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**The Impact of Child-Directed Media Consumption on
Consumer Intelligence**

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**The Impact of Child-Directed Media Consumption on
Consumer Intelligence**

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The Impact of Child-Directed Media Consumption on Consumer Intelligence

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The impact of child-directed media consumption on consumer intelligence was investigated using 77 parent-child pairs - 39 first graders and 38 fifth graders. The majority of the subjects were from a homogeneous sample of primarily middle to upper-middle income, two-parent, Caucasian, families. Data was collected through a parental survey and a 25-minute personal interview with each child.

In the document that follows, first the multi-dimensional constructs of consumer intelligence and child-directed media consumption are defined. In the study, the components of consumer intelligence were defined as: knowledge of the purpose of advertising, knowledge of prices of familiar consumer goods, ability to judge the relative value of goods or groups of goods, and ability to reach a satisfactory purchase decision. The components of child-directed media consumption were defined as: level of media consumption, richness of the media environment (more access to media choices), amount of parental influence on media choices, and media knowledge. Next, measures were developed for each of the constructs and each child was assigned a composite consumer intelligence score and a composite child-directed media consumption score. Using those scores, the study's main hypothesis, that children's consumer intelligence scores would

be higher for children engaging in high levels of child-directed media consumption, was tested. This was accomplished through the use of a mixed methodology employing cluster analysis techniques. Four child-directed media consumption and four consumer intelligence typologies were identified for both first and fifth graders. These typologies were supported by both quantitative and qualitative data. Results did not support the main hypothesis, but results did suggest several theories regarding the relationship between high levels of child-directed media consumption and consumer intelligence. A consumer socialization model describing the relationship between parents, media, and peers, as suggested by the findings, is presented.

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BACKGROUND

Chapter 1 Introduction

INTRODUCTION

As a starting point for the discussion of the shifting role that children play as consumers, consider the following example:

In today's urban China, it is increasingly children who guide their parents through a fast-changing world. When the Zhou's bought a new television set last year, Bella chose the brand. When they go out to eat, Bella insists on Pizza Hut. She teaches them the latest slang and shows them cool sites on the Internet.... Bella dragged her parents to Pizza Hut. Her father prefers traditional Chinese restaurants and tried to coax Bella, unsuccessfully, to switch. In the crowded restaurant, Bella took charge. She ordered pineapple pizza, chicken wings and iced tea for all. Then she went to the salad bar and filled a communal bowl for the table, another novelty she has introduced to her parents. (Chang 2003)

Bella, the subject of the article from which the above excerpt was taken, is 10 years old.

The story of Bella highlights two important global cultural phenomena – one is that due to rapid technological change, children are often thrust into the role of innovators and early adopters in the family. Second, as capitalism spreads, the marketing model dictates that each family member is targeted as a potential purchaser or influencer. The end results of these phenomena are that children are becoming increasingly more important entities in family consumer decision-making – even in China, where capitalism is in its infancy.

As expected, in the United States where capitalism reigns, the treatment of children as consumers of interest has been growing in recent years. In the US, children under 13 are estimated to influence \$600 billion in family spending in addition to the \$40

billion in pocket money that they spend directly. By 2008, the amount of direct spending by children under age 13 is projected to reach \$52 billion (Fonda and Roston 2004).

The influence that US children have on their parent's purchase decisions has been well-documented. A 2003 RoperASW study found significant increases over a one-year period in the number of children and parents who say 8-17 year olds are playing a larger role in household purchasing decisions ranging from food to entertainment to media (Unknown 2003). In fact, Americans are so accustomed to being told that children are important consumers that they now believe that because they are fulfilling the role of a consumer and making decisions, that somehow children are much more consumer-intelligent today than they were 10 years ago (La Ferle, Li et al. 2001). This increase in consumer savvy among children has been anecdotally attributed to earlier and more frequent exposure to media and advertising – both direct and incidental. In the past decade, corporate America's budget for advertising products and services to kids has more than doubled, to an estimated \$15 billion (Fonda and Roston 2004). According to studies, the average child in the United States is exposed to more than 40,000 TV commercials a year (Dittman 2004).

Consider the following excerpt from a review of a British documentary entitled "Getting Older Younger" – in which filmmakers persuaded advertisers to go on camera and give an honest account of how they manipulated children.

... he reflects on the ease with which the young or "the kids" as he and nearly everyone else in advertising call them can be persuaded to pester their parents into buying them the right brand...brands are the stamp of authenticity...in the playground, if you have the wrong type of training shoes, then you are excluded. The thing about kids is, yes, they are keen to be individuals, but there is nothing worse than not being the right type of individual who is included in the group... If you have something nearly right, if you've got it slightly wrong, then it's completely wrong...the great thing about them [kids] is that their memory banks are relatively empty so any message that goes in gets retained...British lawmakers

dismissed the idea of curbing ads to kids... saying kids were 'savvy, media literate and surprisingly cynical' and they didn't need protection. If a few were being exploited then it was their parent's fault... Mead admits that this generation of kids is being bombarded by more messages than any other group of kids in history... The industry itself admits that relentless commercial pressure is forcing a retreat from childhood... Colegrave says that the cut-off point for buying toys has been falling by one year every 5 years. Most of today's children stop playing with Lego when they are 6 or 7... Humphries once recalls how she made the mistake asking 7 year-old girls what toys they liked (ha ha) - they wanted make-up and nail varnish and they pulled up their shirts and showed her their superfluous bras... with the exception of the very young, children watch adult television... fears of their parents divorcing makes them edgy and sophisticated beyond their years. Mothers who want to protect children from manipulation are condemned as "regressive" while those who don't are "progressive" and "independent". Forward-thinking progressives can be encouraged by showing their children as miniature adults - at ease with consumption. Fears of regressive moms are heightened by ads showing the kids will get E-coli if they don't buy disinfectant. (Cohen 1999)

The quotes in the above essay, most from advertisers, serve to summarize a commonly held set of beliefs about today's youth – that they are growing up faster than previous generations, worldly, consumer savvy, and generally not in need of protection – especially from the technology and media they embrace. One group that does not seem to subscribe to the above viewpoint is the kids themselves. A recent survey highlighted the differences in how marketers view children to how children view themselves. The survey found that 51% more of the professional marketers perceive today's kids as “savvy consumers” than do the kids themselves and 39% more see the kids as “powerful” consumers – leading to the observation that marketers' first reaction is to define kids by their characteristics as consumers, while kids define themselves as kids first (Grimm 2004). Another article says that Tom Kalinske, president of Knowledge Universe (makers of LeapFrog learning system) and former CEO of Sega of America and Mattel Inc. and others in the industry believe that kids today are more sophisticated consumers than the generations that preceded them, well able to recognize hype and impervious to crude manipulation (Leonhardt 1997).

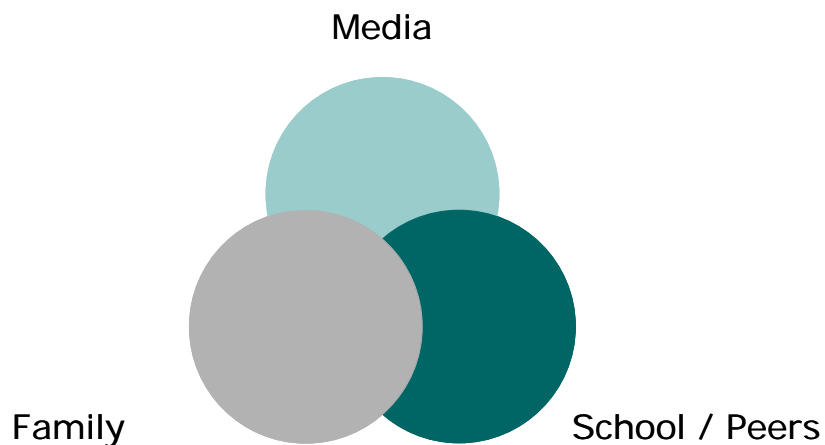
FOCUS OF STUDY

The main focus of this study is to investigate and attempt to measure the influence of media consumption on children's consumer intelligence. To date, even with all of the emphasis on the increasing importance of child consumers and decision makers, consumer behavior researchers have very little study data to support commonly held beliefs related to the influence of media on consumer socialization and consumer intelligence.

Previous literature suggests that the main influences on children's consumer learning are parents, peers, the media and culture as a whole (Roedder-John 1999). This consumer socialization triad is illustrated in Figure 1.

Figure 1

Consumer Socialization Influences



While a large body of literature exists describing and documenting parental influences on children's consumer knowledge, attitudes, and behaviors – there are far fewer academic studies available relating to the other two members of the triad - peers and media. Consequently, there is also an opportunity to look at the interactions between these three primary influences.

Initially, the emphasis of this study was media effects, but throughout the course of the investigation it became apparent to the researcher that the area of interaction between parents and media could not be ignored or set aside. It is from this perspective that the concept of *child-directed* media consumption was constructed. For the purposes of this study, child-directed media consumption is defined as: media consumption activities that are actively asked for, purposefully selected, or independently accessed and consumed by the child. The idea is that the child is consuming media without parental guidance or influence. The underlying assumption is that for children who consume relatively large amounts of media on their own, a higher proportion of consumer socialization could be attributed to the media, and relatively less to parents and peers. Conversely, children who consume little media at all, or consume media mostly with their parents, would have relatively less media influence on their consumer behavior. Therefore, the main hypothesis of this dissertation study is:

H1: Children's consumer intelligence scores will be higher for children engaging in high levels of child-directed media consumption.

GOALS OF STUDY

As previously mentioned, the main components of this study are child-directed media consumption and consumer intelligence. As the construct of child-directed media consumption is both a relative and complex metric, the approach will be to use typologies

to describe various patterns of media consumption behaviors. One goal of this study is to document children's media consumption typologies.

Another goal of this study is to establish a scale to measure consumer intelligence among children. While it is impossible to go back in time to look for increases in consumer knowledge from that of past generations of children, it is expected that this scale will allow for such comparisons in the future.

The final goal of this dissertation research is to begin to define the relationship between media consumption profiles and consumer intelligence in children. This will be accomplished by analyzing the various consumption typologies in terms of consumer intelligence scores – looking for patterns and consistencies that help to explain varying intelligence scores in terms of media consumption practices.

The implication and intended application of knowledge obtained from this study is to better equip educators, parents, and regulators to supplement, fine-tune, and perhaps legislate controls for the media environment in order to ensure children are getting the requisite knowledge to be effective life-long consumers.

PRESENTATION OF STUDY

This dissertation is organized into two major divisions. The first will define terms and address the current situation - exploring the media landscape, documenting assumptions and reviewing what is currently known. The second half of the paper will focus on adding to the existing body knowledge by providing a baseline measurement of consumer intelligence, using the newly developed scale, and describing common media consumption typologies among children.

In an effort to allow the reader to more fully appreciate the immediate relevancy of the topic, the current children's media landscape is discussed in the Chapter 2. The explosion of media directed at and developed for children is one of the key motivators driving this study. One of the primary tasks on the way to discovering the effects of the media environment on children is to first learn more about their understanding of the media itself. A precursor to that task is to catalog the media environment as it now stands.

The following section, Chapter 3, will focus on the two key constructs for which scales will be developed – consumer intelligence and child-directed media consumption among children. As this paper introduces several multi-faceted constructs it is necessary to devote some up-front time to defining and developing these ideas. This section will also lay out this author's underlying assumptions, present a causal progression model for the study and detail expected contributions.

A subsequent section, Chapter 4, will review the existing body of literature in relevant topic areas such as consumer socialization, factors affecting consumer socialization, marketing to children, and media and advertising effects. Literature relating peripherally to the study at hand will be introduced as required. Some peripheral topics include parenting styles, children's decision-making strategies, and media influences not related to consumerism.

The second half of the paper will look at specific hypotheses, scale development, study methodology and outcomes, discussion, and future plans. It is the intent of the author that this paper serve as a starting point for the development of a framework within which interested parties can discuss the implications of the new media landscape on how

children obtain critical knowledge, skills, and attitudes that are responsible for life-long consumer behaviors.

Chapter 2 Current Media Environment

CURRENT MEDIA ENVIRONMENT

In an effort to allow the reader to more fully appreciate the immediate relevancy of the topic, the current children's media landscape will be discussed in this section. The explosion of media directed at and developed for children is one of the key motivators driving this study. A precursor to understanding the effects of the media environment on children is to understand the environment itself.

Cable Television

Since 1979 when Nickelodeon was first launched on cable TV, the number of cable television networks providing programming specifically aimed at child audiences has grown significantly, as has their viewership. Nickelodeon has been the highest-rated cable network in the US since 1995 (Viacom 2004). Today, DirecTV, the largest US satellite television provider, carries 9 stations that provide programming primarily for children under the age of 12 and eleven additional stations are offered as "family-friendly". (See Appendix A for a current listing of children's and family-friendly cable networks.)

Currently, three players dominate children's cable television – with Disney, Nickelodeon, and Cartoon Network providing 80% of kids' viewing options. While about one-third of US children aged 2-11 do not have cable (approximately 20 million households), cable offerings spill over to network television on Saturday morning – with ABC running a Disney line-up, CBS carrying content from Nickelodeon, and NBC running a 3-hour block from Discovery Kids (Ostrow 2004).

Cable television offerings for children are continuing to grow in every dimension. Comcast, the country's largest cable operator has just announced plans to create a 24-hour network for toddlers (Berman, Grant et al. 2004). Turner Broadcasting has introduced a new channel called Toonami (Age 2004). One of the reasons cited for this growth is the opportunity to run repeats on cable – up to 100 showings of the same program (Ostrow 2004).

Interactive and Print Media

While the proliferation of television offerings often attracts the most attention due to widespread access to these stations, there is parallel growth in other forms of media for children – including the Internet, magazines and other print media, radio, and interactive TV.

Disney has a radio network dedicated to children's programming that broadcasts live from Disneyworld and the number of magazine titles offered for children or (parents and children together) is nearing 50. (See Appendix A for a current listing of magazines.) While the number of websites containing content for children is difficult to quantify, the American Library Association site (ALA 2004) contains hundreds of links in 37 categories to content appropriate for children under 14 and does not contain any links to gaming sites or other commercial offerings – which number in the thousands. The growth of Internet use by children is evidenced by data from a recent survey reporting that two million American children now have their own website and that 6 million children will have a website by 2005. This number represents fully 10% of the 23 million kids who have Internet access from home today (Brief 2003).

One new offering on the horizon is Interactive TV for children. Interactive TV allows viewers to interact with television programming through their remote controls or special hardware appliances. Through Interactive TV, viewers can play along with quiz show contestants, select a camera from inside a specific car from which to view a NASCAR race, or pick and choose news stories. This medium also allows programmers to target specific viewers (by zip code, for example) with tailored quiz questions, advertisements and special offers (Keefe 2004). Interactive TV has already seen some success in the UK among children – with “Play & Learn” programming and gaming. One reason that content providers are excited about the prospects of Interactive TV for children is that they are often among the fastest and most receptive adopters of new technology (Goff 2003).

Branding Issues

The growth of children’s content providers across multiple mediums is beginning to change the way media companies view their own business. Ian McClelland, an interactive producer at Turner Kids, states that recent changes within Turner mean “that the company is becoming less of a broadcaster and increasingly a general entertainment company” (Age 2004). This change is causing media companies to put even more focus on brand development – using, for example, the Web to get attention on television and vice versa. Nickelodeon sees the world as a place where kids can interact with the brand in numerous ways – including television, magazines, licensed products and online (Viveiros 2004). Cartoon Network has 1.6 million registered web users and receives between 8 and 9 million visitors monthly. Art Roche, creative director at Cartoon Network New Media said that “...rather than focusing on having viewers build loyalty to the channel, Cartoon Network wants kids to bond with their characters, such as The

Powerpuff Girls, Dexter, and Samurai Jack. These characters make up our brand” (Viveiros 2004).

Not only are media brands increasing their multiple-medium presence, so are other consumer brands – such as Kraft, Pepsi, McDonald’s and Hershey’s – all of whom have online free online gaming sites laden with corporate advertising. These new offerings, sometimes called advergames, often expose children to heavy doses of advertising. Kraft’s nabiscoworld.com features advergames for at least 17 brands – including Ritz Bits Sumo Wrestling, Life Savers Boardwalk Bowling, and a game where players are Planter’s Peanut vendors at a baseball game. The relatively low cost of advertising through Web games is one reason for their popularity with marketers. The cost of airing a 30-second TV commercial can range from about \$7 to \$30 per thousand viewers (at 2004 rates) while advergaming can cost less than \$2 per thousand users who spend, on average, 30 minutes interacting with the products (Pereira 2004).

As branding is playing an increasingly important role in the current children’s media environment, the concept of brand knowledge among children becomes relevant, albeit, not central to the current study. Keller (Keller 2003) suggests that any encounter with a brand has the opportunity to change the mental representation of the brand. It follows, therefore that each varying presentation of a brand to a child serves as a building block – and that the more different ways a brand is presented the more chances there are for lasting representations. This concept is critical to the current study in that if a child is exposed (either directly or incidentally) to a brand through several different media, then that brand will likely have more mental associations than those brands accessed through only one medium. As the current study is looking at the relationship between child-directed media consumption and consumer intelligence, it follows that if a child is

exposed to advertising from multiple stimuli, they may be more influenced than children with fewer ports of entry for advertising messages.

Reaching Children

Accompanying this media explosion is an unprecedented directed-marketing push toward children. Twenty years ago the literature that guided marketers typically treated children as a fairly homogenous segment – reachable mainly through commercials on Saturday morning cartoons and toy promotions on cereal boxes and in the stores themselves. With more media outlets, the content and messages are more easily tailored to an increasingly narrow target audience. One result of this is that children are more able to independently select, consume, and fully experience media offerings. Robby London, of DIC Entertainment (which produces shows such as “Where on Earth is Carmen San Diego?”) believes that “...beyond the age of 5 or 6, kids really pick their own programs. Adults for the most part don’t really control the sets” (Pennington 2004).

While there are still shows with universal kid-appeal, e.g. *Sponge Bob Square Pants* and *Rugrats*, age-related programming plateaus are apparent – with most children outgrowing the educational fare on PBS by the time they get to first grade (Ostrow 2004). In a recent article, an 8-year old boy is quoted as saying: “I used to like ‘Arthur’, but now I don’t since I’ve grown up. I think I’m old enough now for the other shows” (Pennington 2004).

Not only are marketers able to reach children through a growing number of media outlets and narrowly focused programming venues but they are also increasingly reaching children when they may be the most vulnerable – when they are alone. Two studies sponsored by the Kaiser Family Foundation document the trend toward privatization of

media consumption by children (Roberts, Foehr et al. 1999; Rideout, Vandewater et al. 2003) – a trend noticeable to others as well. A recent article contains the following quote from a pediatrician: “Although a huge percentage of kids these days have their own TVs and watch in their rooms with the doors closed, that’s not a great idea” (Pennington 2004). The American Psychological Association (APA) is also concerned about the privatization of children’s media consumption – the growing number of young children using the Internet and watching televisions in their bedrooms, where no one is present to explain what they are viewing or the material with which they are interacting (Dittman 2004). Additionally, Internet usage – which often takes place alone - exposes children to advertisements that “just go unnoticed by the child” (Fonda and Roston 2004) by “mingling advertisements with entertainment in way that can make it hard for children to tell the difference” (Leimbach 2000).

REGULATORY ENVIRONMENT

Since the 1980s, when the phenomenon of focusing on children as consumers first emerged (McNeal 1992), the regulatory environment regarding children and media has become increasingly complex and dynamic. Previous to that time, regulators addressed issues primarily pertaining to television advertising on Saturday morning network television – telling advertisers to separate advertising from programming, not use characters from the current program as spokesmen, and not to encourage children to “ask their parents” for advertised goods. Over the past twenty years, regulators have struggled to supply timely guidance to content providers and advertisers – often leaving unintended gaps in protection. In the past several years though, there has been a more concerted effort by government, advocacy groups, and parents to close these gaps. This effort is fueled by concern over rising rates of childhood obesity – which is blamed, in part on junk food advertisements. Nick Jaffe, executive vice president for the Association of

National Advertisers notes: “there has been nothing like this [current efforts to regulate advertising] since the effort to ban kids’ ads in the 1970s” (McConnell 2004).

In the recent past, the primary focus of relevant regulatory bodies has been categorization and labeling of content. Television shows, movies, and video games all have rating systems that allow parents to readily assess whether or not the content is appropriate for children. On the Internet, the primary focus has been on safety and privacy issues for children. But regulatory bodies are being pressured from all sides to do more – the advertisers want clarity and the parents, teachers, and advocates want increased protection in light of the current media environment. The American Psychological Association (APA) has joined forces with the American Academy of Pediatrics, the Kaiser Family Foundation, and several other organizations in calling for legislation to restrict advertising to children under 8 years old. The groups are also calling for more research showing the influence advertising has on young children. The chairman of APA’s Task Force on Advertising and Children says: “The user is sometimes not even aware of the marketing effort and advertising undertaking. Advertisers and marketers are very sophisticated in using advertising to reach children. However, virtually no research exists in the use of Internet interactivity to reach children” (Dittman 2004).

