and Aaker, 2004; Yi and Baumgartner, 2009). Conversely, individuals who have an orientation toward prevention focus experience “fit” with loss-framed messages because these messages correspond with their inclination to act to avoid undesirable outcomes.

Based on evidence of varying “fit” between regulatory focus orientation and message frame, parents’ regulatory focus orientation may impact their beliefs about the value of television

and videos for young children. Specifically, those who have primarily a promotion-oriented focus may experience greater “fit” with gain-framed marketing messages about infant/toddler TV/video use, and be more likely than those who are prevention-focused to be persuaded by them. In this study, we expect promotion-focused parents to be more readily persuaded by direct and ambiguous educational cues (i.e., in claim statements; brand names) on infant/toddler DVDs given the gain-frame of these cues.

Hypothesis 4a: Parents with a high promotion focus will rate the DVD as more educational for children, compared to less promotion-oriented parents, across claim specificity and product title conditions.

Hypothesis 4b: Parents with a high promotion focus will have a higher intention to purchase the DVD, compared to less promotion-oriented parents, across claim specificity and product title conditions.

METHODS

The present study was a survey experiment consisting of a 2 (Claim specificity: teaches, inspires) X 2 (Learning outcome: ‘letter identification and 20 vocabulary words’, ‘verbal exploration and symbolic language concepts’) X 2 (Brand name: Lil’ Munchkin, Lil’ Genius) X 2 (Promotion focus: high, low) between-subjects design.

The data for this study were collected through the Time-Sharing Experiments for the Social Sciences (TESS) project, which through a partnership with Knowledge Networks enables researchers to conduct survey experiments with a nationally representative sample (the data presented in the current study were not weighted to approximate the U.S. population).² With access to approximately 40,000 US residents, TESS also gives researchers the ability to pick certain segments of the population to sample. For the purposes of this study, we were interested in the opinions and reactions among parents with very young children (i.e., three years old and

younger) as this age range represents the demographic that infant/toddler DVD producers are most likely to target.

Participants

A total of 831 parents/legal guardians participated in this experiment. Of the sample, there were more women ($N = 458$, 55.1%) than men ($N = 373$, 44.9%). Participants ranged in age from 18 to 70 years of age ($M = 31.4$, $SD = 7.35$), and were from predominantly middle class households (median household income = \$50,000 to \$59,999) and White/Non-Hispanic (68.7%) households. Lastly, participants had an average of 14.5 years of education (approximately an Associate's degree; $SD = 2.60$) and came from households consisting of 4.2 people on average ($SD = 1.44$).

Procedure

The experiment was embedded within a larger survey conducted by Knowledge Networks. Participants were first asked if they were the parent or legal/guardian to a child under the age of 36 months. Participants who answered in the affirmative were then directed on to the main study. Participants were then told that their opinions were being sought about a new video for infants and toddlers. They were informed that this product was designed for use with children aged birth to three and they were being asked to evaluate the video for use with their own child who was under the age of three.

After randomly assigning participants to condition, parents were shown an image of the DVD packaging (created specifically for this study). The front and back DVD covers served as the experimental manipulation. Designed to resemble other popular videos intended for use with very young children, the DVD cover was professionally produced by a graphic designer. The DVD was titled "A-B-C Safari" and featured a cartoon lion and giraffe on the front cover, along

with some colorful block letters. The back cover included a short description about the video and included an image of a monkey and picture of children. Except for the experimental manipulations (claim verb, learning outcome, and brand name; described below), the images shown to participants were identical and contained no other educational cues (see Figure 1 for one example of the experimental stimuli). Parents were asked to evaluate the product for its potential educational benefit for young children and then were asked if they would be interested in buying it for their own child (see “dependent measures” below).

Once finished evaluating the product, participants filled out a brief survey that addressed their involvement in their children’s education, opinions about educational media, the extent of their promotion focus orientation, and ownership of infant/toddler DVDs for their own children’s use.

[FIGURE 1 ABOUT HERE]

Independent Variables

Claim Verb Specificity

The written claims displayed on the back DVD cover were modeled off of a collection of claims obtained through searching product websites for popular educational products (e.g. Baby Einstein, Brainy Baby, Leap Frog). In this study, each participant viewed a DVD cover containing a claim with either an (1) explicit learning verb, or an (2) ambiguous learning verb. The verbs used the manipulations were (1) ‘teach’ - which suggested an explicit outcome and (2) ‘inspire’ - which suggested an ambiguous outcome. These verbs were chosen based on their popularity on these websites and the ease with which they could be interchangeably used in the larger claim statement.