Some critics say that websites like Neopets (www.neopets.com) enable advertisers to skirt TV-industry practices that alert children to commercials with bumper announcements like ‘Hey kids, we’ll be right back after these messages’. In fact, Neopets Inc. press materials declare that advertisers can embed their brands “directly into entertaining site content” - a practice that complies with the Children’s Online Privacy Act (Fonda and Roston 2004). This example exposes the gap between current guidelines and those desired by critics of modern advertiser’s methods for reaching children.

In an effort to stave off restrictive legislation, the Children's Advertising Review Unit (CARU) of the National Advertising Review Council promotes responsible children's advertising through the publication of self-regulatory guidelines (CARU 2003). Similarly, the National Cable & Telecommunications Association has recently published a report aimed at empowering television viewers directly (NCTA 2004).

Despite increased self-regulation efforts, the government is getting more involved in protecting children as they navigate the modern media landscape. On April 1, 2004 the domain kids.us premiered as a safe haven for children on the Internet. The new web address is the result of a law sponsored by Congressman John Shimkus (R, IL). Further underscoring the complexity of the current media environment, ABC has become the first television network to agree to provide content to the domain (Telecomweb 2004).

Finally, on June 28, 2004, Senator Tom Harkin (D, IA) announced plans to introduce a bill that would reinstate the Federal Trade Commission's ability to issue rules on unfair advertising to children.

Chapter 3 Construct Definitions

The basic research question that this study strives to answer is: “What is the relationship between child-directed media consumption and consumer intelligence?”

In the previous section, the current media environment for children was presented. The purpose of this section is to define key terms to be used throughout the study and clarify the basic underlying constructs. Additionally, assumptions related to concepts and hypotheses will be outlined and discussed. The three key concepts to be introduced in this section are: child-directed media consumption, media proficiency, and consumer intelligence.

CHILD-DIRECTED MEDIA CONSUMPTION

Since the increase in media use by children is well-documented and thought to be an increasingly important source of consumer-related information for children it is a key aim of this paper to investigate the relationship between media exposure/consumption and consumer intelligence – with the goal being to better understand whether or not media plays a more important role in consumer socialization for child who consumes large amounts/proportions of media on their own – with little parental or other adult participation. For the purposes of this study, “child-directed media consumption” is defined as:

Media consumption activities that are actively asked for, purposefully selected, or independently accessed and consumed by the child.

This definition is intended to be broad enough to be relevant to children of all ages. There are two main components to this definition that warrant further discussion.

First, the notion of media “consumption” is to be distinguished from mere media exposure. Anyone that has observed a small child “watch” Dora the Explorer knows that children nowadays do not sit by idly as the pictures flash by but rather they sing along, shout out answers, and otherwise interact with the characters. Children, as young as two, know to get their purple backpack when they see Dora. The term consumption in this paper is purposefully used to convey the reality of today’s current media environment where children are as often participants as they are viewers. Obviously this is especially true in the interactive world of the Internet and for players of video games. In these media, participation is mandatory.

The second component of interest is the idea of independent consumption. While it used to be somewhat necessary for parents to “stand-by” as children were reading, doing homework, watching family TV shows, using the Internet, etc., to help explain words, or concepts, or situations, this need is rapidly disappearing. With more media outlets, the content and messages can more easily be tailored for an increasingly narrow target audience. The end result is that children are more able to independently select, consume, and fully experience media offerings. The idea of independent consumption and experience is a critical element of this dissertation. The reduced need for adult intervention, brought about by the increased number of offerings, represents a major paradigm shift in media consumption. For years, parents were able to control media exposure by controlling access to the technology – and the knowledge to use it. Now, as demonstrated in the opening paragraph of this paper, the children, in many cases have surpassed their parent’s abilities to access media and thus seized control.

Societal forces are also driving independent media consumption by children. It is estimated that 20 million children in the United States (approximately 27%) now reside in single-parent households (Paulin and Lee 2002) where time-strapped parents may have

difficulty closely monitoring media consumption. Additionally, the increase in violence and sexual content of adult targeted offerings has made co-viewing by families more difficult. The top-rated prime time network television show, CSI: Crime Scene Investigation carries a rating of TV-14 (see www.cbs.com for more information).

In summary, the concept of child-directed media consumption encompasses the idea that an adult's skills, knowledge, and sensibilities are not required for a child, even as young as two, to have a successful media consumption experience.

Media Proficiency: Knowledge and Experience

Having an understanding of the current media environment – where a child can self-select and successfully navigate the media landscape, naturally leads one to consider whether or not the children understand what they are doing. This “knowing and understanding” in conjunction with the ability to access various offerings forms the core of self-directed media consumption. As previously stated, true media consumption goes beyond exposure – to becoming an active participant. In previous media-related studies, self-report measures and monitoring schemes have been employed to log media exposure (Roberts, Foehr et al. 1999). In these types of studies it is possible to identify children with large amounts of exposure but little is known about whether they are affected by and knowledgeable about the media they are engaging. The current study goes beyond the self-reported exposure levels and media environment to measure actual media knowledge.

It is suspected that some children acquire media knowledge, not only through their own experiences but also through the experiences of their siblings and peers. It is believed that this area of interaction provides children with vicarious consumption

experiences with media and can explain why children who do not have cable TV in their home are well versed in program offerings from cable-only networks. The current study uses an independent measure of media knowledge by asking children to identify and define specific elements of the media landscape – on the Internet, in video games, on television, and through movies and music. By assessing each individual's broad knowledge of many forms of media - independent of exposure levels - an assessment or projection of the effects that the media is likely to have on that child can be made.

The idea that indirect as well as direct media interaction can affect a child's consumer intelligence is an important component of the current study. The inclusion of peer effects on media knowledge is an essential element in the overall investigation of media effects. With this piece of the puzzle, the foundation exists for a more complete study of media effects on consumer intelligence – where media is looked at alone, in terms of an interaction with parents, and in terms of an interaction with peers.

The term “media proficiency” has been developed for use in this paper in order to alleviate confusion with the often-used term “media literacy”. Media literacy has previously been defined as the ability to access, analyze, evaluate, and create communications in a variety of media (Schwarz 2003). While elements of the media literacy concept overlap with those associated with media proficiency as defined, there are two important distinctions. First is the element of creation – for the purposes of the current study, it is not necessary for children (nor expected) that they can create anything in the media environment – rather the important elements that are the focus are the ability to participate in and fully experience the offering as it is presented by the content provider. Second, the term media proficiency will be expanded to include specific knowledge of programming and website content – in other words, the ability to identify

and associate programming with its provider, navigate through websites, and identify video game characters across multiple platforms.

In effect, the concept of media proficiency is a multi-dimensional construct – incorporating a child’s exposure, access, and knowledge of their media environment. For the purposes of this paper, it is assumed that children who are highly proficient have attained a portion of their knowledge through experience that can be either direct or indirect. This is important to note, as it is this experience – in the absence of parental or adult interaction – that is at the core of child-directed media consumption.

One of the goals of this paper is to identify typologies of child media consumers. These typologies will incorporate each of the elements discussed in the previous sections – environment, content knowledge, direct experience, indirect experience, exposure, parental supervision (or lack thereof), as well as overall interest in media in general.

CONSUMER INTELLIGENCE

Another term in need of clarification is “consumer intelligence”. Like media proficiency, consumer intelligence is a multi-dimensional construct. For the purposes of this paper consumer literate children are defined as children that are conscious of advertising and aware of its purpose, have knowledge of pricing, understand the concept of value, and are able to reach a satisfying decision in a purchase situation.

As there is no gold standard for defining a “good” consumer, even in the adult world, it is not the author’s intent to judge (or rate) a child’s purchase decision, but rather, the goal is to determine whether or not the child has the ability to make a satisfactory decision in a consumer situation where uncertainty exists.

Another way to think about consumer intelligence is to contrast it with the concept “consumer oriented”. While consumer-intelligent children have some sense of quality, value, and price trade-offs, consumer-oriented children often do not. Children who are consumer oriented understand and are aware of needs/wants, products/brands, and having and owning, but lack the ability to factor in limiters such as price and value. The construct of consumer-oriented is very closely tied to materialism – which will be discussed in the subsequent review of the literature. One of the main goals of this study is to develop a scale by which children’s consumer intelligence can be gauged.

Assumptions

There are several assumptions that must be stated in order for the following study to be fully appreciated. Each of these assumptions will be supported by the literature review in Chapter 4 and revisited again in the discussion section of Chapter 9, but for the purpose of clarity they will be explained as a separate matter.

The first assumption is that children engaged in high levels of child-directed media consumption are more likely to be influenced by that media in terms of consumer socialization. Therefore, it follows that these children are proportionately less affected by more traditional, adult-directed consumer socialization activities.

The second assumption is that children who are large consumers of child-directed media are consuming the media on their own (with little adult supervision or interaction). While this concept has been discussed in previous sections, it is necessary to understand that the main thesis of this paper is that it is the lack of parental/adult participation in

media consumption that leads the children to be proportionally more influenced by media than by other socialization agents.

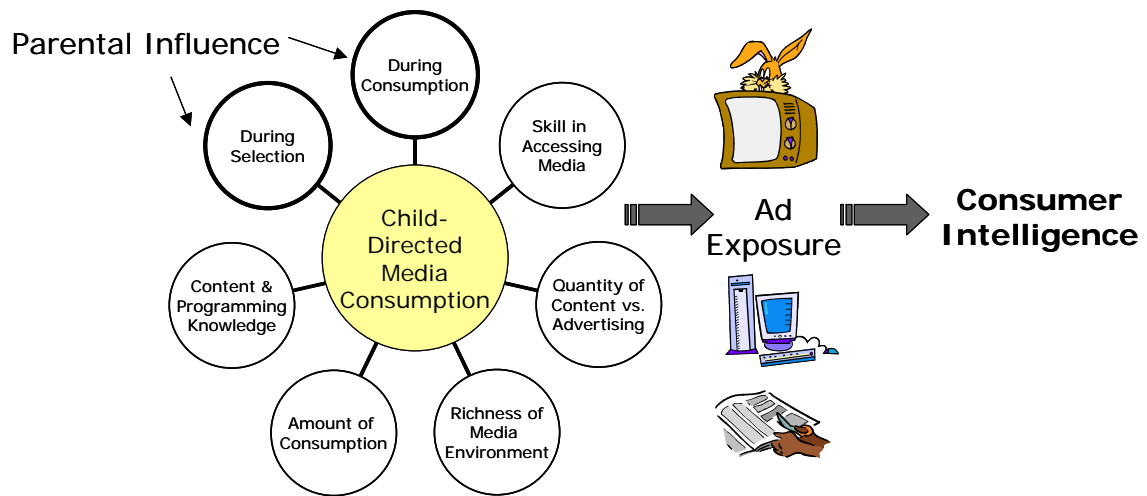
Each of these assumptions warrants discussion, as they are the foundation for the hypotheses to follow. A review of the literature will show that consumer socialization has traditionally been accomplished primarily through parent-child interaction. The idea being explored in the current study is that children who consume large amounts of media on their own are missing out on at least a part of the traditional consumer socialization process and that, for these children, media is supplanting the role of the parent by providing early and repeated exposure to consumer issues. Another component of this assumption is that there is only so much time in a day and if children are spending a large proportion of their time immersed in media there is undoubtedly less time for parent interaction in general.

The second assumption, while seemingly redundant, reinforces the first – namely that children engaged in high levels of child-directed media do not have time to also engage in additional media consumption experiences with their parents.

The third and final assumption is illustrated in Figure 2. The basic principle is that child-directed media consumption causes children to be exposed directly and indirectly to unmediated messages that will influence them as consumers. Again, this assumption is an important component of the argument that children who self-direct their media consumption run the risk of being socialized as consumers not by their parents, but by the media.

Figure 2

Link Between Child-Directed Media Consumption and Consumer Intelligence



Chapter 4 Literature Review

LITERATURE REVIEW

A review of the relevant literature leads to several distinct topics of interest. The overarching subject matter driving the current investigation is consumer socialization - the study of how kids acquire consumer knowledge, skills, behaviors and attitudes. A subset of the consumer socialization literature contains a body of literature that more pointedly informs on the topic at hand – that which deal directly with media effects. As previously stated, the main goal of the current study is to add to this area of knowledge in particular. The current study will bring researchers closer to a more complete understanding of the triad of forces affecting consumer socialization – though both direct impact and through interactions. The existing body of literature also includes studies relating to the media and materialism, the effects and effectiveness of television advertising to children, and information and decision processing in children.

Four Decades of Consumer Socialization Research

Most modern (post television) work in the arena of consumer socialization can be traced back to studies performed in the 1970s by prominent researchers such as Scott Ward, (Ward and Wackman 1971; Ward 1974; Ward, Wackman et al. 1977; Ward, Wackman et al. 1977; Ward 1978), Daniel Wackman (Wackman, Wartella et al. 1977), Ellen Wartella (Wartella, Alexander et al. 1979) John Rossiter (Rossiter and Robertson 1974; Rossiter 1977; Rossiter 1979), and Marvin Goldberg (Goldberg and Gorn 1974; Goldberg, Gorn et al. 1978). Since that time, each new decade has brought forth fresh research programs that have provided a continuous stream of information and enlightenment relating to children, the media, advertising, and the consumer socialization processes.

In the early 1980s, Deborah Roeddder-John began what turned out to be a 20+-year period of investigation that eventually served to map a timeline of how children gain consumer information (Roedder 1981; Roedder, Sternthal et al. 1983; Roedder John and Cole 1986; Roedder John and Whitney 1986). The primary focus of many of her studies was age differences among children - in realms such as information processing, use of perceptual cues, categorization, and decision-making. Also in the 1980s Merrie Brucks (Brucks, Goldberg et al. 1985; Brucks, Armstrong et al. 1988) published several articles relating to cognitive processing of television advertising, and Carole Macklin (Macklin 1983; Macklin 1985; Macklin 1987; Macklin 1988) began a similar program aimed at trying to discover what young children understand about television advertising. In the realm of communications within families, George Moschis (Moschis and Moore 1982; Moschis, Moore et al. 1984; Moschis 1985; Moschis 1987) followed up on earlier work first with broad studies of consumer socialization and later with the effects of television advertising and the role of interpersonal family communication styles.

In the 1990s Laura Peracchio (Peracchio 1992; Peracchio 1993) contributed to the literature with studies looking at children's consumer knowledge acquisition through audio-visual stimuli and script processing. The 1990s also brought a slew of work related to the effects of television and advertising on adolescents (Austin, Roberts et al. 1990; Bousch, Friestad et al. 1994; Committee on Communications 1995; Shim 1996; Mangleburg and Bristol 1998; Robinson, Chen et al. 1998; Macklin and Carlson 1999; Ritson and Elliott 1999). During this period in time there was a great deal of controversy over advertisements for alcohol that were reaching underage children. There was also some interest in learning whether or not the money invested in anti-drug advertisements was well spent.

In the new millennium, there appear to be two distinct trends emerging in consumer research for children. One trend is to look backward and try to summarize, review, and collect all that is known about modern consumption behavior and knowledge acquisition in children from the various studies performed over the past 30 years. This trend was undoubtedly spurred by Deborah Roedder John in 1999 with the article entitled “Consumer Socialization of Children: A Retrospective Look at Twenty-Five Years of Research” (Roedder-John 1999) as well as a meta-analysis of media effects by Emmers-Sommer (Emmers-Sommer and Allen 1999). One recent consumer socialization study looks back to the how children are portrayed as consumers as early as 1910 (Cook 2000). Another historical perspective can be found in a 2002 article by Cross entitled “Valves of Desire: A Historian’s Perspective on Parents, Children, and Marketing” (Cross 2002).

A second emerging trend might be best described as looking at consumer socialization from a post-modern perspective or perhaps consumerism as an embedded or intertwined social phenomenon. Literature from this genre looks at issues such as the development of materialism among children (Buijzen and Valkenburg 2003; Goldberg, Gorn et al. 2003), the unintended effects of advertising (Buijzen and Valkenburg 2003), how children come to understand television (Carlson, Lacznia et al. 2001) and children’s relationships with brands (Pecheux and Derbaix 1999; Manning 2000; Moore and Lutz 2000; Ji 2002). This stream of inquiry diverges from the past in that the focus is shifted from internal – what is going on inside the mind of the child consumer, to external – what is happening in the child’s environment that may be affecting them as a consumer and how product experiences, parental and peer pressure, and the media influence child consumers.

The current study is conducted from this external perspective – looking not at internal mechanisms, but rather social and environmental factors that may affect a child’s

consumer knowledge, perspective, and future behavior. This study is possible because over the last 30 years researchers have constructed a basic framework of consumer socialization, allowing the discipline to move forward as cultural and technological changes lead children to acquire consumer knowledge in ways not possible in the past. It is only through the understanding of the past that it is possible to conduct studies such as the one currently presented – without a baseline or model from which to compare, it would be impossible to explore the possible effects of the modern media environment on children.

It should be noted that throughout the past 40 years a parallel research track has been sustained in relation to children as consumers. There exists an entire industry that focuses on how to market to children from a business perspective. Additionally, since media effects on children and the broad topic of advertising to children are of interest to the general public and parents in particular there are a number of relevant articles published in the popular press. Some literature from each of these sources will be reviewed in an effort to present a more complete summary of the impetus for the current research. One academic researcher of note that approaches children as consumers from a business perspective is James McNeal. McNeal is a pioneer in the modern study of child consumer behavior, publishing his first book on the topic in 1964 (McNeal 1964).

Consumer Socialization: Age-Related Differences

As a comprehensive review of consumer socialization research covering the period of 1974 –1998 was published in 1999 (Roedder-John 1999), the focus of the following survey of the literature will be to pull together the specific pieces of work from that time period and beyond that specifically inform on the current topic – the relationship between media consumption and consumer intelligence. The goal of the

literature review is two-fold, to anchor the current study in widely accepted fundamental theories and to explain the impetus behind the current inquiry.

As with much modern research relating to children's learning, the foundation of consumer socialization literature can be traced back to the work of Piaget (Piaget 1929; Piaget 1955; Piaget 1973) and other cognitive development theorists such as Kohlberg and Vygotsky (Kohlberg 1969). More recently, work relating to decision-making processes in children and categorization schema serves to provide the conceptual psychological structure upon which to build consumer socialization theory. Researchers such as (Parault and Schwanenflugel 2000; Blaye and Bonthoux 2001; Carmichael and Hayes 2001; Zhang and Sood 2002) are involved in such endeavors.

In Roedder John's review of 25 years of consumer socialization research, the first section is devoted to providing a conceptual overview of consumer socialization, summarizing important theories, and developing a conceptual framework that describes stages of consumer development. These stages roughly map to Piaget's theory which proposes four main stages of cognitive development: sensorimotor (0-2 years), preoperational (3-7 years), concrete operational (7-11 years) and formal operational (11-adult) (Roedder-John 1999). The proposed consumer socialization stages are the perceptual stage (3-7 years), the analytical stage (7-11 years) and the reflective stage (11-16 years). Through these stages children progress both in terms of knowledge structures and decision-making and influence strategies. In terms of consumer intelligence, the development of decision-making and influence strategies is most relevant. Characteristics of children in each stage, as presented by Roedder John, are summarized, through paraphrasing of salient concepts, in the following sections.

In the perceptual stage, children have a general orientation toward immediate and readily observable perceptual features of the marketplace. Children's consumer knowledge is characterized by perceptual features and distinctions, often based on a single dimension or attribute and represented in terms of concrete details from their own observations. These children exhibit familiarity with concepts in the marketplace, such as brands or retail stores, but rarely understand them beyond a surface level. In terms of decision-making, the orientation can best be described as simple, expedient, and egocentric. Decisions are usually made on the basis of a single, perceptually salient attribute such as size. Although they may be aware that parents or friends have other views, children at this age have difficulty thinking about their own perspective and that of another person simultaneously.

The analytical stage contains some of the most important developments in terms of consumer knowledge and skills. The shift from perceptual thought to symbolic thought, along with increases in information processing abilities results in a more sophisticated understanding of the marketplace, more complex knowledge about advertising and brands, and a perspective beyond their own feelings and motives. Concepts such as product categories and pricing are thought of in terms of functional or underlying dimensions and generalizations are drawn from personal experiences. Reasoning proceeds at a more abstract level, setting the stage for knowledge structures that allow for abstract concepts such as advertiser's motives. The ability to analyze stimuli on multiple dimensions and the acknowledgement of contingencies brings about vast changes in children's consumer decision-making skills and strategies. Children exhibit more thoughtfulness in their choices and are more flexible and adaptive in their approach to making decisions.

The reflective stage brings about further development in several dimensions. Knowledge about branding and pricing becomes even more nuanced and complex as children develop more sophisticated information processing and social skills. There is a distinct shift in orientation to a more reflective way of thinking and reasoning and there is more focus on the social meanings of the consumer marketplace. An awareness of other people's perspectives results in more attention to the social aspects of being a consumer, making choices, and consuming brands. Additionally, attempts to influence parents and peers become more strategic, and less direct.

In the second part of Roedder John's review, research in five areas is reviewed – children's advertising knowledge, transaction knowledge (products, brands, shopping, pricing), decision-making skills and strategies, purchase request and negotiation strategies, and consumption motives and values. As the consumer intelligence is operationalized in the current study to look at understanding of advertising, pricing

knowledge, sense of value, and decision-making ability, only the relevant sections will be included. Reviews of germane findings, as presented by Roedder John, are summarized in the following sections through the paraphrasing of salient concepts.

Advertising and Persuasion Knowledge

In terms of advertising and persuasion knowledge, the first step for children is to learn to identify television commercials and distinguish them from other forms of programming. This is usually accomplished by age 5. By age 6 or 7 an understanding of advertising intent usually emerges (Rossiter and Robertson 1974; Ward, Wackman et al. 1977; Brucks, Goldberg et al. 1985; Brucks, Armstrong et al. 1988). Prior to this, young children tend to view advertising as entertainment or a source of unbiased information. Around 7 or 8, children begin to see the persuasive intent of commercials, coming to terms with the fact that advertisers are “trying to get people to buy something”. Reid (Reid 1978) found that higher levels of understanding of advertising can be facilitated by parents that take a strong consumer education role with their children. Researchers have questioned whether measures of children’s knowledge of advertising requiring abstract thinking and verbalization result in an overly pessimistic view of what very young children know about advertising intent. A study by Donahue (Donahue, Henke et al. 1980) provided early evidence of understanding in young children but results were not replicated in later studies by Macklin (Macklin 1985; Macklin 1987). In summary, there is little reason to believe that the vast majority of children younger than 7 or 8 years of age understand advertising’s persuasive intent.

By the time they reach their eighth birthday, children not only understand the intent of advertising but also recognize the existence of bias and deception in advertising. Children aged 8 and older no longer believe that “commercials always tell the truth”. Ward (Ward, Wackman et al. 1977) reports that the percentage of kindergarteners and sixth graders believing that advertising never or sometimes tells the truth increases from 50% to 97%. These changes parallel those reported for understanding of persuasive intent for first and fifth graders. Along with more negative views comes a better understanding of why commercials are sometimes untruthful and how one can distinguish truthful from untruthful ads. Ward (Ward, Wackman et al. 1977) found that kindergarteners often state no reason for why commercials lie whereas older children connect lying to persuasive intent. The ability to recognize bias and deception in ads, coupled with an understanding of the persuasive intent of commercials results in less trust and less liking of commercials (Robertson and Rossiter 1974). Family environment, peers and television exposure also contribute to the development of skeptical attitudes toward advertising. For young children, critical attitudes seem

to be furthered by parental control over television viewing (Soley and Reid 1984) and less television viewing in general (Rossiter and Robertson 1974).

Transaction Knowledge

Transaction knowledge encompasses learning about stores, products and brands, shopping scripts, shopping skills and pricing. To children, products and brands are probably the most salient aspects of the marketplace. By preschool, children can begin to recall brand names from television advertisements or product packages, especially with the aid of a salient visual cue (Macklin 1996). By kindergarten and first grade, children begin to read and spell brand names, and by the time they reach middle childhood, they can name multiple brands in most child-oriented product categories such as snacks, cereal, and toys (Rossiter and Robertson 1974; Ward, Wackman et al. 1977; McNeal 1992; McNeal 1992; Otnes, Kim et al. 1994). In terms of brands, children's awareness develops first for child-oriented product categories and then increases and expands, as other categories become more salient. In middle to late childhood children develop a preference for particular brands, while preschool children will express a preference for familiar branded items over generic offerings (Hite and Hite 1995). By sixth grade, children have developed a very keen sense of the social meaning and prestige associated with certain products and brands.

The only existing study relating to shopping skills is reported by Turner and Brandt (Turner and Brandt 1978). In this study, two groups of children (ages 4, 10-11) were given several shopping tasks – one involving a comparison of packages and quantity and one involving prices and quantity. In the first children compared two packages containing equal amounts of same product – one in a single large size and one with many small individually wrapped pieces. In the second task, children were shown three different package sizes and shapes and were asked to determine which one would give the most product for the money. Results show that older children and children who were given more opportunity to manage money and make consumer decisions at home were more accurate in their decision-making.

Despite the fact that children have substantial shopping skills by middle childhood, they pay relatively little attention to prices. By the time children are 8 or 9 years old, they know products have prices, know where to look for them, and know that there are price variations among products and stores, but very few know the prices for frequently purchased items (Stephens and Moore 1975). In a 1992 study McNeal found other cues, such as brand name, to be far more salient to children (McNeal 1992).

Consumption and Motives (Materialism)

One of the most enduring concerns about consumer socialization is that our culture encourages children to focus on material goods as a means of achieving happiness, success, and fulfillment. Concerns of this nature have escalated as

evidence has become available pointing to a higher level of materialism among children (McNeal 1992). Understanding when and how such materialistic values form has been the central focus of consumer socialization research. Research suggests that children clearly value the possession of material goods from a very young age – sometimes favoring them above all else (Goldberg and Gorn 1978). Fueled by a greater understanding of the social significance of goods, consumption symbolism, and interpersonal relationships, materialistic values crystallize by the time children reach the fifth or sixth grade (Goldberg, Gorn et al. 2003). Once the stage is set for the adoption of materialistic values, the extent to which adolescents exhibit these orientations depends on environmental factors such as family communication, peer communication, and television exposure. Higher levels of materialism are reported for adolescents who watch more television (Churchill and Moschis 1979; Moschis and Moore 1982) and watch television to learn about lifestyles and consumer behaviors (Ward and Wackman 1971; Moschis and Churchill 1978). However, it was later determined that the correlations between television viewing and materialism are insignificant in the long run for those with high initial levels materialism and those in families with high levels of communication about consumer matters (Moschis and Moore 1982).

Beyond Age Differences: Gaps in the Socialization Literature

While it is clear that great strides toward understanding the consumer socialization process have been made over the past 30 years, there are some notable gaps that the current research strives to fill. Some of the gaps are noted in the final section of Roedder John's comprehensive review while others have come to light more recently. One topic, related to shopping skills, mentioned by Roedder John (Roedder-John 1999) is children's understanding of pricing and value. As noted, there has only been one study, conducted more 25 years ago, which explores these issues (Stephens and Moore 1975).

Roedder John notes that perhaps the most noticeable gap in socialization literature is a basic understanding of what decision strategies children possess at different ages. It was the choice of the author to leave out the portion of the Roedder John's article that dealt with decision-making because none of the reviewed research studies on this topic included any mention of risk in decision-making, which is the concept most relevant to

the current study. In the majority of the reviewed articles, the focus of the decision-making was on information processing strategies and capabilities – with no mention of the risks children perceive in making a poor choice. The concept of risk in decision-making among children is explored further in a subsequent discussion of findings.

Chief among the factors undoubtedly playing an important role in consumer socialization is the social environment – including family, peers, culture, and mass media. While researchers acknowledge these factors, little basic research exists that applies social interaction theories, found in the early writings of Piaget and the work of Vygotsky, to consumer socialization (Roedder-John 1999). Vygotsky argues that learning only takes place in the midst of social interaction with others within a culture, often through cognitive scaffolding – where a parent or teacher, in a social setting, presents a situation that is slightly beyond what a child alone can master. The parent or teacher then guides the child through the learning process (Vygotsky 1986; Rogoff 1990; Markman 1999). Another recent article advocating use of scaffolding blocks as the basis for consumer socialization studies was published in 1999 by Cram and Ng (Cram and Ng 1999). These authors argue that consumer socialization studies approached from a purely psychological or purely marketing perspective fail to fully take into account children's cultural milieu. The focus of the current study is to investigate consumer learning that comes through the media in the absence of the adult-led social interactions that are key to scaffolding theory.

In terms of influence of the family on consumer socialization, there have been three sustained approaches to the study of this topic. One approach was to look at parent's purposeful attempts to educate their children regarding consumer issues. It was found that parents often have few educational goals and make limited attempts to teach consumer skills (Ward 1974; Ward, Wackman et al. 1977; Moschis, Moore et al. 1984).

A second stream, studied extensively by Moschis and his colleagues employed family communication pattern typologies (Moschis and Moore 1979; Moore and Moschis 1981). Finally, in the late 1980s, Carlson and his colleagues identified typologies of parental socialization that are currently being incorporated into research programs, including the one presented in this paper.

In the current study, media consumption typologies will be developed with consideration of the parental socialization types identified by Carlson. These types include authoritarian, rigid controlling, organized effective, indulgent, and neglecting parents (Carlson and Grossbart 1988; Carlson, Grossbart et al. 1992). While a significant portion of the studies completed in this area involve use of adolescents as the primary subject, it is believed that many of the socialization phenomena relevant to the current study stem from learning and experiences that occur in early to middle childhood.

Finally, one more family-related factor suspected to have influence over consumer socialization is sibling relationships and/or birth order. Birth order becomes more important in studies based in the context of socialization, rather than cognitive developmental sequences. It is expected that children with older siblings in the household will exhibit some accelerated forms of consumer learning or product familiarity. For this reason, birth order and household membership will be included in the current study.

Media Effects: A Closer Look

In terms of media effects on consumer socialization, the primary focus has been on television advertising. Strong evidence exists that supports the idea that television advertising affects children's product preferences (Roedder-John 1999). The effects of television advertising are one of the few areas of inquiry that has enjoyed constant

attention over the past four decades of consumer socialization research (Ward 1972; Goldberg and Gorn 1974; Robertson and Rossiter 1974; Rossiter 1979; Roedder, Sternthal et al. 1983; Macklin 1988; Raju and Lonial 1990; Young 1990; Wilson and Weiss 1992; Alexander and Morrison 1995; Acuff 1997; Bergler 1999; Macklin and Carlson 1999).

Over the last 15 years, Austin (Austin, Roberts et al. 1990; Austin and Meili 1994; Austin and Nach-Ferguson 1995; Austin, Fujioka et al. 1999; Austin, Pinkleton et al. 2000) in the context of alcohol advertising, found some support for an interaction effect on children between parents and the media. In a 2000 study involving teenagers, Austin noted that the potential risk of frequent exposure to persuasive alcohol portrayals via late-night talk shows, sports, music videos, and prime-time television for underage drinking is moderated by parental reinforcement and counter-reinforcement of messages. This is consistent with Austin's findings through the years that parents can countermand media influences through communication with their children. These findings are also consistent with those of a previously cited study by Moschis and Moore (Moschis and Moore 1982) where it was found that television exposure was positively related to materialistic views except in families with strong communication patterns.

Starting the late 1980s, studies by Carlson (Carlson and Grossbart 1988; Carlson and Grossbart 1990; Carlson, Grossbart et al. 1992; Carlson, Walsh et al. 1994; Carlson, Lacznia et al. 2001) also explored the interaction between parenting and media. Carlson's research stream involves the effects of varying family communication patterns on the consumer socialization process. One salient finding is that parents with differing styles use the socialization medium of television in dissimilar ways – some view it as a valuable tool for children to learn about social behaviors, while others use access to media as a means of control.

A recent article with perhaps the most compelling case for further study of the effects of high levels of child-directed media consumption was published 1999 in the *Journal of Advertising*. This article compares and contrasts consumer socialization variables between African Americans and Caucasians (Bush, Smith et al. 1999). Of interest is the finding that African-American college students tend to watch more TV, use advertising more as a source for information and have more positive attitudes toward advertising than their Caucasian counterparts. The authors then go on to surmise that due to increased media usage, television and advertising in general may have greater socializing effects for African-Americans than for Caucasians. Clearly this finding highlights the need for further studies where media effects are more isolated or insulated from other social factors.

In 1999, a meta-analytic summary of media effects research that has been published in *Human Communication Research* during the past 25 years was presented. Basic findings were that, first, age is related to processing ability, understanding, and attending to media such that as children age, they better understand media messages. Second, that the mass media are a significant source of learning and third, that the media can influence attitudes, which in turn, may influence and shape behaviors (Emmers-Sommer and Allen 1999). An additional observation of particular relevance is a finding that there exists an effort to control or partially control children's exposure to harmful media but, as a result of different family dynamics from the 1970s, children may not receive the adult guidance necessary to be shielded from graphic material, and they may not have someone to explain the real world implications of such materials. At the core of the construct of child-directed media consumption is the idea that it is different from parental-mediated consumption in the sense that there is no one present to explain content (in the context of this study, consumer-related content) to children.

The importance of television as a socialization agent has been investigated in terms of content as well as advertising. O'Guinn (O'Guinn, Faber et al. 1989; O'Guinn and Shrum 1997) postulates that television may play an important role in shaping perceptions of social norms, many of which have consumer components. He states:

...as cultures have grown more complex, our ability to develop accurate perceptions and norms may have actually decreased - this is due largely to the extent to which we use mass-mediated information in lieu of that directly acquired. Much of this information is treated as if it was directly observed in the real world and is worked into cognitions of reality. It is important to keep in mind that television is so prevalent in our society that virtually no one can escape its influence. Even light viewers are likely to be affected by the images and values of television either directly through viewing or indirectly through interactions with others who have been affected. Many of the findings may be strongest for children and adolescents who have limited real life experiences.

He then goes on to say that the programs between the ads have largely been ignored by consumer researchers – a common lament among consumer researchers (O'Guinn, Faber et al. 1989; Hirschman and Thompson 1997). For this reason, the current study does not isolate the viewing of advertisements but rather treats the consumption of advertisements as a consequence of media consumption in general. Additionally, the deliberate inclusion of generalized media consumption of all types is reflective of the author's view that messages affecting consumer socialization may be present in programming or content as well as traditional advertisements.

In summary, the relevant body of literature pertaining to consumer socialization - while rich with descriptive detail, stage models, and explanations of basic media effects - leaves room for further exploration of topics relating to the social context of consumer learning. This area of study becomes even more salient in light of cultural changes such as non-traditional family structures, increased media offerings, and technological

advances that foster consumer learning in an environment unmediated by parents or other responsible adults.

Motivation for Current Study

The final section of the literature review provides context for the motivation to embark on a study of child-directed media consumption and consumer intelligence. To summarize, it is known from the previous section that there exists little empirical research on applied consumer knowledge among children – specifically in relation to pricing and “real-world” decision-making. Additionally, there are numerous calls for research into social, cultural, and environmental factors affecting the consumer socialization process – namely family structure, parental and peer influence, and media effects. The current study strives to inform, at some level, on each of these topics. Furthermore, there are even more calls for research on consumer socialization in light of cultural changes affecting media consumption patterns and attitudes toward the media. Also driving the current interest in media-related studies are topics of concerns such as rising materialism, increased media access for children, and the rapid pace of technological change. It is perhaps the rapid changes in technology, and the subsequent lag in empirical research, that unite parents, teachers, researchers, and regulators in an ongoing effort to answer the age-old question “how is all this affecting the children?”

As previously stated, a significant portion of the consumer socialization literature is devoted to the understanding and effects of television advertising. At the end of her review of 25 years of consumer research, Roedder John states that while television advertising is of obvious importance to consumer socialization, much could be learned from a better understanding of the subtle effects of content in both television and movies (Roedder-John 1999) – mirroring a sentiment by O’Guinn previously discussed. A

subsequent article reiterated the need to study media effects beyond television advertising and put forth the requirement to include computers and new media, like the Internet, into future studies (Wartella 2000). (Edwards, La Ferle et al. 1999). In the same article, Wartella also concludes that further research is needed on the effects of media on children in order to help shape future content. This call for research comes on the heels of an essay which argues “there is far too little research on the effects of new types of media programming and formats on children. In fact, the gap between the research base and production and policy issues appears to be widening” (Wartella 1999).

The concern over media effects on children is a universal phenomenon, as evidenced by the following excerpt from an Australian author.

...it could be argued that the carefully targeted advertising and images in children's media amount to a child-focused Synopticon, where the ultimate in children's culture is beamed via television across many a household, and via the Internet in some others... many young vagabond children are very aware of what it is necessary to consume in order to live the ultimate in Western tourist child life, and many of these commodities are frustratingly beyond their reach. (Ailwood 2000)

Postmodern theorists raise similar concerns about the effects of media images on society as a whole – supporting earlier assertions by O’Guinn that television (rather than actual experiences) may play an important role in shaping perceptions of social norms.

Postmodernism, at its core, is a critique of capitalism and the ideology of science that produces the innovations and technologies that keep the capitalist engine running. Advertising is critical to the process of commodification. Advertising not only informs but stimulates market demand and in this way it expands markets. Conversely advertising is only effective with extensive and high-velocity markets with high-speed transportation and communication technologies and infrastructures and with imaging technologies to visually represent commodities to consumers. Under these conditions, advertising encourages the selling of symbols, especially as basic needs are satisfied or it can encourage the consumption of products that at one level meet basic needs but at a more symbolic level communicate status, membership, and other culturally defined differences. Postmodernists emphasize that humans have a fascination with images and as the

number and quality of images increase, not only is culture increasingly a series of visual images, but self and identity are increasingly defined in terms of media images rather than real social situations. The act of advertising itself reduces objects from their use value to their sign value - for as advertisements become commodities in and of themselves, image rather than information becomes the content of the commodity. (Allan 2000)

Finally, a recent article summarizes the current concern regarding the media as a consumer socialization agent – not only for children in the United States, but around the world.

Although we tend to believe that parents, friends, and schools are the main socialization agents for teens, a simple look at the omnipresence of media suggest that media are equally powerful socialization agents. There appears to be a convergence of teen values and beliefs across cultures, forming what some are calling a global teen consumer. Perhaps due to the ease of communication and access to images via the Internet and satellite programming, teens appear, at least on the surface, to be growing more similar. There is a growing debate in the United States over what age is acceptable to target children and teens with marketing communications. Increasingly in the United States we are seeing marketers targeting children, claiming they are growing up faster and identifying with being teens at a younger age than previous generations. Marketers are breaking up teens into older teen (17-19), younger teens (10-16) and tweens - who make up the early fringes of younger teens. According to a Nickelodeon representative in the United States, "an 11 year-old today has the emotional maturity of a 13 year-old 10 years ago"...products and brands help create an image and self-identity and this is especially true among unsure and developing adolescents. A positive outcome of consumption occurs when young people consume various brands to help enter a role or maintain or enhance their current self-images. Advertising and consumption are part of their daily lives, as normal and familiar as eating and sleeping. Television is pervasive and whether teens are consciously aware of it or not, they are bombarded by messages designed to socialize them into becoming adult consumers. Socially and culturally, advertising on television teaches teens about their place in the world and the adult world they will soon enter. Many people believe that a global youth culture is on the rise, whose values and beliefs transcend national boundaries with many of the values being generated from American programming, products, and advertising. (La Ferle, Li et al. 2001)

CURRENT STUDY

Chapter 5 Hypotheses

The purpose of this chapter is to introduce the current study – including hypotheses, measures, and expected contributions. A subsequent chapter will discuss the methodology in detail.

INTRODUCTION TO CURRENT STUDY

From the review of the literature, it is clear that there is broad concern regarding the effects of media consumption among children in modern society. The current study is intended to serve as a starting point for beginning to understand those effects in the area of consumer intelligence. One significant potential contribution is a measure of child-directed media consumption that could be applied to the study of media effects in other domains. A similar potential contribution is the development of a measure for consumer intelligence that could be helpful in identifying factors that impact the acquisition of consumer skills and knowledge.

HYPOTHESES

The following hypotheses are presented as constructed from a summary of the current literature. The hypotheses do not necessarily reflect the views of the author, but rather stem from a desire to investigate the question of whether or not the media is positively influencing children's consumer intelligence. The main hypothesis for the current study is:

H1: Children's consumer intelligence scores will be higher for children engaging in high levels of child-directed media consumption.

This hypothesis reflects the view that the media is becoming an increasingly important consumer socialization agent for children. Support for H1 would indicate that media might have a positive influence on consumer socialization – lending support to the widely held belief that children today are more consumer savvy than children of previous generations – due, in large part, to media influences.

As the literature focuses a great deal on two agents of consumer socialization in particular – television and parents, separate hypotheses are developed relating to their effects in the context of the current study.

H2: Children's consumer intelligence scores will be higher for children whose parents have higher levels of influence on their media consumption.

H3: Children's consumer intelligence scores will be higher for children who consume proportionally more television programming in relation to their overall media consumption.

H2 stems from previous works cited in the literature review that parents are important socialization agents. Support for H2 would provide additional evidence of the importance of parental involvement in consumer socialization. H3 reflects the view from the literature that television and television advertising in particular are influential socialization agents. Support for H3 would provide additional evidence of the important role that television and its embedded advertising, has on consumer intelligence.

Again, the above hypotheses are reflective of broad societal views that media is an increasingly important consumer socialization agent. The goal of this study is to begin to build a base of empirically acquired knowledge addressing the underlying relationship.

CONSTRUCT DEVELOPMENT

In order to begin to explore the relationship between child-directed media consumption and consumer intelligence, an appropriate framework for measuring each was developed. The following section presents the components of each of the key constructs and a rationale for their inclusion. Specific data collection methods are discussed in a subsequent chapter.