Learning Outcome

We also examined the learning outcomes referenced in claims on existing infant/toddler videos and DVDs. Based on the results of this review of claims, we chose outcomes for the present that were (1) empirically verifiable (i.e., specific) and (2) unverifiable (i.e., ambiguous). Half of the participants viewed a DVD containing the following learning outcome: “letter identification and 20 vocabulary words” (i.e., specific outcome). The other half viewed a DVD cover on which the learning outcome was “verbal exploration and symbolic language concepts” (i.e., ambiguous outcome).

Brand Name

The brand names used on the front covers of the DVD were also modeled after existing video/DVD brand names used for infant and toddler products, though none of the names used for this manipulation were currently in use by other media products. Again, there were 2 between-subjects conditions: (1) a brand name containing an educational cue, and (2) a brand name not containing an educational cue. For half of the participants the DVD brand name was “Lil’ Genius” (i.e., contains educational cue), while for the other half the brand name was “Lil’ Munchkin” (i.e., no educational cue).

Promotion Focus

Participants filled out a 5-item subscale from the BIS/BAS questionnaire (Carver & White, 1994). Specifically, the subscale was the BAS “Reward Responsiveness Subscale” ($\alpha = .84$), and included questions like “When I'm doing well at something I love to keep at it” and “When I get something I want, I feel excited and energized”. Responses to questions were recorded on a 4-point Likert scale (1 = very untrue for me, 4 = very true for me; $M = 3.46$, $SD = 0.49$). Participants were then split into two groups with either high promotion focus ($M = 3.86$; $SD = 0.16$) or low promotion focus ($M = 3.05$; $SD = 0.36$) based on a median split.

Dependent Variables

Perceived Educational Value

Respondents were asked two questions regarding the product's perceived educational value for infants and toddlers ($r = .66$). Their responses to these questions were recorded on a 5-point Likert scale (1 = *very unlikely*, 5 = *very likely*) and then averaged together to form a "perceived educational value of product" scale (1 = *very unlikely*, 5 = *very likely*- $M = 3.71$, $SD = 0.90$).

Purchase Intent

Parents were asked how likely it is that they would purchase this product for their child if it were available to them. We also reminded the parent that this product was intended for use with children from the age of birth to three. Their responses to this item were recorded on a 5-point Likert scale (1 = *very unlikely*, 5 = *very likely*; $M = 3.15$, $SD = 1.21$).

Covariates

Previous Experience with Videos

Parents were asked how many videos/DVDs directed for use with infants/toddlers they owned (e.g., *Baby Einstein*, *Brainy Baby*; 1 = none, 2 = 1 to 3 videos, 3 = 4 to 6 videos, 4 = 7 to 9 videos, 5 = 10 to 12 videos, 6 = 13+ videos; $M = 2.44$, $SD = 1.36$). In total, 73.8% ($N = 613$) of participants reported that they purchased or owned at least one of these videos.

Analytic Approach

We first tested relationships using zero-order correlations to determine whether any of our dependent variables were linked to select demographic variables (see Table 1). The results of this test revealed that both age of respondent and education of respondent were both significantly

linked to the perceived educational value of the video and purchase desire. As such, these two variables were entered as additional covariates in subsequent hypothesis tests.

To test our hypotheses we used a 2 X 2 X 2 X 2 analysis of covariance (ANCOVA). In each test, the independent variables were the experimental manipulations and the median split on participant's promotion focus. For all tests of main effects we used a Bonferroni adjustment to reduce incidences of Type I error and considered all tests with directional hypotheses to be significant with a one-tailed test (Hypotheses 3a-b, 4a-b). For non-directional hypotheses (1a-b, 2a-b) and interactions we considered $p \leq .05$ as significant. We included the number of videos owned, participant's age, and years of education as covariates in the model.³ All analyses were conducted with SPSS 15.0.

RESULTS

Zero-Order Correlations

Table 1 contains the zero-order correlations for all variables of interest in our study. As noted in the table, there was a small but marginally significant correlation between assignment to brand name condition and parent's promotion focus ($r(831) = -.06$), as parents with a lower promotion focus were more likely to be in the Lil' Munchkins condition. There were also significant relationships found between participant age, participant education, and number of videos owned with each of our dependent variables. Lastly, older parents were more likely to have had more years of formal education ($r(831) = .37$).