Measuring Consumer Intelligence

From the review of the literature we know that one of the main milestones in consumer socialization is the ability to understand the purpose and intent of advertising (i.e. (Rossiter and Robertson 1974; Ward, Wackman et al. 1977)). For this reason, the understanding of advertising becomes one of the four main components of consumer intelligence – and the only measure deeply rooted in the literature.

The bulk of the consumer socialization literature supports the idea that socialization may occur in stages that roughly follow Piaget's stages of perceptual, analytical, and reflective. As one of the goals of this paper is to provide a starting point and measurement methodology to assess whether or not child-directed media consumption influences the rate of learning of consumer concepts, it is necessary to step back from the stage theory. Stage theory necessarily prohibits us from believing that children are maturing as consumers faster than in the past - as there is no evidence that children are maturing through Piaget's stages faster. Instead, this study examines a child's practical, rather than cognitive ability to act as a consumer. Instead of measuring what children have the capacity to do and understand - this study measures the child's actual knowledge and abilities relating to consumer behaviors.

Beyond understanding the purpose and intent of advertising, the other proposed components of consumer intelligence relate to the child's knowledge of prices, ability to understand the value of goods in relation to each other and the ability to reach a satisfactory purchase decision (in a realistic "shopping" situation").

As there are no previous studies looking at these particular dimensions as a measure of consumer intelligence, it was decided that in the analysis, each component would be treated as equally important.

In summary, children who have high consumer intelligence scores would have the following component profile (relevant to the current sample):

- Knowledge of the persuasive nature of advertising coupled with the understanding that some advertisers lie and some don't
- Knowledge of prices of familiar consumer goods
- Ability to judge the relative value of goods or groups of goods
- Ability to reach a satisfactory purchase decision

Measuring Child-Directed Media Consumption

Like consumer intelligence, child-directed media consumption is a multi-dimensional construct. It has previously been defined as:

Media consumption activities that are actively asked for, purposefully selected, or independently accessed and consumed by the child.

From a review of the literature, mainly the comprehensive Kaiser Foundation report Kids & Media @ the new millennium (Roberts, Foehr et al. 1999), three important components of this measure are identified: media consumption, the media environment,

and parental influence. As the current study endeavors to measure media beyond self-reported exposure levels, a fourth dimension, media knowledge, is added. As there is anecdotal evidence that children are exposed to and affected by media outside of their home environment (and thus away from the control of their parents), the addition of the media knowledge category serves to identify children who may not be highly exposed to media, but may be still very aware of it and potentially influenced by it.

As there are no previous studies looking at these particular dimensions as a measure of child-directed media consumption, it was decided that in the analysis, each component would be treated as equally important.

In summary, children who have high levels of child-directed media consumption would have the following component profile (relevant to the current sample):

- High overall levels of consumption
- Highly enriched media environment (more access to media choices)
- Low instance of parental influence on media choices
- High levels of media knowledge across multiple domains

This chapter presents the hypotheses for the following study as well as a high-level framework for measuring the key constructs. The following chapter will present the study methodology in detail – describing how the inputs for the above measures were obtained and analyzed.

Chapter 6 Methodology

The purpose of this chapter is to present the research methods employed in the current study. First a brief review of the methodologies of similar studies will be presented, followed by the details of the current study procedures.

BRIEF REVIEW OF METHODOLOGIES

In the past, several studies have looked at issues relating to the hypotheses outlined in the previous chapter – many with a narrow focus on one or more of the elements of the multi-dimensional constructs of consumer intelligence and child-directed media consumption.

The most comprehensive study to date examining the media environment and media usage among children was a Kaiser Family Foundation Report published in November of 1999 (Roberts, Foehr et al. 1999). For this report, data was gathered from two different nationally representative samples of 2,065 students in grades 3-12 and 1,090 children aged 2-7 years. Data for this report was gathered using several methods. Children in grades 3-12 self-reported, through a survey, their media environment while parents or caregivers of the children aged 2-7 completed the environmental survey for their children. A subset of each group then completed media-use diaries over a one-week period that served as verification and provided additional insight into specific consumption patterns. For the younger children, where it was impossible to administer questionnaires directly to children, parent-proxy interviews were used - leading the authors to caution readers against direct comparisons between the responses of younger children and those of the older children who were surveyed in a school setting.

Another caveat related to conducting research related to children's media consumption is also articulated in the same report, *Kids & Media @ the new millennium* (Roberts, Foehr et al. 1999) – this one also lending credence to the need for more research relating to child-directed media consumption.

There is good reason to expect parental responses to be somewhat more conservative than children's responses. Parents frequently are not present when their children are engaged in media activities, so they may be unaware of how much of which media and what content their children consume under what conditions. Moreover, in light of recent and ongoing public discussion of the role of media in children's lives, many parents may be inclined to give "socially desirable" responses to some of the media questions. In short, parents may well provide relatively conservative estimates of their young children's media behavior.

A similar study of children's media use (Rideout, Vandewater et al. 2003), of children aged 6 months to 6 years also used a survey of parents – this time over the telephone – to obtain measures of their children's media consumption habits.

While methods for obtaining media use data, as noted above, are fairly consistent, methods for collecting data from children vary widely. In early consumer socialization studies of an exploratory nature, it was common to use personal interviews (Ward, Wackman et al. 1977). This method has gained in popularity again in recent years as researchers begin to explore topics such as children's relationships with their brands (i.e., (Ji 2002).

In the 1980s, there was a decided shift from the use of "traditional" interview methods to the use of more non-verbal measures in collecting data from children. This change reflected an effort to assess children's knowledge, thoughts, and feelings independent of the constraints on their ability to understand questions and communicate verbally. These non-verbal methods often involved the construction of stimuli whereby

children could point to or otherwise non-verbally indicate an answer or the use of non-verbal scales such as smiling faces or other pictographs (Roedder, Sternthal et al. 1983). Another method employed was to not “ask” the children anything, but rather observe their behavior as they complete structured consumer tasks, such as making a decision through the use of an information board (Klayman 1985; Davidson 1991; Gregan-Paxton and Roedder John 1997). The use of improved non-verbal measures was called for by Macklin (Macklin 1985) when “dealing with a subject population with limited language facility”.

Finally, there have been a number of studies relating to children’s consumer behavior that use indirect methods of assessing consumer knowledge and media effects. In one study, Pine and Nash (Pine and Nash 2002) analyze letters written to Santa as a measure of television advertising effects on young children. Other studies employ various tactics - such as using proxies for money - in an effort to isolate study variables and reduce error introduced by overly complex measures (Roedder-John and Lakshmi-Ratan 1992).

SELECTION CRITERIA FOR STUDY METHODOLOGY

While many of the above creative methodologies were considered for the current study, the complexity of the overall task – looking for a relationship between two multi-dimensional constructs – calls for direct measurement approaches. As a result, no proxies were employed and direct survey and interview methods were used exclusively. The method employed in this study is reminiscent of those used in early consumer socialization studies. This approach is appropriate as the nature of the current study is similar to early exploratory studies that looked for relationships between the three consumer socialization agents (parents, peers, and the media) and consumer skills in

children. The current study revisits those issues in light of the current mass media environment.

RESEARCH METHODS

The following sections detail the study methodology including sample selection, data collection procedures, construction of composite measures, and analysis procedures. In general, this study employs a mixed methodology - a combination of qualitative and quantitative approaches. As this is a relationship study, causal linkages are not of concern and therefore will not be addressed. The research protocol for this study was approved by the University of Texas Institutional Research Board (IRB Protocol #2004-04-0050).

Sample

This study employs a sample of seventy-seven (77) parent-child pairs. Subjects were recruited using a convenience sample and through “snowballing”. Subjects were purposefully recruited from middle to upper-middle income neighborhoods to minimize SES variation. In terms of ethnicity of the children, 87% were Caucasian, 4% Asian, 4% Hispanic or bi-racial Hispanic/Caucasian, 4% African-American or bi-racial African-American/Caucasian and one subject was bi-racial Asian/African-American. Ethnicity of the children was self-reported by their parents.

The sample contained 39 children in first grade and 38 children in fifth grade. These age groups were selected based on a combination of prior research findings and the nature of the study. In her comprehensive review of the consumer socialization literature, Roedder John (Roedder-John 1999) proposed the following consumer socialization stages: the perceptual stage (3-7 years), the analytical stage (7-11 years) and the reflective

stage (11-16 years). The current study uses children at two transition points – one between the perceptual and analytical stages (first graders) and one between the analytical and reflective stages (fifth graders). By using children in transition, it was believed that a wider range of responses would be captured. In addition, it was thought that first graders would be the youngest possible subjects able to successfully complete the 20-25 minute child interview / assessment. Finally, first graders, more than their younger peers, are more likely to be subjected to media influences outside of their home and again, provide for more variation in responses. Fifth graders were selected for similar reasons – as they are more likely than their older peers (who are in middle school) to still be under the influence of their parents.

Parents reported that 7 of the 77 children in the study (9%) spent a significant amount of time at another residence. While it might be assumed that these children come from families with divorced parents, comments made by these parents indicate that some interpreted the question to mean a friend's house or relative's house where they are likely to consume media.

In terms of gender, the sample consists 48 females and 25 males. The breakdown by grade and gender is shown in Table 1.

Table 1

Sample by Gender and Grade

	First Grade	Fifth Grade
Boys	16	13
Girls	23	25

STUDY PROCEDURES

The study required the collection of two sets of data – a survey of the media environment that was completed by a parent and a 20-25 minute interview with each child. A single researcher (the author) conducted all of the interviews to ensure consistency and completeness. For the most part, interviews took place in either the researcher's home or the child's home – during which time parents completed their survey. In some instances, where twins were involved, first graders were interviewed in a group. In this scenario, the interviewer recorded all the responses separately and made use of additional probes to ensure independent responses from each of the subjects. Steps were taken to ensure that there was not any undue parental influence on children's responses.

A portion of the interviews occurred in a school environment, where the subjects were recruited through the author's personal relationship with the subject's teacher – who independently contacted parents. In some of these cases, due to time constraints on the children, data for fifth graders was collected in a small group environment where the subjects recorded their own responses to interview questions. In these instances, the interviewer closely monitored the written responses to ensure consistency and completeness. Where necessary, the interviewer helped record the respondent's answers when they were having difficulties expressing themselves.

As all of the younger children were volunteered by a parent who had some basic knowledge of the study procedures, they were each willing to participate and able to provide complete data sets.

Parental Survey

Parents of children in the study were presented with a packet containing two consent forms – one to sign, one to keep – and the survey to be completed. The data collected from parents is divided into five categories: demographics; child's media consumption; child's media environment; parent's media permissiveness and conflict over use and content; and consumer-related questions. The parental survey for first and fifth graders is identical except for the section that addresses parental permissiveness. As permissiveness is measured by what the parent will and will not allow the child to consume, it was necessary to develop separate lists of media choices for each grade. A complete copy of the parental survey(s) can be found in Appendix B.

Child Interview

As the vast majority of interviews were conducted one-on-one, the procedure described will apply for that situation. It can be assumed that fifth graders who self-reported (in group situations) were provided with a checklist or numbered blanks where appropriate and first grade responses were recorded serially by the interviewer. Wherever possible, children were screened or shielded to avoid influencing each other. It is the belief of the interviewer that the group interview scenario compromised very few of the responses. In those cases where a child's response was clearly influenced (for example, by a twin), a note was made at the time and that response was evaluated in light of the influence. When it became apparent to the interviewer that a particular respondent was easily influenced, the interviewer altered the procedure to make sure that particular child was forced to respond independently on subsequent items.

The interviews were usually administered in a casual environment, often with the interviewer and child sitting on the floor or at a kitchen table – in some cases siblings,

friends, or parents were in close proximity. While it seems that the presence of others might be cause for alarm when interviewing adults, the relaxed environment and tacit support for the children seemed to put them at ease and help the flow of the interview. While the interview was structured to last not more than 20 minutes, interviews often took much longer as many of the children wanted to talk about their media experiences in great detail. In general children thought the interview was “fun” and more than a few asked if they could do it again. In some cases the interviewer had to administer the interview to insistent siblings and friends that were not in the subject pool.

The data collected from children is divided into five categories: parental influence on media choices (presence during viewing and conflict over use or content); media knowledge (TV, video games, Internet, movies, music); pricing knowledge; ability to judge relative value; and performance on a shopping/decision task. An outline of the interview procedure is found in Appendix B.

All of the stimuli were informally pre-tested with children of varying ages (older, younger, and in between) to ensure broad familiarity with stimuli among the sample. As the stimuli encompasses a wide range of media, children known to have extensive knowledge of each genre were sought out for pre-testing.

The interview began with the child telling the interviewer who they usually watched TV with, played video games with, and watched movies or DVDs with.

Next, the child was presented with 5 note cards imprinted with well-known cable and network channel logos. See Appendix B for the logos of the 5 channels. The interviewer then read a list of 10 television shows and asked the child to point to the network logo that they believe the show is broadcast on.

The child was then shown a series of 8 images from video games on a laptop computer screen – some from each of the three big gaming systems (Ninetndo, PS2, and X-Box) and asked to recall the name of the game or character. The 8 video game images can be found in Appendix B.

For the next exercise, the interviewer asked the child to name three movies and then three musicians or songs. While the actual names of the movies and musicians were recorded, the relevant data was whether or not the child could quickly come up some names off the top of their head.

After recalling movies and musicians, the child was then shown a series a five web pages on a laptop computer and asked two questions about each page. Images of the web pages can be found in Appendix B. The first question asked them to describe what they thought one could do on the page and the second, what would happen if a specific action was taken. A brief narrative of each response was recorded.

The following questions addressed the purpose of advertising. Each child was asked why they thought we had commercials on TV (or what the purpose of the commercials was) and then was asked whether or not they thought what the commercials were telling them was “true”.

The next three consumer-intelligence assessment tasks were administered in varying orders dependent upon the specific interview conditions.

In the pricing task, the child was presented with a series of familiar items on a laptop computer and asked to say what they thought the item costs (in real dollars). Prior to naming any prices, children were shown (on the screen) a bag of Skittles and told they

cost \$1 and a high-end Nintendo Game Boy and told it cost \$100. Children in first grade were asked to price 10 items and children in fifth grade 12 items. Each child was shown the items in the same randomly generated order. See Appendix B for a list of all the items and their prices by gender and grade. Images of the pricing stimuli can be found in Appendix B as well. Eight of the items were common for all subjects – a bike helmet, a box of Rice Krispies, a McDonald's Happy Meal, a box of 24 Crayola crayons, a starter deck of Yu-Gi-Oh cards, a bicycle, a DVD, and a Sorry brand board game. A unique list of items for each gender/grade combination was created to ensure the child's interest was held throughout the interview process. For example, first graders were shown a picture of a "Finding Nemo" DVD, while fifth graders were shown a "Harry Potter" DVD. Girls were shown girl's bikes and boys were shown boy's bikes. The additional two items priced by fifth graders involved a brand manipulation. Girls were asked to price three brands of jeans, and boys, three types of basketball shirts.

In the relative value task, the child was shown a series of 6 pictures on the laptop screen. Each child was shown the items in the same randomly generated order. Each picture was divided in half so there was a left side and a right side. Each side contained one or several of the items from the pricing task (including the Skittles and Gameboy for which the prices were known). The child was asked to indicate which side they thought was "worth more" or was more "valuable". The child either pointed to their choice or said "left" or "right". In all cases, there was a minimum 30% price differential between the items on each side. Images of the relative trade task stimuli, by gender and grade, can be found in Appendix B.

Finally, each child was presented with 12 (or 14 for fifth graders) note cards imprinted with the items they priced, plus the Skittles and Gameboy. The child was asked to sort or rank the items in terms of how much they liked them. Most children

sorted the cards into three categories – things they liked, things they didn't like, and things they didn't care about. Some of the older children ranked all items sequentially. The child was then asked to identify their favorite items.

The final consumer intelligence assessment walked the child through a simulated shopping task. The child was told that they could select a single item (to keep) from one of three “stores” that the interviewer would show them in a pre-determined order. The rules were that if they selected something from the first store, they would not be shown the other items and that if they passed on an item, they couldn't go back to a store once they left. After making an initial selection, the child was shown all of the items from all of the stores and asked if they wanted to change their mind. Each child's selections were recorded as well as any comments made during the exercise. The data of interest is whether or not the child could reach a satisfactory purchase decision. If they changed their mind after seeing all the choices, it was noted whether they ended up selecting something they had already seen and passed on or something not yet seen.

Each of the items in all of the stores cost about \$1. One store contained gender and age-appropriate stickers, one toys, and the third school supplies from the University of Texas bookstore. A photo of the items can be found in Appendix B.

During the last part of the child interview, the initial plan was to go through the final page of the parent survey orally with the child asking them what they thought their parents would allow and what they were interested in. This task proved to be too time consuming, so instead, children were briefly asked about several specific items, such as “Lord of the Rings” for first graders, or R-rated movies for fifth graders to allow the interviewer to gauge the level of permissiveness from the child's perspective. Each child was asked the final two questions of the parent survey dealing with conflict over media

content and amount of time spent using media. Children were verbally asked whether there was conflict “a lot”, “sometimes”, or “hardly ever”/ “never” for each of these items.

Chapter 7 Construct Measurements

The purpose of this chapter is to describe the method used for coding and analyzing the data collected as well as the analyses used to test the hypotheses. The following sections describe how the data from the parent survey and child interview were combined and compiled to yield a single consumer intelligence score and measure of self-directed media consumption for each child.

DEVELOPMENT OF A CONSUMER INTELLIGENCE SCORE

As previously stated, the four components of consumer intelligence are:

- Knowledge of the persuasive nature of advertising coupled with the understanding that some advertisers lie and some don't
- Knowledge of prices of familiar consumer goods
- Ability to judge the relative value goods or groups of goods
- Ability to reach a satisfactory purchase decision

As a result, four variables representing each of the components were created. These four variables were then summed with equal weighting to create a single consumer intelligence score. All variables are ordinal. Those variables are:

PRICEP – representing the child's performance on the pricing task

TRADEP – representing the child's performance on the relative value task

ADVSC – representing the child’s knowledge of the purpose and intent of advertising

SHOPSC – representing the child’s performance on the shopping task

All of the data for these variables was collected from the child during the interview.

Each of the four variables was scaled to have a minimum value of 0 and a maximum value of 10 (0-10).

The consumer intelligence score is represented by the variable TOTCI. TOTCI has a possible range of values from 0-40.

$$\text{TOTCI} = \text{PRICEP} + \text{TRADEP} + \text{ADVSC} + \text{SHOPSC}$$

As both the first and fifth graders were assessed using the same procedure, all of the scores exist on the same continuum and are able to be compared.

The following section describes how the value for each of the consumer intelligence component variables was determined. Due to the varied nature of the questions and assessment vehicles, some components represent computed quantitative values while other values are assigned through a coding scheme.

Pricing Performance Variable

PRICEP, the child’s performance on the pricing task was arrived at by summing up the number of items (out of 10) that the child correctly priced within 50% of the actual

price (absolute value of the percent difference). For the fifth graders, who priced twelve items, two of the branded products were not counted. The highest and lowest priced branded jeans and basketball shirts were not tallied for PRICEP. Tallying correct prices within 75% and 100% of the actual price was also considered but using 50% as a benchmark provided more discrimination across all subjects. The 50% cut-off was consistently applied across the entire data set, with any computed responses in excess of 50% difference being counted as incorrect. The data for the pricing variable, by subject, is presented in Appendix C. As the first and fifth grade pricing stimuli had eight (8) items in common, it is possible to compare performance between the groups for this variable. A summary of group averages, by item, is presented in Table X.

Table 2
Group Averages for Pricing Performance Variable

Group Averages by Item								
Group	Bike	Cereal	Crayons	Bike Helmet	Sorry Game	Yu-Gi- Oh Cards	Video	Happy Meal
1 Boys	174.6%	148.1%	575.9%	79.7%	71.9%	104.3%	89.6%	169%**
1 Girls	141.5%	139.1%	382.3%	72.6%	72.2%	54.9%	55.2%	221%
5 Boys	54.0%	71.6%	65.7%	101.2%	48.0%	280.2%	41.6%	34%
5 Girls	73%*	43.3%	47.7%	146.2%	38.0%	92.4%	51.0%	43%
Grade 1	155.5%	142.9%	463.8%	75.6%	72.1%	76.3%	69.7%	200%
Grade 5	66.9%	53.0%	53.7%	134.3%	40.4%	153.2%	47.7%	40%

* = 286% with all subjects, subject #14 was excluded due to excessive error

** = 353% with all subjects, subject #50 was excluded due to excessive error

A t-test comparing overall group mean differences in PRICEP (for all ten items) shows a significant difference in this variable between first and fifth graders. (Standard levels of significance are applied at the $p < .05$ level.)

The average for first graders is 3.5, for fifth graders 5.6 (on a scale of 0-10). First graders outperformed fifth graders for two items – the bike helmet and the Yu-Gi-Oh cards.

Relevant Value Performance Variable

TRADEP, the child's performance on the relative value task was arrived at by summing up the number of times the child correctly selected the more valuable of the groups of items (out of 6) and then scaling that number to range from 0 –10. The data for the relevant value task, by subject, is presented in Appendix C. As dissimilar stimuli were used for each gender/grade combination, it is not possible to do a direct set-by-set performance comparison. A summary of group averages is presented in Table X.

Table 3
Group Averages for Relevant Value Task

Group	Average	
	Count Correct	TradeP (scaled)
1 Boys	2.00	3.33
1 Girls	3.22	5.36
5 Boys	3.00	5.00
5 Girls	3.56	5.93
Grade 1	2.72	4.53
Grade 5	3.37	5.61

A t-test comparing overall group mean differences for TRADEP shows a significant difference in this variable between first and fifth graders, with the fifth graders scoring higher. (Standard levels of significance are applied at the $p < .05$ level.)

Knowledge of Advertising Variable

ADVSC, the measure of the child's knowledge of the intent and purpose, was arrived at by coding the child's responses to each part of Question 9 from the child interview. Each part of the response was assigned 0-5 points and then the results from each part were summed for a total ADVSC score.

Codes (points) for the question pertaining to the purpose of advertising:

0 – no answer or an answer of “I have no idea”

1 – answer relating to someone needing a break

“[actors] can go over their lines, take a break”

“so we can get away from the TV and use the bathroom”

2 – answer relating to the helpful nature of advertising

“to help us”

3 – answers mentioning the informative or entertainment value of commercials

“so you get new movies, to tell you movies and new shows”

4 – answers mentioning the advertisers desire to sell or get money

“raise money”

“for information and so people can make money”

5 – answers mentioning the persuasive nature of advertising

“to try to get you to buy a product”

“to tell people this is a good thing to use”

The use of a progressive coding scheme related to the purpose of advertising is a change from previous works where knowledge of the purpose of advertising has been a binary function (yes/no). This progressive coding scheme was developed to incorporate the idea that children can and do grow in their understanding of advertising. The codes reflect a progression of thought from no thought, to the notion of advertising serving some purpose, to the ultimate understanding of what that purpose is – following a continuum of more sophisticated understanding. To compare this data to previous findings, it is necessary to count all answers for 0-4 as “not understanding the purpose of advertising” and all of the 5’s as “understanding the persuasive nature of advertising” – although some researchers may lean toward coding 4’s (in the current scheme) as “understanding”. Table X presents the tallies for, by gender and grade, for each of the codes.

Table 4

Tallies for Purpose of Advertising Scores

	Purpose Scores					
	Code 0	Code 1	Code 2	Code 3	Code 4	Code 5
1 Boys	5	6	1	2	1	1
1 Girls	6	8	2	4	1	2
Total 1	11	14	3	6	2	3
5 Boys	0	1	0	8	1	3
5 Girls	0	0	0	6	3	16
Total 5	0	1	0	14	4	19

Codes (points) pertaining to the question of whether or not what advertisers say is true:

0 - no answer or an answer of "I have no idea"

1 - "yes"

2 - "no" - with no explanation as to why they are not true

"no, not all true because they don't look true"

3 - "no" - with any explanation as to why they are all not true or "yes and no" with no explanation at all

"no, some are and they say it"

"true and false"

"no, Mickey Mouse isn't true - it's someone dressed up in a costume"

4 - "no" - with a plausible explanation or "yes and no" with any explanation

"no, really big smiles means they are faking, they are so happy they are going to get money"

"sometimes, I learned from Sponge Bob it may be attraction only"

5 - "sometimes" with a plausible explanation

"sometimes but most not - seen at store or from friends that it's not true - doesn't work like it should - Marvin's magic drawing board - wouldn't move the stuff"

"some not true - glad trash bags wouldn't break that easy - Hefty trash bags shows Glad bags broke - then someone steals hefty bag"

Data for this variable was coded first by the author and then independently by a second coder, using the above code descriptions. Initial inter-rater agreement was 81% overall for both the purpose and truthfulness of advertising. Disagreements were resolved through consensus with approximately half of the initial discrepancies deemed to be clerical or procedural errors, rather than interpretive disagreements. Final scores were agreed upon for all subjects.

As with the “purpose of advertising scores”, a progressive coding scheme, designed to capture children’s progression of thought about whether or not advertisers may be lying to them, was created. This coding scheme is anchored on one end by no thought (0) or “yes, all ads are true” (1), progresses to a perceptual or literal interpretation of the truth of ads (plausibility), and finally to a more full understanding that some advertisers may lie sometimes. Data for each component of ADVSC is presented, by gender and grade, in Appendix C. Table X contains summary scores, by group, for each component, as well as the total ADVSC score.

Table 5

Group Averages for Advertising Knowledge Scores

Group	Average Ad Knowledge		
	Purpose Score	Truth Score	ADVSC
1 Boys	1.44	2.44	3.88
1 Girls	1.65	3.43	5.09
5 Boys	3.38	3.54	6.92
5 Girls	4.40	3.96	8.36
Grade 1	1.56	3.03	4.59
Grade 5	4.05	3.82	7.87

The component scores, regarding the truth and purpose of advertising, were summed to create an overall measure of the children's understanding of advertising – which encompasses both the philosophical and practical components of advertising knowledge. Using this measurement scheme, a child that scored a 10 (highest) would understand that (1) advertisers are trying to persuade them to do something (purpose) and (2) that the advertisers may lie to persuade them (truth). A child that understands the persuasive nature, but not that an advertiser may lie to persuade and a child that understands that an advertiser may lie to them but does not understand the selling intent of advertising would receive identical scores, in the middle of the possible range of scores. As an additional check on the consumer intelligence component, ADVSC, a correlation between the scores for the purpose and truth portions of the measure was run, looking for some relationship between the two sub-measures. Within each grade, there was no significant correlation between the purpose and truth scores. Over the entire range (all grades), there was a significant correlation between the sub-measures. The results of the correlation are presented in Table X.

Table 6

ADVSC Sub-Measures Correlation

Correlations

		Purpose of Adv	Adv Truth	Adv Score
Purpose of Adv	Pearson Correlation	1	.284*	.827**
	Sig. (2-tailed)	.	.012	.000
	N	77	77	77
Adv Truth	Pearson Correlation	.284*	1	.774**
	Sig. (2-tailed)	.012	.	.000
	N	77	77	77
Adv Score	Pearson Correlation	.827**	.774**	1
	Sig. (2-tailed)	.000	.000	.
	N	77	77	77

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Shopping Satisfaction Variable

SHOPSC, the final 10-point measure representing the child's performance on the shopping task also has two 5-point components. The first part is a coded score based on how the child completed the shopping task. The second component is a bonus assigned to each child based on comments made throughout the consumer intelligence assessment tasks. Each coding scheme is described below. As each child was given equal opportunity, through probing by the interviewer, to explain some of their decisions, it is consistent and fair to award points for these comments. Most of the comments were collected during either the relative value task or during the shopping task. These points are awarded for reasoning skills that are independent of pricing knowledge. For fifth graders, who were less likely to share their decision-making process, bonus points were also awarded objectively for knowing the relative prices of similar branded items (jeans,

basketball shirts). Children were awarded 3 points for correctly sequencing the brands (from lowest cost to highest cost) and 5 points for correctly sequencing and being within 50% of the actual prices for all items.

Codes pertaining to the shopping task:

0 – child never made a decision or couldn't decide between two or several items

1 – child didn't choose anything during the initial viewing of all stores then finally picked something when prodded

2 – child selected something initially, then changed their mind after viewing all the items to something they had already seen and passed on

3 – child explicitly stated that they wanted to see everything first, and then make a decision

4 – child selected something initially, then changed their mind after viewing all the items to something they had not yet seen

5 – child selected something initially and were satisfied, even when presented with more alternatives

Codes for bonus points awarded:

1 - any comment related to being "perceptually bound"

"I choose the bike because it was bigger"

3 – any comment indicating a choice was made due to some personal rationale

“I like the Lego’s better than the Gameboy”

“these items are worth more ‘to me’ ”

5 – comments describing a logical rationale for a decision

“the food would run out and the game would rip”

chose Lego’s in the relative value task because “they are worth \$100”

The data for the shopping task, by subject, is presented in Appendix C. A summary of group averages is presented in Table X.

Table 7

Group Averages for Shopping Satisfaction Task

	Average Shopping Performance		
Group	Shopping Score	Shopping Bonus	SHOPSC
1 Boys	4.19	1.31	5.50
1 Girls	2.74	0.61	3.35
5 Boys	4.31	2.08	6.38
5 Girls	4.24	1.52	5.76
Grade 1	3.33	0.90	4.23
Grade 5	4.26	1.71	5.97

A t-test comparing overall group mean differences for SHOPSC shows a significant difference in this variable between first and fifth graders, with the fifth graders scoring higher. An overall comparison of SHOPSC also shows significant differences

between boys and girls, with boys scoring higher. (Standard levels of significance are applied at the $p < .05$ level.)

DEVELOPMENT OF A MEASURE OF CHILD-DIRECTED MEDIA CONSUMPTION

As previously stated, the four components of child-directed media consumption are:

- amount of consumption
- richness of the media environment (more access to media choices)
- amount of parental influence on media choices
- media knowledge across multiple domains

As a result, four variables representing each of the components were created. These four variables were then summed with equal weighting to create a single measure of child-directed media consumption. Those variables are:

CONSTD – representing the child’s media consumption

KTOT – representing the child’s media knowledge across multiple domains

ETOT – representing the richness of the child’s media environment

INFT – representing the influence of the parent on the child’s media selection and usage

Data for these variables comes from both the parental survey and the child interview.

Each of the four variables was scaled to have a minimum value of 0 and a maximum value of 40 (0-40).

The overall child-directed media consumption score is represented by the variable TOTMED. TOTMED has a possible range of values from 0-160.

$$\text{TOTMED} = \text{CONSTD} + \text{KTOT} + \text{ETOT} + \text{INFT}$$

As both the first and fifth graders were assessed using the same procedure, all of the scores exist on the same continuum and are able to be compared.

The following section describes how the value for each of the consumer intelligence component variables was determined. Due to the varied nature of the questions and assessment vehicles, some components represent computed quantitative values while other values are assigned through a coding scheme.

Media Consumption Variable

CONSDT, a standardized measure of the child's overall media consumption, was arrived at in the following manner. First the total number of hours per week, as reported by parents, was calculated. Then this total consumption number was used to assign a standardized score ranging from 0-40 which represents overall media usage.

In several cases, parents indicated which activities their child regularly engaged in, but failed to specify for how many hours. In these instances, the median hours

reported for children of the same age and gender that also reported engaging in that particular media activity were used. Scores were assigned as follows:

- 0 – fewer than 10 hours per week
- 5 – between 10 and 15 hours per week
- 10 – between 15 and 20 hours per week
- 15 – between 20 and 25 hours per week
- 20 – between 25 and 30 hours per week
- 25 – between 30 and 35 hours per week
- 30 – between 35 and 40 hours per week
- 35 – between 40 and 45 hours per week
- 40 – more than 45 hours per week

A maximum of 45 hours was determined to be essentially continual consumption (i.e. 20 hours on a weekend + 5 hours per weekday). Consumption data, by subject, are presented in Appendix C. A summary of the variable CONSTD, by group, is presented in Table X.

Table 8

Group Averages for Media Consumption Score

Subject ID	Average Media Consumption Hours per Week						
	TV	Video Games	Computer	Music	Other	Raw Total	CONSTD
1 Boys	15.81	2.25	4.44	3.77	0.69	26.96	19.38
1 Girls	14.29	0.57	2.16	7.20	0.95	25.16	17.17
5 Boys	18.08	5.62	4.63	5.52	1.20	35.04	26.54
5 Girls	13.27	1.11	6.20	4.88	1.56	27.02	20.20
Grade 1	14.91	1.26	3.09	5.79	0.84	25.90	18.08
Grade 5	14.92	2.65	5.66	5.10	1.44	29.76	22.37

A t-test comparing overall group mean differences for CONSTD shows no significant difference in this variable between first and fifth graders. (Standard levels of significance are applied at the $p < .05$ level.) The lack of significance is due to large within group variances.

Media Knowledge Variable

KTOT, a measure of the child's media knowledge has 5 elements. Data for this variable was collected from each child during the interview. The 40 points were assigned as follows:

- 1 point for each television show that was correctly matched to its network (total possible = 10)
- 1 point for each video game character correctly identified by name. Half of a point (.5) for each video game character recognized, but name not recalled (total possible = 8)

- 2 points for each movie (up to 3) named (total possible = 6)
- 2 points for each musician or song (up to 3) named (total possible = 6)
- 1 point each for correctly identifying the purpose of the web site and 1 point for the follow-up question about each site (total = 10 points)

Data for the media knowledge variable, by subject, are presented in Appendix C. A summary of the data, by group, is presented in Table X.

Table 9
Group Averages for Media Knowledge Scores

	Average Media Knowledge Scores					
Subject ID	TV	Video Games	Movies	Music	Internet	KTOT
1 Boys	6.50	3.69	4.50	3.13	3.31	21.13
1 Girls	5.22	1.93	4.78	3.91	2.30	18.15
5 Boys	8.62	4.92	5.08	3.38	6.62	28.62
5 Girls	7.70	4.28	4.52	5.12	8.32	29.94
Grade 1	5.74	2.65	4.67	3.59	2.72	19.37
Grade 5	8.01	4.50	4.71	4.53	7.74	29.49

A t-test comparing overall group mean differences for KTOT shows a significant difference in this variable between first and fifth graders, with the fifth graders scoring higher. (Standard levels of significance are applied at the $p < .05$ level.)

Media Environment Variable

ETOT, which represents the richness of the child's media, is a composite score calculated from data gathered from the parent survey. One point was awarded for each unique item from the survey that was present in the child's home. An additional point was awarded for each item in the child's room. While it is theoretically possible to have each of 22 different items in the home, the overlapping nature of the questions makes it possible to score this with a range of 0-22 points. For example, none of the respondents reported having Satellite TV and Cable TV or a high-speed Internet connection and a dial-up connection.

Finally, the number of each of six media content items (DVD's, video tapes, computer games, CD's, video games, and Game Boy games) owned by the child (or immediately accessible to the child) was coded and summed per the following schedule.

- 0 – none owned
- 1 – between 1-10 items owned
- 2 – between 10-20 items owned
- 3 – more than 20 items owned

The score was summed for the six different media types, yielding a maximum possible score of 18.

The score from the number of media titles owned was added to the environmental score for a total possible ETOT score of 40.

Data for the media environment variable, by subject, are presented in Appendix C. A summary of the data, by group, is presented in Table X.

Table 10

Group Averages for Media Environment Scores

	Average Media Environment Scores			
Subject ID	Number of Items in Home	Number of Items in Room	Number of Media Titles (Coded)	ETOT
1 Boys	8.81	1.00	6.44	16.25
1 Girls	9.17	1.52	7.26	17.96
5 Boys	9.31	4.00	8.31	21.62
5 Girls	9.08	1.80	7.72	18.60
Grade 1	9.03	1.31	6.92	17.26
Grade 5	9.16	2.55	7.92	19.63

A t-test comparing overall group mean differences for ETOT shows a significant difference in this variable between first and fifth graders, with the fifth graders scoring higher. (Standard levels of significance are applied at the $p < .05$ level.) This significance can be attributed to fifth graders having, in general, more devices in their room.

Parental Influence Variable

INFT, representing the influence of the parent on the child's media selection and usage, is also a multi-dimensional variable. This variable has inputs from data collected from both the parent and the child. The maximum possible score for INFT is also 40. INFT has four elements:

- presence of parents during consumption (from child)

- permissiveness of parents (from parent)
- age child first started watching TV alone (from parent)
- presence of conflict over content or amount of time engaged in media activities (from both parent and child)

As this study is looking at child-directed media consumption, a high value for this element would indicate a lack of parental involvement, thus a high amount of child-directed media usage.

The score representing the presence of parents during media consumption has a range from 0 – 10. Respondents were assigned a score based on whether or not they reported the presence of any parent during these consumption activities. The codes were assigned as follows:

- 0 – child reported the usual presence of parent(s) for all three activities
- 4 - child reported the usual presence of parent(s) for two of three activities
- 7 – child reported the usual presence of parent(s) for one of three activities
- 10 – child did not report the usual presence of parent(s) at any activity

The score representing the permissiveness of parents has a range of 0-20. This score was derived from the last page of the parent survey where they were specifically asked whether or not they would allow their child to consume particular media offerings. There were 28 offerings listed. As all parents allow some subset of the offerings a scale of 0-20 was created (by subtracting 8 from the total number of offerings allowed).

The score representing the age at which the child first started watching TV has a range of 0-10. Again, as a high INFT represents a lack of parental involvement, this

element was reverse scored by subtracting the reported age from 10. So, a child who first started watching TV alone at age 1.5 years would score an 8.5. A child never watching TV alone would score a 0.

The final score, representing the amount of conflict present between the parent and child regarding the content and amount of media consumed was derived using data from both the parent survey and child interview. Each were asked the same set of questions regarding how often there was conflict over content and amount of usage – for a total of 4 responses.

0 was scored for each response of “Often Disagree” (which indicates parental awareness and involvement in media selection and usage)

1.25 was scored for each “Sometimes Disagree” response

2.5 was scored for each “Usually Agree” response

The total possible points for this component is 10 ($2.5 * 4$) – indicating no presence of conflict.

Using the above scheme, the variable INFT has a possible 50 points. As the other variables for TOTMED have a maximum of 40 points, INFT was scaled to have a possible range of 0-40.

Data for the (lack of) parental influence variable, by subject, are presented in Appendix C. A summary of the data, by group, is presented in Table X.

Table 11

Group Averages for Parental Influence Scores

Subject ID	Average Parental Influence Component Scores										Raw INFT	INFT
	TV with Parents	Video Games w/Parents	Movies with Parents	Raw Presence Score	Coded Presence Score	Permissiveness	Coded Permissiveness	Presence of Conflict	Age First Watched TV	TV Age Coded		
1 Boys	0.50	0.06	0.44	1.00	7.00	16.50	9.00	3.83	2.97	7.03	26.86	21.49
1 Girls	0.48	0.09	0.35	0.91	7.26	15.00	7.35	3.10	3.15	6.85	24.55	19.64
5 Boys	0.62	0.38	0.92	1.92	3.92	15.00	7.23	2.88	4.92	5.08	19.12	15.29
5 Girls	0.56	0.16	0.84	1.56	5.16	13.20	5.52	3.00	4.38	5.62	19.30	15.44
Grade 1	0.49	0.08	0.38	0.95	7.15	15.62	8.03	3.40	3.08	6.92	25.50	20.40
Grade 5	0.58	0.24	0.87	1.68	4.74	13.82	6.11	2.96	4.57	5.43	19.24	15.39

A t-test comparing overall group mean differences for INFT shows a significant difference in this variable between first and fifth graders, with the first graders scoring higher. (Standard levels of significance are applied at the $p < .05$ level.) This significance can be attributed to more parental presence during movie and television viewing for fifth graders. In other words, there is more co-viewing between fifth graders and their parents than first graders and their parents.

SUMMARY OF DATA CODING AND VARIABLE CONSTRUCTION FOR MAIN HYPOTHESIS TESTING

In summary, data gathered from the parent survey and child interviews was combined and compiled to produce a single measure of consumer intelligence and a single measure of child-directed media consumption for each child.

Data for composite consumer intelligence scores and child-directed media consumption scores, by subject, are presented in Appendix C. Mean comparisons for these data are presented in a subsequent chapter. A correlation was run on the components of each composite score, first overall, and then within each grade. Resulting correlation matrices are presented in Tables X-X.