[TABLE 1 ABOUT HERE]

Perceived Educational Value of DVD

The first ANCOVA analysis assessed differences in parents' perceived educational value of the DVD. The results revealed two significant main effects and one significant interaction.

First, there was a significant main effect of parents' promotion focus, $F(1,810) = 25.70, p < .001$, partial- $\eta^2 = .031$. In line with hypothesis 4a, parents with a greater promotion focus rated the DVD of higher educational value for infants and toddlers ($M = 3.87, SE = 0.04$), compared to parents with a lower promotion focus ($M = 3.56, SE = 0.04$).

Our test examining parent's assessment of the product's educational value based on the video's brand name was also significant, $F(1,810) = 2.88, p < .05$, partial- $\eta^2 = .004$. As predicted (Hypothesis 3a), parents in the Lil' Genius condition were more likely to believe that the DVD had educational value ($M = 3.76, SE = 0.04$) when compared to parents in the Lil' Munchkins condition ($M = 3.66, SE = 0.04$).

We also found support for our two null hypotheses testing main effects (i.e., hypotheses 1a and 2a). With regard to claim verb specificity, we found no significant differences in parents' assessments of the product based on the specificity of the verb used in the claim, $F(1,810) = 0.77, p = .38$, partial- $\eta^2 = 0.001$. Parents presented with a claim containing the verb 'teaches' ($M = 3.69, SE = 0.04$) rated the DVD as of the same educational value as the parents presented with verb 'inspires' in the claim ($M = 3.74, SE = 0.04$). Further, there was also no difference in parent ratings of educational value based on differences in the specificity of learning outcomes within the claim, $F(1,810) = 0.25, p = .62$, partial- $\eta^2 = 0$. Parents who viewed the claim containing the ambiguous outcome (i.e., "verbal exploration and symbolic language concepts"; $M = 3.70, SE = 0.04$) was rated the same as the claim containing the specific outcome (i.e., "letter identification and 20 vocabulary words"; $M = 3.73, SE = 0.04$).

Finally, there was also a significant interaction effect for claim verb specificity and outcome specificity, $F(1,810) = 3.85, p = .05$, partial- $\eta^2 = 0.005$. As shown in figure 2, assessments of the video's educational worth were higher when the verb claim was 'inspires' and

the claims outcome was specific ($M = 3.81, SE = 0.06$) versus a vague outcome ($M = 3.67, SE = 0.06$). However, when the verb claim was ‘teaches’, parents gave a higher assessment of the video when the claim was vague ($M = 3.73, SE = 0.06$) than when it was specific ($M = 3.64, SE = 0.06$).

[FIGURE 2 ABOUT HERE]

Purchase Intent

The next ANCOVA examined the impact of parent and DVD factors on participants’ stated purchase intentions. This analysis revealed one significant main effect. Mirroring the results reported above, there was a significant main effect of parents’ promotion focus, $F(1,809) = 26.06, p < .001$, partial- $\eta^2 = .031$. Supporting hypothesis 4b, the results indicated that parents with a greater promotion focus were more likely to say that they would purchase the video ($M = 3.34, SE = 0.06$) in comparison to parents with a lower promotion focus ($M = 2.94, SE = 0.06$).

Again the results supported our two null hypotheses testing the influence of claim verb and outcome specificity levels (i.e., hypotheses 1b and 2b). Specifically, parents presented with the specific verb ‘teaches’ ($M = 3.18, SE = 0.05$) were just as likely to say that they would purchase the video when compared to parents presented with verb ‘inspires’ in the claim ($M = 3.10, SE = 0.06$), $F(1,809) = 1.11, p = .28$, partial- $\eta^2 = 0.001$. Moreover, there were no differences in purchase desire based on the specificity of the learning outcomes associated with the claim, $F(1,809) = 0.89, p = .35$, partial- $\eta^2 = 0.001$. Parents said they were just as likely to want to purchase the DVD when the claim’s outcome was ambiguous ($M = 3.11, SE = 0.05$) compared to those who saw the specific learning outcome in the claim ($M = 3.18, SE = 0.05$).