Table 12

Correlation Matrix for Consumer Intelligence Scores, All Subjects

Correlations		Pricing Performance	Value Performance	Advertising Knowledge	Shopping Performance	Composite CI Score
Pricing Performance	Pearson Correlation	1	.146	.392**	.321**	.638**
	Sig. (2-tailed)	.	.206	.000	.004	.000
	N	77	77	77	77	77
Value Performance	Pearson Correlation	.146	1	.397**	.165	.630**
	Sig. (2-tailed)	.206	.	.000	.152	.000
	N	77	77	77	77	77
Advertising Knowledge	Pearson Correlation	.392**	.397**	1	.261*	.776**
	Sig. (2-tailed)	.000	.000	.	.022	.000
	N	77	77	77	77	77
Shopping Performance	Pearson Correlation	.321**	.165	.261*	1	.651**
	Sig. (2-tailed)	.004	.152	.022	.	.000
	N	77	77	77	77	77
Composite CI Score	Pearson Correlation	.638**	.630**	.776**	.651**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.
	N	77	77	77	77	77

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 13

Correlation Matrix for Consumer Intelligence Scores, First Grade

Correlations^a

		Pricing Performance	Value Performance	Advertising Knowledge	Shopping Performance	Composite CI Score
Pricing Performance	Pearson Correlation	1	.004	.042	.014	.370*
	Sig. (2-tailed)	.	.980	.800	.933	.020
	N	39	39	39	39	39
Value Performance	Pearson Correlation	.004	1	.391*	.104	.670**
	Sig. (2-tailed)	.980	.	.014	.528	.000
	N	39	39	39	39	39
Advertising Knowledge	Pearson Correlation	.042	.391*	1	.115	.678**
	Sig. (2-tailed)	.800	.014	.	.486	.000
	N	39	39	39	39	39
Shopping Performance	Pearson Correlation	.014	.104	.115	1	.562**
	Sig. (2-tailed)	.933	.528	.486	.	.000
	N	39	39	39	39	39
Composite CI Score	Pearson Correlation	.370*	.670**	.678**	.562**	1
	Sig. (2-tailed)	.020	.000	.000	.000	.
	N	39	39	39	39	39

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

a. Grade = First Grade

Table 14

Correlation Matrix for Consumer Intelligence Scores, Fifth Grade

Correlations ^a		Pricing Performance	Value Performance	Advertising Knowledge	Shopping Performance	Composite CI Score
Pricing Performance	Pearson Correlation	1	.019	.096	.435**	.587**
	Sig. (2-tailed)	.	.907	.565	.006	.000
	N	38	38	38	38	38
Value Performance	Pearson Correlation	.019	1	.178	.063	.573**
	Sig. (2-tailed)	.907	.	.286	.705	.000
	N	38	38	38	38	38
Advertising Knowledge	Pearson Correlation	.096	.178	1	-.045	.495**
	Sig. (2-tailed)	.565	.286	.	.789	.002
	N	38	38	38	38	38
Shopping Performance	Pearson Correlation	.435**	.063	-.045	1	.664**
	Sig. (2-tailed)	.006	.705	.789	.	.000
	N	38	38	38	38	38
Composite CI Score	Pearson Correlation	.587**	.573**	.495**	.664**	1
	Sig. (2-tailed)	.000	.000	.002	.000	.
	N	38	38	38	38	38

** . Correlation is significant at the 0.01 level (2-tailed).

a. Grade = Fifth Grade

To further prepare the data for subsequent analysis, the variable TOTMED was scaled to have the same range as the variable TOTCI (0-40). As TOTMED emerged from the data-coding phase with a total possible range of 0-160, each child's total was then divided by 4 - yielding a range of 0-40. These variables are now ready to be analyzed to test the main hypothesis.

Table 15

Correlation Matrix for Child-Directed Media Scores, All Subjects

		Correlations				
		Media Consumption	Media Knowledge	Media Environment	Lack of Parental Influence	Composite Media Score
Media Consumption	Pearson Correlation	1	.323**	.212	.123	.802**
	Sig. (2-tailed)	.	.004	.064	.287	.000
	N	77	77	77	77	77
Media Knowledge	Pearson Correlation	.323**	1	.357**	-.142	.654**
	Sig. (2-tailed)	.004	.	.001	.217	.000
	N	77	77	77	77	77
Media Environment	Pearson Correlation	.212	.357**	1	.112	.581**
	Sig. (2-tailed)	.064	.001	.	.332	.000
	N	77	77	77	77	77
Lack of Parental Influence	Pearson Correlation	.123	-.142	.112	1	.354**
	Sig. (2-tailed)	.287	.217	.332	.	.002
	N	77	77	77	77	77
Composite Media Score	Pearson Correlation	.802**	.654**	.581**	.354**	1
	Sig. (2-tailed)	.000	.000	.000	.002	.
	N	77	77	77	77	77

** . Correlation is significant at the 0.01 level (2-tailed).

Table 16

Correlation Matrix for Child-Directed Media Scores, First Grade

Correlations^a

		Media Consumption	Media Knowledge	Media Environment	Lack of Parental Influence	Composite Media Score
Media Consumption	Pearson Correlation	1	.290	.341*	.430**	.838**
	Sig. (2-tailed)	.	.073	.034	.006	.000
	N	39	39	39	39	39
Media Knowledge	Pearson Correlation	.290	1	.249	.468**	.661**
	Sig. (2-tailed)	.073	.	.126	.003	.000
	N	39	39	39	39	39
Media Environment	Pearson Correlation	.341*	.249	1	.460**	.603**
	Sig. (2-tailed)	.034	.126	.	.003	.000
	N	39	39	39	39	39
Lack of Parental Influence	Pearson Correlation	.430**	.468**	.460**	1	.737**
	Sig. (2-tailed)	.006	.003	.003	.	.000
	N	39	39	39	39	39
Composite Media Score	Pearson Correlation	.838**	.661**	.603**	.737**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.
	N	39	39	39	39	39

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

a. Grade = First Grade

Table 17

Correlation Matrix for Child-Directed Media Scores, Fifth Grade

Correlations

		Media Consumption	Media Knowledge	Media Environment	Lack of Parental Influence	Composite Media Score
Media Consumption	Pearson Correlation	1	.323**	.212	.123	.802**
	Sig. (2-tailed)	.	.004	.064	.287	.000
	N	77	77	77	77	77
Media Knowledge	Pearson Correlation	.323**	1	.357**	-.142	.654**
	Sig. (2-tailed)	.004	.	.001	.217	.000
	N	77	77	77	77	77
Media Environment	Pearson Correlation	.212	.357**	1	.112	.581**
	Sig. (2-tailed)	.064	.001	.	.332	.000
	N	77	77	77	77	77
Lack of Parental Influence	Pearson Correlation	.123	-.142	.112	1	.354**
	Sig. (2-tailed)	.287	.217	.332	.	.002
	N	77	77	77	77	77
Composite Media Score	Pearson Correlation	.802**	.654**	.581**	.354**	1
	Sig. (2-tailed)	.000	.000	.000	.002	.
	N	77	77	77	77	77

** . Correlation is significant at the 0.01 level (2-tailed).

Variables to test H2, H3

In order to test H2 and H3 (reiterated below), it is necessary to create several more variables. These variables actually represent a subset of the inputs to TOTMED.

H2: Children's consumer intelligence scores will be higher for children whose parents have higher levels of influence on their media consumption.

H3: Children's consumer intelligence scores will be higher for children who consume proportionally more television programming in relation to their overall media consumption.

To test hypothesis H2, a new variable is created to allow for more intuitive processing. This variable, RINFT, is a reverse-coded version of INFT – where a high score indicates a higher level of parental influence and a lower score, less parental influence. It is calculated by subtracting INFT from 40.

$$\text{RINFT} = 40 - \text{INFT}$$

To test hypothesis H3, a new variable (TVCONS) representing the proportion of television consumed in relation to all media consumption was created. To be consistent, this variable is scaled to have a range of 0-40. TVCONS is calculated by dividing the number of hours per week spent watching TV by the total number of hours spent on all media consumption and then scaling that percentage to fit a range of 0-40. A child who exclusively watches TV will have a score of 40, while a child who rarely watches TV, but engages in other media consumption activities will have a much lower score. In addition,

although there is no hypothesis associated with it, another variable, representing the proportion of all screen-related media consumption in relation to total media consumption (SCRCON) is examined. Data for these variables, by subject, is presented in Appendix C. Averages, by group, for these variables are presented in Table X.

Table 18

Average TV and Screen Consumption Scores, by Group

	Average Variables for H2, H3			
Subject ID	Raw TV Proportion	TVCONS	Raw Screen Proportion	SCRCON
1 Boys	56%	22.59	82%	32.62
1 Girls	61%	24.50	71%	28.51
5 Boys	54%	21.56	84%	33.58
5 Girls	48%	19.29	76%	30.47
Grade 1	59%	23.71	75%	30.20
Grade 5	50%	20.06	79%	31.54

FINDINGS AND CONCLUSIONS

Chapter 8 Analysis and Results

The purpose of this chapter is to present the results of the data analysis. The first section of results examines group mean differences by grade, and then gender within grade, across all variables. The remainder of the chapter presents the results of the cluster analyses for the main hypothesis (H1) as well as H2 and H3. All analyses, except where noted, were performed using SPSS Version 12.0. Standard levels of significance are applied at the $p < .05$ level.

While the application of cluster analysis methodology to test the main hypotheses may, at first glance, appear to be an overly complex approach, the parallel analysis of both the qualitative and quantitative data provide for a richer understanding of the variables and their relationships (Tashakkori and Teddlie 1998). Cluster analysis, like factor analysis, seeks to identify a set of groups that both minimize within-group variation and maximize between-group variation. Clustering techniques have been applied to a wide variety of research problems – from medicine and psychiatry to archeology. In general, whenever one needs to classify a “mountain” of information into manageable, meaningful piles, cluster analysis is of great utility (Statsoft 2004). Additionally, Fisher’s Exact Method, used in conjunction with a hierarchical cluster analysis, is a technique specifically designed to deal with relatively small data sets – such as the one generated in the current study. In this study, statistical significance testing is reported where applicable/available but many researchers applying cluster analysis techniques often do not test significance. As cluster analysis is routinely employed in the exploratory phase of the research process – looking for the “most significant solution possible” (Statsoft 2004), the application of the technique to the broad and unique data set generated in the current study is appropriate. While contributions from this study

exist in the development of the main constructs and their component measures, additional contributions are gained from applying the mixed methods approach of cluster analysis to the complex issues surrounding media effects on consumer socialization.

ANALYSIS AND HYPOTHESIS TESTING

Several levels of analysis were performed on the resulting coded data sets. First, as presented above, t-tests were run by grade, and then gender within each grade looking for group mean differences. These results were confirmed with a univariate analysis that also looked for gender/grade interactions. These tests lend credibility to the measures as, for example, consumer intelligence would be expected to be higher for fifth graders than first graders.

The main hypothesis, H1 was tested using a hierarchical cluster analysis with a subsequent Chi-Square analysis, using Fisher's Exact Test of the clusters to identify patterns significantly different from chance. As little is known empirically about the relationships between the main variables, a classificatory approach to the data is appropriate. For this study, the cluster analysis is being used to classify subjects into describable groups – based on their scores for the components comprising child-directed media consumption and consumer intelligence. Once clusters are created for consumer intelligence and media consumption, a Chi-Square analysis using Fisher's exact test was run, looking for significant relationships between the consumer intelligence clusters and media consumption clusters. A significant intersection between clusters of high consumer intelligence and large amounts of child-directed media consumption would support H1. This analysis of the clusters, using Fisher's Exact Test was run using SPSS version 12.

H2 and H3 are tested using an ANOVA – looking for significant relationships between the variables of interest (RINFT, TVCON) and consumer intelligence cluster membership. In addition, the SCRCOM variable, representing a proportional amount of screen consumption is tested using the same analysis method.

Group Means for Consumer Intelligence and Component Scores

As previously stated, the four components of consumer intelligence are:

- Knowledge of the persuasive nature of advertising coupled with the understanding that some advertisers lie and some don't (ADVSC)
- Knowledge of prices of familiar consumer goods (PRICEP)
- Ability to judge the relative value of goods or groups of goods (TRADEP)
- Ability to reach a satisfactory purchase decision (SHOPSC)

Each of these variables has a range from 0-10, with the composite consumer intelligence score having a range from 0-40.

An Independent Samples t-test was run for each of the 4 component variables of consumer intelligence and the composite measure looking at group mean differences between first and fifth graders. Results are found in Tables 2 and 3.

Table 19

Consumer Intelligence Scores, Grades 1 and 5

Group Statistics

	Grade	N	Mean	Std. Deviation	Std. Error Mean
Advertising Knowledge	First Grade	39	4.436	2.5628	.4104
	Fifth Grade	38	7.974	1.6189	.2626
Pricing Performance	First Grade	39	3.487	1.8900	.3026
	Fifth Grade	38	5.632	1.3238	.2148
Value Performance	First Grade	39	4.538	2.5428	.4072
	Fifth Grade	38	5.711	2.0389	.3308
Shopping Performance	First Grade	39	4.231	2.6002	.4164
	Fifth Grade	38	5.974	2.2359	.3627
Composite CI Score	First Grade	39	16.846	5.7195	.9159
	Fifth Grade	38	25.184	4.1904	.6798

Table 20

Differences in Consumer Intelligence Scores Between Grades 1 and 5

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Advertising Knowledge	Equal variances assumed	7.171	.009	-7.220	75	.000	-3.5378	.4900	-4.5139	-2.5617
	Equal variances not assumed			-7.261	64.404	.000	-3.5378	.4872	-4.5110	-2.5646
Pricing Performance	Equal variances assumed	6.986	.010	-5.753	75	.000	-2.1444	.3728	-2.8870	-1.4018
	Equal variances not assumed			-5.779	68.155	.000	-2.1444	.3711	-2.8849	-1.4039
Value Performance	Equal variances assumed	1.289	.260	-2.228	75	.029	-1.1721	.5261	-2.2201	-.1241
	Equal variances not assumed			-2.234	72.345	.029	-1.1721	.5246	-2.2177	-.1264
Shopping Performance	Equal variances assumed	.352	.555	-3.150	75	.002	-1.7429	.5533	-2.8451	-.6407
	Equal variances not assumed			-3.156	73.868	.002	-1.7429	.5522	-2.8432	-.6426
Composite CI Score	Equal variances assumed	3.929	.051	-7.282	75	.000	-8.3381	1.1451	-10.6192	-6.0569
	Equal variances not assumed			-7.310	69.682	.000	-8.3381	1.1406	-10.6130	-6.0631

As expected, there is a significant difference in mean scores for each of the four consumer intelligence components and the composite measure between first and fifth graders. The average consumer intelligence score for fifth graders was 25.2. The average consumer intelligence score for first graders was 16.8. As there are significant group differences between the grades for consumer intelligence, all further analysis will be performed separately for each group (by grade, first and fifth).

Next, intelligence scores by gender, within grade, were compared. These t-tests looked for gender differences in each component of consumer intelligence, as well as the composite score. Results are found in Tables 4-7.

Table 21

First Grade Consumer Intelligence Scores, By Gender

Group Statistics^a

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Pricing Performance	Girls	23	4.000	2.0671	.4310
	Boys	16	2.750	1.3416	.3354
Value Performance	Girls	23	5.435	2.2121	.4612
	Boys	16	3.250	2.4900	.6225
Advertising Knowledge	Girls	23	4.870	2.7187	.5669
	Boys	16	3.813	2.2574	.5643
Shopping Performance	Girls	23	3.348	2.3857	.4975
	Boys	16	5.500	2.4221	.6055
Composite CI Score	Girls	23	17.870	6.0099	1.2531
	Boys	16	15.375	5.0974	1.2743

a. Grade = First Grade

Table 22

Differences in First Grade Consumer Intelligence Scores, By Gender

Independent Samples Test^a

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Pricing Performance	Equal variances assumed	3.267	.079	2.123	37	.040	1.2500	.5887	.0572	2.4428
	Equal variances not assumed			2.289	36.878	.028	1.2500	.5461	.1433	2.3567
Value Performance	Equal variances assumed	.181	.673	2.882	37	.007	2.1848	.7581	.6487	3.7208
	Equal variances not assumed			2.820	29.856	.008	2.1848	.7748	.6022	3.7674
Advertising Knowledge	Equal variances assumed	.486	.490	1.277	37	.209	1.0571	.8275	-.6195	2.7337
	Equal variances not assumed			1.321	35.736	.195	1.0571	.7999	-.5656	2.6798
Shopping Performance	Equal variances assumed	.347	.560	-2.754	37	.009	-2.1522	.7815	-3.7356	-.5687
	Equal variances not assumed			-2.746	32.108	.010	-2.1522	.7837	-3.7482	-.5561
Composite CI Score	Equal variances assumed	.058	.811	1.354	37	.184	2.4946	1.8418	-1.2373	6.2265
	Equal variances not assumed			1.396	35.441	.171	2.4946	1.7873	-1.1322	6.1213

a. Grade = First Grade

Table 23

Fifth Grade Consumer Intelligence Scores, by Gender

Group Statistics^a

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Pricing Performance	Girls	25	5.720	1.3699	.2740
	Boys	13	5.462	1.2659	.3511
Value Performance	Girls	25	6.040	2.0913	.4183
	Boys	13	5.077	1.8467	.5122
Advertising Knowledge	Girls	25	8.480	1.4468	.2894
	Boys	13	7.000	1.5275	.4237
Shopping Performance	Girls	25	5.760	2.1848	.4370
	Boys	13	6.385	2.3643	.6557
Composite CI Score	Girls	25	25.880	4.6217	.9243
	Boys	13	23.846	2.9111	.8074

a. Grade = Fifth Grade

Table 24

Differences in Fifth Grade Consumer Intelligence Scores, by Gender

Independent Samples Test ^a										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
Pricing Performance	Equal variances assumed	.068	.796	.566	36	.575	.2585	.4569	-.6681	1.1851
	Equal variances not assumed			.580	26.206	.567	.2585	.4454	-.6566	1.1736
Value Performance	Equal variances assumed	.378	.543	1.399	36	.170	.9631	.6883	-.4329	2.3591
	Equal variances not assumed			1.456	27.276	.157	.9631	.6613	-.3931	2.3192
Advertising Knowledge	Equal variances assumed	.032	.858	2.936	36	.006	1.4800	.5041	.4576	2.5024
	Equal variances not assumed			2.885	23.275	.008	1.4800	.5131	.4194	2.5406
Shopping Performance	Equal variances assumed	.386	.538	-.813	36	.421	-.6246	.7681	-2.1823	.9331
	Equal variances not assumed			-.793	22.778	.436	-.6246	.7880	-2.2556	1.0063
Composite CI Score	Equal variances assumed	1.440	.238	1.440	36	.159	2.0338	1.4125	-.8309	4.8986
	Equal variances not assumed			1.657	34.466	.107	2.0338	1.2273	-.4591	4.5268

a. Grade = Fifth Grade

The tests of gender differences yielded some interesting results. For first graders, there was no significant difference between boys and girls for the composite consumer intelligence score or the advertising score. There were, however, significant differences in the other component scores. Girls scored significantly higher on the pricing and value components, with boys scoring significantly higher on the shopping task. These observed gender differences lend further credence to the use of cluster analysis of the component scores to group individuals rather than relying solely on the composite consumer intelligence score, for which gender differences are not significant.

For fifth graders, the only significant gender difference was in knowledge of advertising, for which girls had a mean score of 8.5 and boys had a mean score of 7.0 (on a 10 point scale).

Group Means for Child-Directed Media Consumption and Component Scores

As previously stated, the four components of child-directed media consumption are:

- amount of consumption (CONSTD)
- richness of the media environment (more access to media) (ETOT)
- amount of parental influence on media choices (INFT)
- media knowledge across multiple domains (KTOT)

Each of these variables has a range from 0-40, as does the composite media consumption score. An ANOVA analysis was run on each of the 4 component variables of child-directed media consumption and the composite measure looking at group mean differences between the grades. Results are found in Tables 8 and 9.

Table 25

Media Scores, Grades 1 and 5

Group Statistics

	Grade	N	Mean	Std. Deviation	Std. Error Mean
Media Consumption	First Grade	39	18.077	11.3332	1.8148
	Fifth Grade	38	22.368	10.2494	1.6627
Media Knowledge	First Grade	39	19.372	6.6071	1.0580
	Fifth Grade	38	29.487	5.6634	.9187
Media Environment	First Grade	39	17.260	4.3621	.6985
	Fifth Grade	38	19.633	5.9071	.9583
Lack of Parental Influence	First Grade	39	20.400	4.8617	.7785
	Fifth Grade	38	15.389	6.0736	.9853
Composite Media Score	First Grade	39	18.792	5.0241	.8045
	Fifth Grade	38	21.745	4.1000	.6651

Table 26

Differences in Media Scores Between Grades 1 and 5

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Media Consumption	Equal variances assumed	.148	.701	-1.741	75	.086	-4.291	2.4645	-9.2011	.6181
	Equal variances not assumed			-1.744	74.592	.085	-4.291	2.4613	-9.1950	.6120
Media Knowledge	Equal variances assumed	3.160	.080	-7.204	75	.000	-10.115	1.4040	-12.9120	-7.3181
	Equal variances not assumed			-7.219	73.812	.000	-10.115	1.4012	-12.9071	-7.3230
Media Environment	Equal variances assumed	3.632	.061	-2.009	75	.048	-2.373	1.1812	-4.7258	-.0195
	Equal variances not assumed			-2.001	68.056	.049	-2.373	1.1858	-4.7389	-.0064
Lack of Parental Influence	Equal variances assumed	2.016	.160	4.002	75	.000	5.011	1.2521	2.5162	7.5048
	Equal variances not assumed			3.990	70.764	.000	5.011	1.2557	2.5066	7.5145
Composite Media Score	Equal variances assumed	1.353	.249	-2.821	75	.006	-2.952	1.0466	-5.0373	-.8675
	Equal variances not assumed			-2.828	72.779	.006	-2.952	1.0438	-5.0329	-.8720

As expected, there were some significant differences between group means for first and fifth graders in terms of the child-directed media consumption. There were significant differences in the components of media knowledge and the media environment as well as in the overall composite score. The differences in knowledge and environment were not unexpected and will be addressed in the subsequent discussion. Significant differences were not found for media consumption or lack of parental influence.