We did not find any support for hypothesis 3b as changes in the brand name of the video did not significantly impact decisions to purchase the video, $F(1,809) = 1.75, p = .09$, partial- $\eta^2 = 0.002$. Participants in the Lil' Genius condition ($M = 3.19, SE = 0.06$) were not more likely than parents in the Lil' Munchkins condition ($M = 3.09, SE = 0.05$) to say that they would buy the DVD for their child. No interactions were significant.

CONCLUSIONS

In October of 2011 the American Academy of Pediatrics reissued their policy statement discouraging screen media use with children young than age two (AAP, 2011). In their statement, the AAP states “Although infant/toddler programming might be entertaining, it should not be marketed as or presumed by parents to be educational” (AAP, 2011, 4). Yet, survey research indicates that many parents do believe these products to be of educational value for young children, and that this belief is associated with higher rates of viewing among their babies and toddlers (Rideout and Hamel, 2006; Vandewater et al., 2007; Zimmerman, Christakis, and Meltzoff, 2007). Furthermore, the vast majority of video/DVDs produced for children under age two do carry direct or implied statements or cues suggesting educational benefits for infants and toddlers (Garrison and Christakis, 2005; Fenstermacher et al., 2010). In response to concerns about the seductive and unfounded educational claims and cues used to market infant/toddler media products (CCFC, 2006), however, the FTC contended that “claims that the product ‘exposes’ or ‘introduces’ children to particular content – are unlikely, by themselves to convey an educational or developmental benefit claim...” (Engle, 2007, 2). As such, they argued that the

“net impression” gleaned from an ad or on DVD packaging with these types of statements was unlikely to mislead a reasonable parent.

This study is the first known examination of the extent to which parents of young children do distinguish between true, direct educational claims and ambiguous educational cues on infant/toddler DVD packaging. Notably, the findings suggest that parents perceive as much educational value from a DVD that claims to “inspire” infants and toddlers as one that claims to “teach.” Parents’ perceptions are also unaffected by whether or not the learning outcome is measurable and verifiable (i.e., “letter identification and 20 vocabulary words”) or not (i.e., “verbal exploration and symbolic language concepts”). Follow-up research is needed with diverse experimental stimuli to further verify that parents’ reactions to infant/toddler DVDs are not impacted by the specificity of the learning verbs and outcomes contained in the claims, and to determine the conditions under which parents would perceive a difference. Still, these preliminary findings suggest that the FTC may need to revisit their position regarding appropriate marketing techniques on media products produced for infants and toddlers. It seems parents may in fact interpret products that do not directly claim empirically verifiable outcomes in the same manner as those carrying explicit learning claims.

The results did provide one interesting interaction involving these claim features. The interaction revealed that *how* claims are paired influences parent’s educational assessment of the DVD. In the condition where parents viewed a specific verb claim, the parents who saw a claim outcome that was vague and not measurable were more likely to say that the DVD had educational value than parents who saw a claim with a specific and measurable outcome. Yet, when parents viewed a vague verb claim, the parents who saw the specific outcome rated the educational value of the DVD more highly than parents who saw the vague outcome. In fact,

parents who saw the DVD cover using the most definitive language and the most specific outcomes ('ABC Safari teaches infants and toddlers letter identification and 20 vocabulary words') rated this video the least educational. One explanation is that parents just do not parse these claims very carefully. Instead, parents may be focused on the general educational tone that the message sends. The use of a verb like 'inspires' may suggest some manner of educational ambiguous while a verb like 'teaches' has a very clear meaning. Specifically, the term "inspires", when paired with a measurable outcome, may more closely resemble the "open-ended" statements found to elicit particularly favorable responses by participants in Sawyer and Howard's (1991) study, in comparison to the more closed-ended "teaches." Conversely, when the outcome is more open-ended, the specific verb claim helps to add educational weight to the statement. Additional research should use different ambiguous claim verbs to further investigate the stability and boundaries of this finding.

In line with our expectations, parents did react differently to the DVD with an educational cue in the brand name (i.e., "Lil Genius") compared to those who viewed the DVD with no educational cue in the brand name (i.e., "Lil Munchkin"). Parents who viewed the DVD with the "Lil' Genius" brand name were more likely to say that the product had more educational value than parents who saw the DVD with the "Lil' Munchkins" brand name. However, there was no difference in purchase intentions based on the DVD's brand name. These findings suggest that similar products with educational cues in their name (e.g., Baby Einstein, Brainy Baby) do influence parents in the way that advocacy groups like the CCFC contend (CCFC, 2006), though the influence did not carry over into parents' purchasing decisions in this study.