Next, composite media scores by gender, within grade, are compared. These t-tests look for gender differences in each component of child-directed media consumption, as well as the composite score. Results are found in Tables 10-13.

Table 27

First Grade Media Scores, by Gender

Group Statistics^a

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Media Consumption	Girls	23	17.174	11.0604	2.3062
	Boys	16	19.375	11.9548	2.9887
Media Knowledge	Girls	23	18.152	5.3966	1.1253
	Boys	16	21.125	7.8941	1.9735
Media Environment	Girls	23	17.961	4.7332	.9869
	Boys	16	16.253	3.6758	.9190
Lack of Parental Influence	Girls	23	19.643	4.1744	.8704
	Boys	16	21.488	5.6728	1.4182
Composite Media Score	Girls	23	18.248	4.2436	.8848
	Boys	16	19.575	6.0353	1.5088

a. Grade = First Grade

Table 28

Differences in First Grade Media Scores, by Gender

Independent Samples Test^a

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Media Consumption	Equal variances assumed	.005	.942	-.591	37	.558	-2.201	3.7214	-9.7414	5.3392
	Equal variances not assumed			-.583	30.749	.564	-2.201	3.7751	-9.9029	5.5007
Media Knowledge	Equal variances assumed	5.295	.027	-1.399	37	.170	-2.973	2.1243	-7.2770	1.3314
	Equal variances not assumed			-1.309	24.568	.203	-2.973	2.2718	-7.6558	1.7102
Media Environment	Equal variances assumed	2.567	.118	1.210	37	.234	1.708	1.4115	-1.1522	4.5676
	Equal variances not assumed			1.266	36.474	.213	1.708	1.3485	-1.0260	4.4415
Lack of Parental Influence	Equal variances assumed	.703	.407	-1.171	37	.249	-1.844	1.5750	-5.0353	1.3473
	Equal variances not assumed			-1.108	25.921	.278	-1.844	1.6640	-5.2650	1.5769
Composite Media Score	Equal variances assumed	.993	.325	-.808	37	.424	-1.327	1.6431	-4.6564	2.0020
	Equal variances not assumed			-.759	25.070	.455	-1.327	1.7491	-4.9291	2.2747

a. Grade = First Grade

Table 29

Fifth Grade Media Scores, by Gender

Group Statistics^a

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Media Consumption	Girls	25	20.200	9.6264	1.9253
	Boys	13	26.538	10.4850	2.9080
Media Knowledge	Girls	25	29.940	5.8333	1.1667
	Boys	13	28.615	5.4396	1.5087
Media Environment	Girls	25	18.602	5.7531	1.1506
	Boys	13	21.615	5.9096	1.6390
Lack of Parental Influence	Girls	25	15.440	5.9515	1.1903
	Boys	13	15.292	6.5486	1.8163
Composite Media Score	Girls	25	21.068	3.8313	.7663
	Boys	13	23.046	4.4367	1.2305

a. Grade = Fifth Grade

Table 30

Differences in Fifth Grade Media Scores, by Gender

Independent Samples Test ^a										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Media Consumption	Equal variances assumed	.538	.468	-1.868	36	.070	-6.338	3.3923	-13.2184	.5415
	Equal variances not assumed			-1.817	22.649	.082	-6.338	3.4876	-13.5593	.8824
Media Knowledge	Equal variances assumed	.028	.869	.679	36	.501	1.325	1.9508	-2.6318	5.2810
	Equal variances not assumed			.695	25.995	.493	1.325	1.9072	-2.5956	5.2449
Media Environment	Equal variances assumed	.040	.843	-1.518	36	.138	-3.013	1.9852	-7.0396	1.0128
	Equal variances not assumed			-1.505	23.846	.146	-3.013	2.0026	-7.1479	1.1211
Lack of Parental Influence	Equal variances assumed	.191	.665	.070	36	.944	.148	2.1053	-4.1221	4.4175
	Equal variances not assumed			.068	22.451	.946	.148	2.1715	-4.3506	4.6460
Composite Media Score	Equal variances assumed	.038	.846	-1.431	36	.161	-1.978	1.3825	-4.7821	.8257
	Equal variances not assumed			-1.365	21.495	.186	-1.978	1.4496	-4.9885	1.0322

a. Grade = Fifth Grade

For both first graders and fifth graders, no significant differences of group means between boy and girls were found for any of the four media components or the composite measure.

As very large standard deviations in media consumption scores are reported in both the first and fifth grade analysis and there is mixed support for differences between grades for the media components, a combined t-test, looking for gender differences across all subjects was performed for the media components and the composite media score. Results are found in Tables 14 and 15.

Table 31

Media Scores for All Subjects, By Gender

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Media Consumption	Girls	48	18.750	10.3400	1.4924
	Boys	29	22.586	11.6971	2.1721
Media Knowledge	Girls	48	24.292	8.1501	1.1764
	Boys	29	24.483	7.7741	1.4436
Media Environment	Girls	48	18.295	5.2433	.7568
	Boys	29	18.657	5.4379	1.0098
Lack of Parental Influence	Girls	48	17.454	5.5450	.8003
	Boys	29	18.710	6.7417	1.2519
Composite Media Score	Girls	48	19.717	4.2370	.6116
	Boys	29	21.131	5.5710	1.0345

Table 32

Differences in Media Scores for All Subjects, by Gender

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Media Consumption	Equal variances assumed	.694	.408	-1.501	75	.138	-3.836	2.5557	-8.9275	1.2551
	Equal variances not assumed			-1.456	53.566	.151	-3.836	2.6354	-9.1209	1.4485
Media Knowledge	Equal variances assumed	.775	.382	-.101	75	.919	-.191	1.8843	-3.9449	3.5627
	Equal variances not assumed			-.103	61.402	.919	-.191	1.8622	-3.9143	3.5322
Media Environment	Equal variances assumed	.001	.982	-.290	75	.773	-.362	1.2505	-2.8532	2.1290
	Equal variances not assumed			-.287	57.484	.775	-.362	1.2619	-2.8886	2.1644
Lack of Parental Influence	Equal variances assumed	.874	.353	-.887	75	.378	-1.256	1.4158	-4.0766	1.5642
	Equal variances not assumed			-.845	50.536	.402	-1.256	1.4859	-4.2399	1.7275
Composite Media Score	Equal variances assumed	3.100	.082	-1.258	75	.212	-1.414	1.1239	-3.6534	.8246
	Equal variances not assumed			-1.177	47.532	.245	-1.414	1.2017	-3.8313	1.0025

There are no significant group mean differences for gender found across the entire sample.

Group means for Variables related to H2, H3

Recall that two additional variables were created to test H2 and H3. The first (RINFT), associated with H2, is a variable positively representing the amount of parental influence over media choice and consumption. The second, associated with H3 represents the proportion of television consumed in relation to all media consumed (TVCON). Each of these variables can range from 0-40. In addition, although there is no hypothesis associated with it, another variable, representing the proportion of all screen-related media consumption in relation to total media consumption (SCRCON) is examined. These variables were examined, looking for group mean differences between the grades. Results are found in Tables 16 and 17.

Table 33

RINFT, TVCON, SCRCON by Grade

Group Statistics

	Grade	N	Mean	Std. Deviation	Std. Error Mean
Parental Influence	First Grade	39	19.600	4.8617	.7785
	Fifth Grade	38	24.611	6.0736	.9853
TV Consumption	First Grade	39	23.713	6.2053	.9936
	Fifth Grade	38	20.065	6.3408	1.0286
Screen Consumption	First Grade	39	30.198	5.8470	.9363
	Fifth Grade	38	31.536	5.6223	.9121

Table 34

Differences in RINFT, TVCON, SCRCON by Grade

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Parental Influence	Equal variances assumed	2.016	.160	-4.002	75	.000	-5.011	1.2521	-7.5048	-2.5162
	Equal variances not assumed			-3.990	70.764	.000	-5.011	1.2557	-7.5145	-2.5066
TV Consumption	Equal variances assumed	.012	.913	2.552	75	.013	3.649	1.4298	.8005	6.4970
	Equal variances not assumed			2.551	74.828	.013	3.649	1.4302	.7996	6.4979
Screen Consumption	Equal variances assumed	.020	.888	-1.023	75	.310	-1.338	1.3078	-3.9433	1.2671
	Equal variances not assumed			-1.024	74.988	.309	-1.338	1.3071	-3.9419	1.2658

Results show a significant group mean difference between the grades for television consumption and parental influence – with first graders consuming proportionally more television than fifth graders and parents more involved (present) with fifth graders. This is not unexpected as first graders are less likely to spend a large amount of time using the computer and parents and fifth graders are more likely to co-view television and movies.

Next, H2 and H3 variables, as well as the screen consumption variable are examined looking for gender differences within the grades. Results are found in Tables 18 – 21.

Table 35

First Grade RINFT, TVCON, SCRCON, by Gender

Group Statistics^a

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Parental Influence	Girls	23	20.357	4.1744	.8704
	Boys	16	18.513	5.6728	1.4182
TV Consumption	Girls	23	24.498	5.5411	1.1554
	Boys	16	22.586	7.0863	1.7716
Screen Consumption	Girls	23	28.514	5.5143	1.1498
	Boys	16	32.619	5.6045	1.4011

a. Grade = First Grade

Table 36

Differences in First Grade RINFT, TVCON, SCRCON, by Gender

Independent Samples Test^a

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Parental Influence	Equal variances assumed	.703	.407	1.171	37	.249	1.844	1.5750	-1.3473	5.0353
	Equal variances not assumed			1.108	25.921	.278	1.844	1.6640	-1.5769	5.2650
TV Consumption	Equal variances assumed	.112	.740	.945	37	.351	1.912	2.0229	-2.1869	6.0108
	Equal variances not assumed			.904	27.128	.374	1.912	2.1150	-2.4268	6.2507
Screen Consumption	Equal variances assumed	1.087	.304	-2.272	37	.029	-4.105	1.8071	-7.7666	-.4435
	Equal variances not assumed			-2.265	32.085	.030	-4.105	1.8125	-7.7966	-.4134

a. Grade = First Grade

Table 37

Fifth Grade RINFT, TVCON, SCRCON, by Gender

Group Statistics^a

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Parental Influence	Girls	25	24.560	5.9515	1.1903
	Boys	13	24.708	6.5486	1.8163
TV Consumption	Girls	25	19.286	6.5166	1.3033
	Boys	13	21.563	5.9448	1.6488
Screen Consumption	Girls	25	30.472	5.5689	1.1138
	Boys	13	33.584	5.3417	1.4815

a. Grade = Fifth Grade

Table 38

Differences in Fifth Grade RINFT, TVCON, SCRCON, by Gender

Independent Samples Test^a

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Parental Influence	Equal variances assumed	.191	.665	-.070	36	.944	-.148	2.1053	-4.4175	4.1221
	Equal variances not assumed			-.068	22.451	.946	-.148	2.1715	-4.6460	4.3506
TV Consumption	Equal variances assumed	.125	.726	-1.052	36	.300	-2.277	2.1651	-6.6680	2.1140
	Equal variances not assumed			-1.083	26.507	.288	-2.277	2.1017	-6.5931	2.0391
Screen Consumption	Equal variances assumed	.004	.949	-1.657	36	.106	-3.113	1.8787	-6.9229	.6975
	Equal variances not assumed			-1.679	25.349	.105	-3.113	1.8535	-6.9274	.7020

a. Grade = Fifth Grade

In terms of gender differences, the only significant group mean difference was for proportion of screen consumption between first grade girls and boys. The mean score for boys was 32.6, for girls it was 28.5. Translated into a real proportion, boys in this sample are consuming roughly 81% of their media through screen-related activities, while girls are spending about 71% of their media time in screen-related activities. This

means that first grade girls in this sample are spending proportionally more time listening to music or reading magazines than boys.

The data set was further explored by running a univariate analysis of the data looking for any interactions between gender and grade. The results show no significant interactions between gender and grade for any of the eight component variables or the two composite measures and as a result, are not presented.

DATA ANALYSIS FOR HYPOTHESIS TESTING

Once each of the data components of the composite measures of child-directed media consumption and consumer intelligence were described and analyzed for group mean differences, cluster analyses were performed independently, by grade, on each group of components. This analysis yielded two cluster membership identifiers for each child – one for media consumption and one for consumer intelligence. Next, cross tabs of the clusters were analyzed – looking for significance in the value of media consumption for predicting consumer intelligence. Finally, using inputs from the cluster analysis, H1 was tested – looking for significant intersections, using Fisher's Exact Test, between clusters with high media consumption and high consumer intelligence scores. Standard levels of significance at the $p > .05$ were applied.

The first step in the analysis of the data is to develop classificatory clusters for each composite measure – consumer intelligence and child-directed media consumption. The procedure for determining the number of clusters for each grade for each measure is presented in Appendix D.

Each analysis yielded a 4-cluster solution, meaning there are four consumer intelligence clusters for each grade and four child-directed media clusters for each grade. As previously stated, there are significant differences between first and fifth graders in consumer intelligence – therefore, the 8 different consumer clusters are described within grades (4 for each grade), not between grades. Once the number of clusters for each grade was determined, a description of a “typical” cluster member was created. Clusters are described using a mixture of raw qualitative data, an analysis of group means across the four components of consumer intelligence, and the composite consumer intelligence score.

Identification of Consumer Intelligence Cluster for First Graders

Table 22 contains the mean scores for each of the four consumer intelligence components for each of the 4 clusters. A clustered bar graph of the information is presented in Figure 3.

Figure 3

First Grade Consumer Intelligence Mean Component Scores, by Cluster

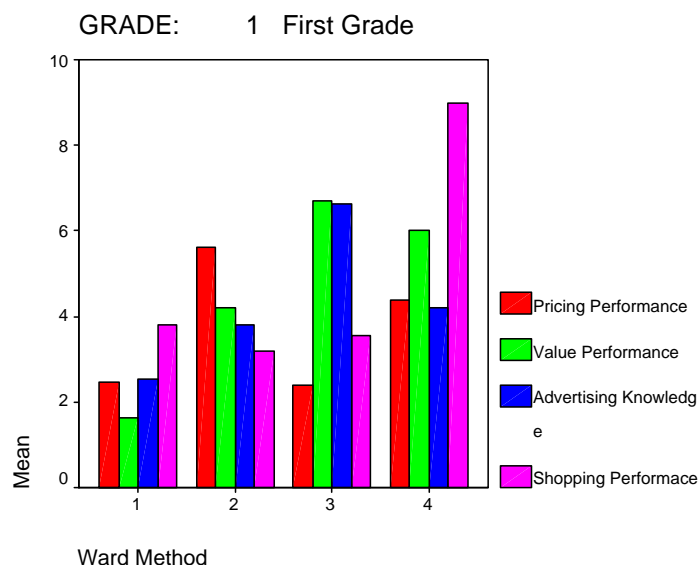


Table 39

First Grade CI Mean Component Scores, by Cluster

Descriptives^a

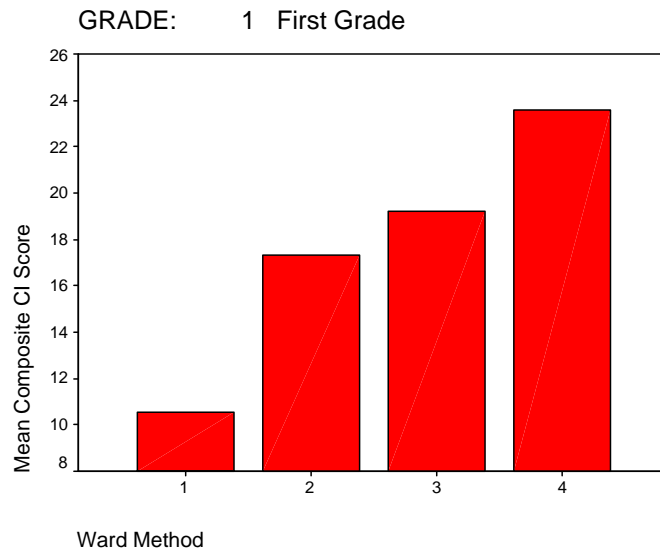
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Pricing Performance	1	11	2.455	1.1282	.3402	1.697	3.212	.0	4.0
	2	10	5.600	.9661	.3055	4.909	6.291	4.0	7.0
	3	13	2.385	1.5566	.4317	1.444	3.325	.0	5.0
	4	5	4.400	1.5166	.6782	2.517	6.283	2.0	6.0
	Total	39	3.487	1.8900	.3026	2.875	4.100	.0	7.0
Value Performance	1	11	1.636	1.3618	.4106	.721	2.551	.0	3.0
	2	10	4.200	1.3166	.4163	3.258	5.142	2.0	5.0
	3	13	6.692	1.6013	.4441	5.725	7.660	5.0	10.0
	4	5	6.000	2.0000	.8944	3.517	8.483	3.0	8.0
	Total	39	4.538	2.5428	.4072	3.714	5.363	.0	10.0
Advertising Knowledge	1	11	2.545	2.1149	.6377	1.125	3.966	.0	6.0
	2	10	3.800	1.5492	.4899	2.692	4.908	2.0	6.0
	3	13	6.615	2.3993	.6654	5.166	8.065	1.0	10.0
	4	5	4.200	1.4832	.6633	2.358	6.042	2.0	6.0
	Total	39	4.436	2.5628	.4104	3.605	5.267	.0	10.0
Shopping Performance	1	11	3.818	1.7787	.5363	2.623	5.013	.0	5.0
	2	10	3.200	1.4757	.4667	2.144	4.256	1.0	5.0
	3	13	3.538	2.4019	.6662	2.087	4.990	.0	7.0
	4	5	9.000	1.0000	.4472	7.758	10.242	8.0	10.0
	Total	39	4.231	2.6002	.4164	3.388	5.074	.0	10.0

a. Grade = First Grade

The mean composite consumer intelligence score for each first grade consumer intelligence cluster is presented in Figure 4. Results of an ANOVA on the means, showing significant differences, can be found in Appendix E.

Figure 4

First Grade Mean CI Scores, by Cluster



The frequency distribution for the four consumer-intelligence clusters for first grade is presented in Table 23.

Table 40

First Grade CI Frequency Table, by Cluster

Ward Method^a

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	11	28.2	28.2	28.2
2	10	25.6	25.6	53.8
3	13	33.3	33.3	87.2
4	5	12.8	12.8	100.0
Total	39	100.0	100.0	

a. Grade = First Grade

Cluster 1 contains subjects with the lowest overall consumer intelligence scores. Children in this cluster were typically unsure of their answers, often looked to someone else, including the interviewer for advice. Of the 11 subjects in this cluster, 9 are male. Although the children in this group were often unsure about their responses, they were not unresponsive. In terms of advertising, they did not seem to have thought too much about the purpose of advertising – rather that it was just something that came along with shows. Some comments about the purpose of advertising from subjects in this cluster include:

“when shows come on, so do commercials”

“..I hate it when I’m watching and it goes to an ad and I have to wait so long”

“.. to power up the shows – they need a rest like people”

The most advertising aware member of cluster one offered this comment:

“they want you to go to these stores and buy cars”

As they are generally unaware of consumer issues, children in cluster 1 are labeled as “Unawares”.

Cluster 2 and Cluster 3 have relatively equal average composite consumer intelligence scores but differ in their component scores.

The subjects in Cluster 2 have the highest average score on the pricing performance and the lowest on the shopping score. This cluster contains 9 girls and 1 boy. Children in cluster 2 offered some reasoning for their consumer-related responses but did not seem to be able to use the articulated reasoning to arrive at satisfactory

decisions or solutions. For example, during the relevant value exercise, one girl articulated she liked the Legos better than the Gameboy, and liked the helmet/video choice better than the bike - seeming to know that they weren't worth as much, then went ahead and selected the lower valued items. Similarly, another child in this group didn't select the bike in the relevant trade exercise because he had already selected it once before. Finally, one other child said that during the trade task that they chose the side with 7 lower priced items because "there were a lot of them" – again, seeming to know that they weren't worth as much. Children in this group had a difficult time shopping and making a decision. They often ended up with two items. In terms of advertising, they were aware that advertising had a purpose, but many did not convey an understanding of the true intent. Some comments from children in cluster 2 regarding the purpose advertising are:

"so people that are being on TV can get ready to do something else"

"so we can get away from the TV and use the bathroom"

"to show you some stuff"

On the topic of the truthfulness of advertising, subjects in cluster 2 had this to say:

"no, they are selfish"

"no, not true, they're all not true because they don't look true"

As this group is characterized by their inability to use information and make a decision, they will be referred to as "Flip-Flops".