As anticipated, our findings indicate that parents with a strong promotion focus orientation have higher perceptions of the educational value of an infant/toddler DVD and have a stronger desire to purchase the DVD when the packaging contains explicit and ambiguous educational statements, compared to their peers who are not promotion-focused. These results offer important early insights into the particular types of parents that may be more vulnerable to educational claims and cues used to market infant/toddler media products. In particular, this is the first study to examine the role of regulatory focus in parents' reactions to marketing features on infant/toddler media products, and as such, our findings broaden the scope of theory applied in this area and point to compelling avenues for follow-up research. One remaining question in particular is whether parents with a higher promotion focus are more likely to selectively attend to information that fits their regulatory focus (i.e., the educational cues), or whether parents pay equivalent attention to the educational cues but promotion-focused parents were more persuaded by them. Of course, additional research is also needed to understand relationships with parents' extent of *prevention* focus as well. Parents who have a strong prevention focus likely experience greater "fit" with loss-framed messages, and may be more readily persuaded by them. Such messages regarding early childhood TV/video use tend to be found among warnings from the AAP and others against such use. For example, in a recent radio and print campaign the AAP says:

"It may be tempting to put your infant or toddler in front of the television, especially to watch shows created for children under age two. But the American Academy of Pediatrics says: Don't do it! These early years are crucial in a child's development. The Academy is concerned about the impact of television programming intended for children younger than age two and how it could affect your child's development." (AAP, 2010, 1).

Additional experimental research is needed to determine the extent to which prevention-focused parents may be more impacted by such loss-framed messages regarding infant/toddler television and DVD/video use.

The differences in parents' reactions based on their degree of chronic promotion focus have practical implications as well. As prior research has shown that parents' perception of the educational value of television and DVDs for infants and toddlers is associated with a higher rate of television and video exposure among young children (e.g., Rideout and Hamel, 2006; Vandewater et al., 2007; Zimmerman, Christakis, and Meltzoff, 2007b), our findings beg the question of whether young children's rates of exposure may vary with parents' promotion focus. Additional research is currently underway to examine this possibility. Furthermore, the present findings can inform various institutions who seek to reduce parents' perceptions of the educational value of these products (e.g., AAP; CCFC). Such campaigns may be more successful to the extent that they take into account parents' regulatory focus orientations. Of note is research indicating that an individual's focus can be altered situationally such that a normally prevention-focused person can be primed to be temporarily promotion-focused (see Dholakia et al., 2006; Keller, 2006; Werth and Foerster, 2007). Thus, a campaign may seek to prime a promotion focus among their target audience before delivering gain-framed messages aimed at changing parents' perceptions of the educational value of infant/toddler DVDs.

Evaluating the Null Hypothesis

As this study predicted and found no differences in parents' reactions based on claim verb and outcome specificity, it is important to acknowledge the difficulty associated with

predicting that the null hypothesis will not be rejected. When most researchers engage in quantitative research, the goal is to reject the null hypothesis (i.e., show that one's findings could not have happened by chance; Schutt, 2009). However, in the current study we have predicted that there would be no differences among parents' educational assessment of the video or their desires to purchase the video based on the specificity of educational claims. Yet, there are several challenges to predicting that the null hypothesis will not be rejected which, in turn, should engender some skepticism in the results.

The reason why it is worthwhile to be skeptical of studies which predict that the null hypothesis will not be rejected is because there are certain things a researcher can do to get the results they desire. The first is to use a small sample size, as this reduces the ability to detect significant effects if they do exist (Schutt, 2009). This is not an issue here, however, since we were able to detect significant main effects for both of our dependent variables (i.e., for promotion focus and brand name- for the assessment of educational value) as well as an interaction, suggesting a sufficiently large sample. Furthermore, our power analysis indicates that with a sample size of 832 participants, we would be able to detect significant differences for even small effect sizes (Cohen's $f^2 = .017$).

A second way that a researcher can get the results they desire is to use an experimental manipulation that is so weak that it virtually guarantees no significant differences between experimental conditions will emerge. As our study did employ relatively subtle manipulations of the claims, it may be appropriate to consider whether these manipulations were strong enough. Our significant interaction looking at verb specificity by outcome specificity was significant, thus suggesting that this particular manipulation did have some influence to produce differences in parent's judgment of the DVD.⁴ Moreover, we contend that because this study was designed

to test an important policy point by the FTC (namely, that less specific educational claims would be met with more skepticism than more specific claims by the average parent) it was vital that the experimental manipulation mimic real infant/toddler DVDs. While we could have cued more critical inquiry on the part of the parents by asking them more pointed questions about the claim's contents, it would not have been an accurate replication of how these videos are usually purchased.⁵

As such, we believe our findings regarding parents' assessments of educational video claims do indeed show that parents do not evaluate claims very closely. With the exception of the interactive influence of verb specificity and outcome specificity on parents' perception of educational value, parents did not distinguish between the DVDs based on the verb or educational outcome listed on the packaging. As such, our findings suggest that parents do not actually parse educational claims when evaluating DVDs for infants and toddlers.

Future Research and Limitations

There are some limitations associated with this study that should be addressed. First, there was no measure of actual purchasing behavior, just a report from the parent about how likely they would be to purchase the video. A stronger test would be to actually have participants engage in the purchasing behavior, though this was not an option for the present study. A second limitation was that participants were unable to hold the DVD package and examine it, as they might in a department store, nor could they see how other parents rated the product, as they might do online. Consequently, this study may have omitted cues that help parents make their purchasing decisions. However, limiting the extraneous variables in this study helped to provide a cleaner test of the influence of our independent variables of interest.

One potentially important avenue to investigate in future work is the role that parent/expert recommendations play in shaping attitudes towards the product. Infant/toddler media production companies seem to rely heavily upon recommendations from both parents and professionals when appealing to consumers. Future research should also manipulate the desirability of these products by making them potentially less appealing to parents. Somewhat surprisingly, parents in this sample were universally inclined to view our DVD positively. A fair amount of press attention has been paid to the warnings against media use with children under two from the AAP (AAP, 2011) as well as the controversy surrounding the use of these videos with children (e.g., Lewin, 2009). It seems this coverage may not have impacted the attitudes of many parents with young children, however. Future work on this topic could also cue skepticism in parents by including information from these previous studies and/or including questions which require a closer reading of the claims (e.g., asking parents specific questions about the content of the claims).

Conclusion

As described above, the findings of this study do not support the decision or rationale of the FTC in response to the CCFC's complaints regarding the misleading educational claims on infant/toddler media products. Given that this study is the first known investigation of parents' reactions to various educational cues on infant/toddler DVD packaging; more research is needed to fully inform the appropriate position of the FTC. Still, these findings, which contradict expectations voiced by representatives of the FTC (Engle, 2007a,b), coupled with the prolific array of educational claims and cues used to market media products intended for infants and toddlers indicate that such additional research is badly needed.

ENDNOTES

1. Involvement was manipulated by telling one group of participants that they would receive, as a gift, one of the products they were supposed to review while the non-motivated group was told that they would not receive a gift.
2. See www.knowledgenetworks.com for more information about Knowledge Networks and the TESS program.
3. Participants were able to click on the image to see a larger version and we have a record of when participants did so. There were no differences between parents who clicked on the image and those that did not, nor any differences in perceptions of educational value or purchase intentions.
4. We conducted 30 statistical tests as part of our hypothesis testing (two ANCOVAs with four main effects and eleven interactions each). As such, there is some likelihood that this result occurred by chance (Schutt, 2009).
5. This is also why we did not explicitly inform parents that this was an academic study as we felt that many parents would have engaged in hypothesis guessing if told that this was a study about how parents assess infant/toddler videos (all Knowledge Network families are told at enrollment that they may be taking part in market research, public policy polling and/or academic research).

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FIGURE 1
Example of Experimental Stimuli

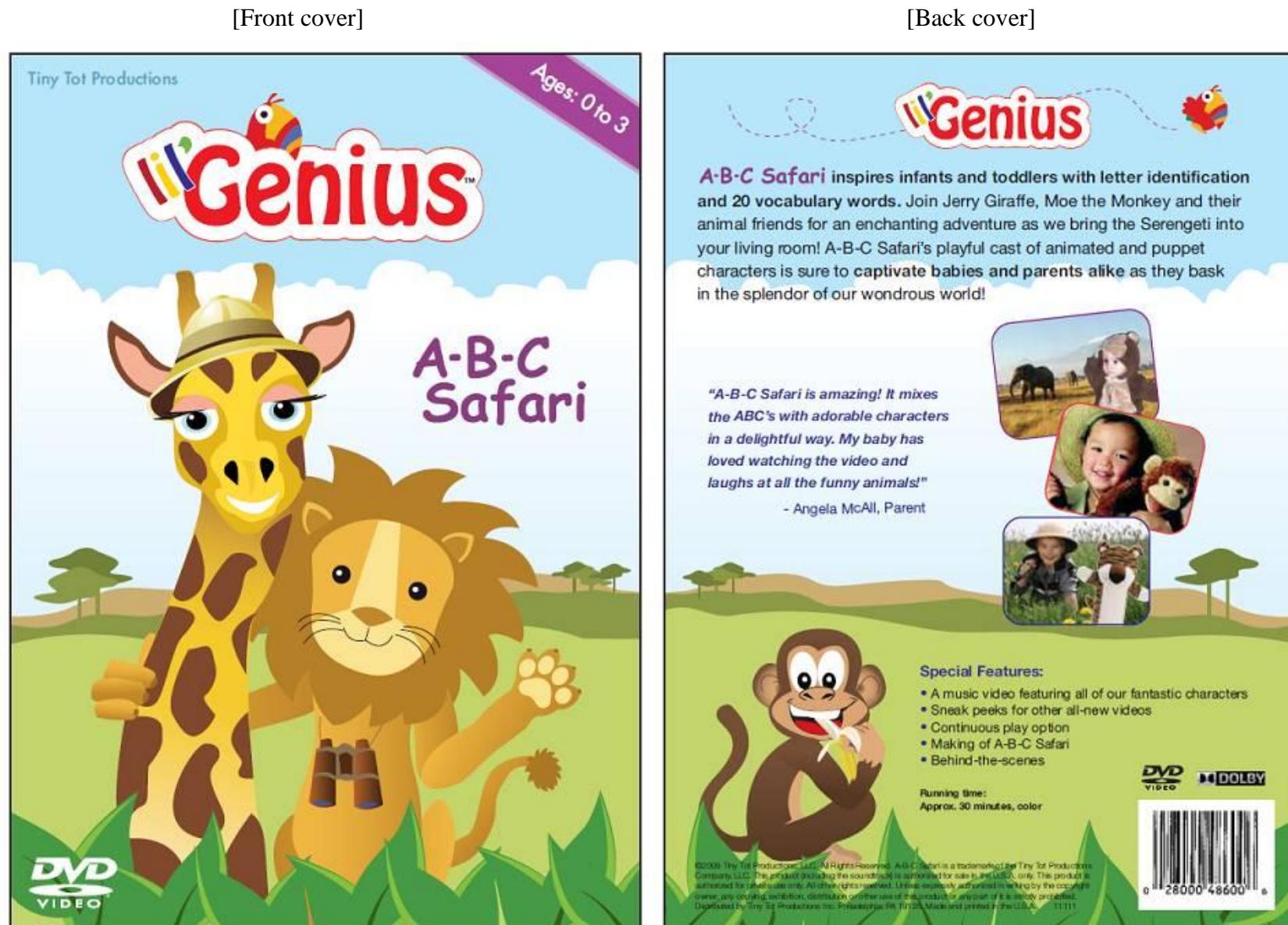


TABLE 1
Zero-order Correlations for Variables of Interest

| | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. |
|--|----|-------|------|------|-----|-------------------|--------|--------|-------|
| 1. Perceived educational worth | - | .65** | -.03 | -.03 | .01 | .26** | -.14** | -.22** | .13** |
| 2. Purchase desire | | - | -.01 | .03 | .02 | .24** | -.18** | -.31** | .24** |
| 3. Brand name condition (Lil' Genius = 1) | | | - | .01 | .01 | -.06 ⁺ | -.02 | .04 | -.02 |
| 4. Claim verb specificity (teaches = 1) | | | | - | .00 | .01 | -.06 | .05 | .00 |
| 5. Claim output specificity (specific = 1) | | | | | - | -.01 | -.02 | -.02 | -.02 |
| 6. Promotion focus | | | | | | - | -.17** | -.05 | .11* |
| 7. Respondent age | | | | | | | - | .37** | .06 |
| 8. Respondent years of education | | | | | | | | - | -.01 |
| 9. Infant/toddler videos owned | | | | | | | | | - |

Note: ⁺ $p < .10$; * $p < .01$; ** $p < .001$

FIGURE 2
Parents' Ratings of DVD Educational Value Based on Claim Verb Specificity and Outcome Specificity.