Cluster 3 contains subjects that are similar to cluster 2 in average composite consumer intelligence scores but score much higher on value judgments and knowledge

of advertising, are similar on the shopping task, and are much lower on pricing knowledge. This group contains 10 girls and 3 boys. Children in this group overall seemed to have an easier time making a decision once all they had all the information they desired. Like children in cluster 2, they also articulated some of their reasoning, but unlike Flip-Flops, they tried to use the information. One child said that the cereal was very hard to price because they never bought cereal just alone, the same child also asked if the “Finding Nemo” item was a movie or a DVD because “the DVD costs \$100 but the movie would only be \$50”. Another commented that the Legos were hard to price because “there are a lot of them”. This comment is markedly different from those made by children in cluster 1, the Unawares, who instead, saw the “1000 piece” sign and determined that the Legos must cost either \$100 or \$1000.

In terms of knowing the purpose of advertising, children in cluster 3 were similar to Flip-Flops in that some clearly do understand the intent, while others do not – overall, this group tended to characterize advertising as informational in nature but were very cynical about its truthfulness. Some comments regarding the purpose of advertising are:

“because if they just have TV, then other companies wouldn’t get the chance to show what they have”

“to show people what stuff is in stores and what new shows there are”

“to raise money”

In terms of the truthfulness of ads, children in cluster 3 thought:

“no, really big smiles means they are faking - they are so happy they are going to get money”

“sometimes - my mom told me when I was 5 that not everything on TV is true”

“no... flying...telling you people are flying and people can't fly”

“no, not true - Glad trash bags wouldn't break that easy - Hefty trash bags shows Glad bags broke and the hefty bag walks, then someone steals hefty bags”

“some are fake – they say ‘out in August’, but they do not have them – they’re not out”

“no, some say stuff, like HEB, ‘see the little swimming pool’, then they don't have it”

“it depends, if they just want you to buy and get money then it’s not true”

As the defining characteristic of this group is their skepticism toward advertising, this group will be known as “Conspiracy Theorists”.

Cluster 4 contains subjects with the very highest average composite consumer intelligence scores. This group contains 3 boys and 2 girls. Children in this group displayed very adult-like reasoning skills and more consumer knowledge in general. Some of the comments made by children in this cluster are:

“the price of a Happy Meal depends on what you get”

“ it’s \$28 for movie tickets to ‘Finding Nemo’“

“the food will run out, the game will rip, so I choose...”

“those things are worth more **to me**”

In terms of advertising children in cluster 4 are less knowledgeable on average than either the Flip-Flops or the Conspiracy Theorists. Some of their thoughts on the purpose of advertising and its truthfulness are:

“people that are playing can have a rest for a while”

“give your mind a break”

“they tell if they are true or not...they just say ‘catch Toon Disney’”

“no, Mickey Mouse isn’t true, it’s just someone dressed up in a costume”

As children in this group are able to apply the information they have (irregardless of the quality of that information) to decision-making and are able to reach a solution that is justifiable to them, they will be referred to as “Mr. Spocks”. They have the most logical approach to consumer decisions.

Identification of Consumer Intelligence Clusters for Fifth Graders

Table 24 contains the mean scores for each of the four consumer intelligence components for each of the 4 clusters. A clustered bar graph of the information is presented in Figure 5.

Table 41

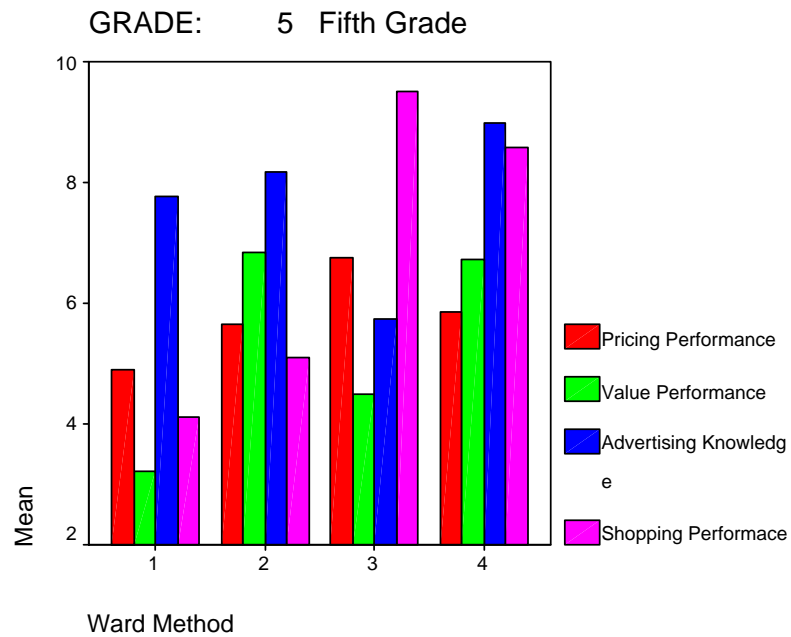
Fifth Grade Consumer Intelligence Mean Component Scores, by Cluster

Descriptives ^a									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Pricing Performance	1	9	4.889	1.6159	.5386	3.647	6.131	3.0	7.0
	2	18	5.667	1.0847	.2557	5.127	6.206	4.0	8.0
	3	4	6.750	1.5000	.7500	4.363	9.137	5.0	8.0
	4	7	5.857	1.0690	.4041	4.868	6.846	5.0	8.0
	Total	38	5.632	1.3238	.2148	5.196	6.067	3.0	8.0
Value Performance	1	9	3.222	1.3944	.4648	2.150	4.294	2.0	5.0
	2	18	6.833	.9235	.2177	6.374	7.293	5.0	8.0
	3	4	4.500	1.9149	.9574	1.453	7.547	3.0	7.0
	4	7	6.714	1.8898	.7143	4.966	8.462	5.0	10.0
	Total	38	5.711	2.0389	.3308	5.040	6.381	2.0	10.0
Advertising Knowledge	1	9	7.778	1.5635	.5212	6.576	8.980	5.0	10.0
	2	18	8.167	1.4653	.3454	7.438	8.895	6.0	10.0
	3	4	5.750	1.7078	.8539	3.032	8.468	4.0	8.0
	4	7	9.000	.8165	.3086	8.245	9.755	8.0	10.0
	Total	38	7.974	1.6189	.2626	7.442	8.506	4.0	10.0
Shopping Performance	1	9	4.111	1.7638	.5879	2.755	5.467	2.0	7.0
	2	18	5.111	.6764	.1594	4.775	5.447	4.0	7.0
	3	4	9.500	1.0000	.5000	7.909	11.091	8.0	10.0
	4	7	8.571	1.1339	.4286	7.523	9.620	7.0	10.0
	Total	38	5.974	2.2359	.3627	5.239	6.709	2.0	10.0

a. Grade = Fifth Grade

Figure 5

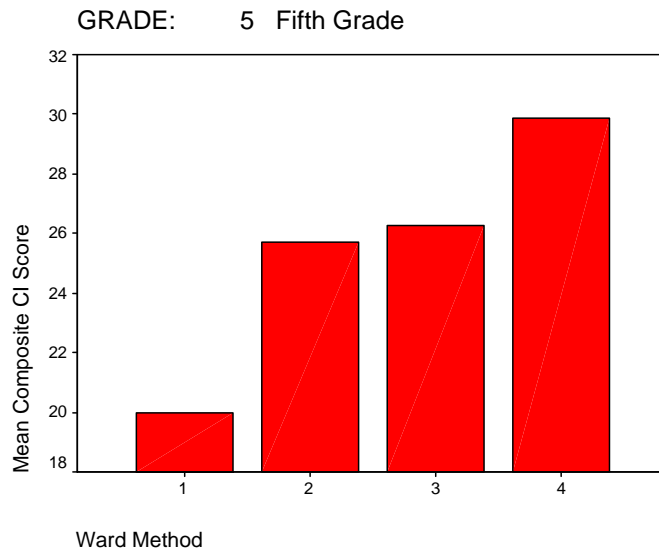
Fifth Grade Consumer Intelligence Mean Component Scores, by Cluster



The mean composite consumer intelligence score for each fifth grade consumer intelligence cluster is presented in Figure 6. Results of an ANOVA on the means, showing significant differences, can be found in Appendix E.

Figure 6

Fifth Grade Mean Consumer Intelligence Scores, by Cluster



The frequency distribution for the four consumer-intelligence clusters for fifth grade is presented in Table 25.

Table 42

Fifth Grade CI Frequency Table, by Cluster

Ward Method^a

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	9	23.7	23.7	23.7
2	18	47.4	47.4	71.1
3	4	10.5	10.5	81.6
4	7	18.4	18.4	100.0
Total	38	100.0	100.0	

a. Grade = Fifth Grade

Cluster 1 contains children with the overall lowest average composite consumer intelligence scores – 5.7 points or more than 22% lower than the next lowest group's. This group's average composite consumer intelligence score is lower than that of the first grade "Spocks". This group has 5 girls and 4 boys. Children in this group, on average, scored the lowest on each of the components except for knowledge of advertising. More than half of the subjects in this group changed their mind during the shopping task. Comments regarding the purpose and truthfulness of advertising from this cluster were typical of most fifth grade subjects:

"to advertise stuff so people will buy it"

"to make you buy the thing"

"to make people interested to buy your stuff"

and...

"sometimes [they are not true], because my friend got a twisty hair thingy and I used it and my hair got tangled"

"it depends, oxi-clean isn't true - it doesn't work in 48 seconds"

"no, you see sparkly crayons and you get home and they are regular crayons"

"no, dad got a gun that said the laser would go 3,000 yards but it only went 100 yards – he wanted to get his money back but couldn't return it"

These examples typify the responses that display some skepticism – where the skepticism stems from either a personal experience or the fact that something they saw on the commercial cannot be true in a literal sense.

As with the low-performing first graders, members of this cluster will be referred to as "Unawares".

Like the first graders, average composite consumer intelligence scores for children in Cluster 2 and Cluster 3 are relatively equal, but individual component scores vary.

Cluster 2 for fifth graders contains children that are “middle of the road” and have component scores that are relatively even (except for advertising knowledge, which again is not a distinguishing component for fifth graders). This cluster contains 4 boys and 14 girls. This cluster is the largest cluster by double. Children in this cluster understood the purpose of advertising but rather than citing personal experiences with advertised products as proof of their veracity, children in this cluster relied on more in-depth analyses of the ads themselves. Some of the comments about advertising are:

“...think about it logically, some seem like they can’t be true (trash bags, for example)”

“some of it, what you got to look for is if it changes to 2 scenes... look for 1 scene - that way you know if it's not true – [says] rainbow art dries instantly then the camera angle changes”

“Sonic Breeze is true - it states facts and explains...”

Unlike the similar first grade cluster (Flip-Flops), children in this cluster, in general did not have trouble making a decision. This group of fifth graders will be referred to as the “Smiths” to reflect their average scores on most of the consumer intelligence components.

Fifth grade children in Cluster 3 have the highest average pricing and shopping scores and very low average advertising knowledge scores. This pattern is basically an inverse of The Smiths profile, with the same average composite score. This group

contains 3 boys and 1 girl. Some of the comments regarding the purpose of advertising from fifth graders in this cluster are:

“it’s a way to show people what’s out there”

“the maker of the show gets money to let people advertise”

“because they need to pause for them”

In terms of the truthfulness of advertising, there was little comment from this group except for one girl who shared that:

“Disney doesn't show what they say [they are going to show] - Disney doesn't advertise things [only other shows]”

As this group had the highest shopping and pricing scores as a group, they will be referred to as the “Super Shoppers”.

Children in the final consumer intelligence cluster for fifth graders, cluster 4, have the highest average composite consumer intelligence score. This group has 5 girls and 2 boys. This group’s scores were increased by excellent performance on the shopping task and their superior advertising knowledge. Pricing knowledge was similar to that of The Smiths and the relevant value score somewhat lower. Only one child in this group changed their mind while shopping – and it was to something not yet seen. Children in this group had this to say about the purpose of advertising:

“...for you to be attracted or want to buy that certain item - trying to get you to buy it”

“advertise for the product and get people.. to make people want them...they make them look better than they are”

What distinguishes this group from The Smiths is their ability to make a satisfactory decision and stick with it. Children in this group, in general, were very matter-of-fact about their responses to all stimuli – they stuck to the facts and were very sure that their responses were sufficient and “correct”. For this reason this group will be called the “Sgt. Fridays” (just the facts ma’am).

In summary, four consumer intelligence clusters have been independently determined and described for each grade. For first grade, these clusters are: the Unawares, Flip-Flops, Conspiracy Theorists, and Mr. Spocks. The Spocks have the highest average composite consumer intelligence score and the Unawares, the lowest.

For fifth graders, the clusters are: the Unawares, Smiths, Super Shoppers, and Sgt. Fridays. The Sgt. Fridays have the highest average composite consumer intelligence scores and the Unawares, the lowest.

Identification of Child-Directed Media Consumption Clusters for First Graders

As previously stated, the procedure for arriving at a four-cluster solution for each grade is detailed in Appendix D.

Table 26 contains the mean scores for each of the four media components for each of the 4 clusters. A clustered bar graph of the information is presented in Figure 7.

Table 43

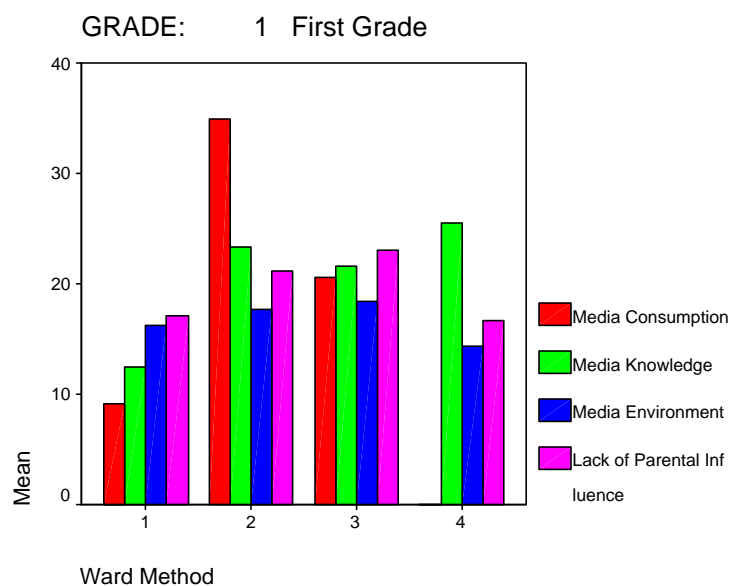
First Grade Media Mean Component Scores, by Cluster

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Media Consumption	1	12	9.167	5.1493	1.4865	5.895	12.438	.0	15.0
	2	7	35.000	5.0000	1.8898	30.376	39.624	30.0	40.0
	3	17	20.588	4.9631	1.2037	18.036	23.140	10.0	25.0
	4	3	.000	.0000	.0000	.000	.000	.0	.0
	Total	39	18.077	11.3332	1.8148	14.403	21.751	.0	40.0
Media Knowledge	1	12	12.500	1.9540	.5641	11.258	13.742	10.0	16.0
	2	7	23.286	6.5311	2.4685	17.245	29.326	12.0	32.5
	3	17	21.529	5.5099	1.3363	18.697	24.362	14.5	32.5
	4	3	25.500	2.1794	1.2583	20.086	30.914	23.0	27.0
	Total	39	19.372	6.6071	1.0580	17.230	21.514	10.0	32.5
Media Environment	1	12	16.171	4.6058	1.3296	13.244	19.097	9.0	23.0
	2	7	17.729	3.6375	1.3749	14.364	21.093	12.0	21.0
	3	17	18.353	4.6495	1.1277	15.962	20.743	12.0	26.0
	4	3	14.333	1.1547	.6667	11.465	17.202	13.0	15.0
	Total	39	17.260	4.3621	.6985	15.846	18.674	9.0	26.0
Lack of Parental Influence	1	12	17.067	4.4983	1.2986	14.209	19.925	8.0	22.0
	2	7	21.143	4.1629	1.5734	17.293	24.993	16.8	27.6
	3	17	23.094	3.9919	.9682	21.042	25.147	15.4	29.0
	4	3	16.733	2.8024	1.6180	9.772	23.695	13.6	19.0
	Total	39	20.400	4.8617	.7785	18.824	21.976	8.0	29.0

a. Grade = First Grade

Figure 7

First Grade Media Mean Component Scores, by Cluster



The mean composite consumer intelligence score for each first grade child-directed media cluster is presented in Figure 8. The frequency distribution for the four media clusters for first grade is presented in Table 25. Results of an ANOVA on the means, showing significant differences, can be found in Appendix E.

Figure 8

First Grade Mean Media Scores, by Cluster

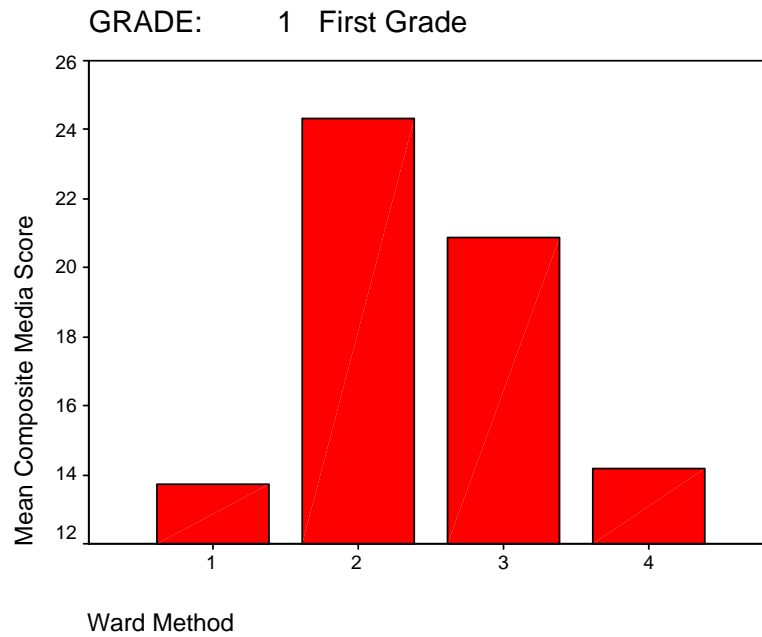


Table 44

First Grade Media Frequency, by Cluster

Ward Method^a

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	12	30.8	30.8	30.8
2	7	17.9	17.9	48.7
3	17	43.6	43.6	92.3
4	3	7.7	7.7	100.0
Total	39	100.0	100.0	

a. Grade = First Grade

Cluster 1 has children with the lowest average composite media score, with very low media knowledge scores. There are 4 boys and 8 girls in this cluster. Four of 12 in this group have older siblings and 2 are only children. Many of the children in this group reported watching (or attempting to watch) “Lord of the Rings” with a parent or other adult – several thought it was too scary and stopped watching. In terms of music consumption, many of the children in this group say they “listen to what’s on”. Children in this group tended to mention unique movie and DVD titles such as “Chitty Chitty Bang Bang”, “Castle’s History” and “Bodacious Rodeo Bloopers”. Children in this group will be referred to as the “Different Drummers” as they tend to not consume or be interested in much mainstream media targeted to children.

The children in cluster 2 have, on average, the highest consumption scores and the highest average composite media score. There are 3 boys and 4 girls in this group. Children in this group tended to have significantly older siblings, with more than half having the presence of a teenager in the home. Three of the 7 children in this group spontaneously mentioned media conflict between their parents. One child commented:

“It’s OK with Dad if I watch ‘Fear Factor’ and ‘Lord of the Rings’, but not with mom.” Others reported going on the Internet alone or declared that “most stuff is OK with my parents”. Children in this cluster have a wide variety of movie interests – from “Freddy vs. Jason” to “The Wizard of Oz” to “Spiderman” and “Men in Black”. This group tended to mention musicians by name – including Toby Keith, Barbara Streisand, Little Romeo, and Michael Jackson. In general this group is characterized by more sophisticated media choices and a more in-depth connection with what they are consuming. This group will be referred to as the “Sophisticates”.

Cluster 3 has children, who on average fall in the middle of the pack for all components of child-directed media consumption. There are 8 boys and 9 girls in this cluster. Children in this group, for the most part, reported having parents that monitored media content. Many mentioned that they were “too little” for Lord of the Rings. Children in this group tended to be the first-born – only five had significantly older siblings in the home. Children in this cluster named movies such as “Shrek”, “Finding Nemo”, and “Cheaper by the Dozen” and tended to name categories of music, rather than specific musicians (jazz, country). Some of the girls in this cluster mentioned the “Kim Possible” CD – which contains music from the popular Disney television show. Another child in this group mentioned Disney radio as her favorite music. The distinguishing characteristic of this group is their primary involvement with age-appropriate, mainstream media. This group will be referred to as the “Disneys”.

Cluster 4 has children with the highest average media knowledge scores and is characterized by their extremely low consumption scores (on average, less than 10 hours per week, which is coded as a 0). This group has 1 boy and 2 girls. Children in this group tended to have larger families – two with 4 children and one with 3 children. These children liked media and were excited that they knew a lot about video games and

computers. Children in this cluster mentioned movies like “Shrek”, “Harry Potter”, and “Scooby Doo”. The high knowledge scores for this group can be attributed to their knowledge of the Internet. Nearly every child in this group responded to questions about the Internet sites whereas very few responded in any of the other groups. When shown the Google website and asked what they could do there, they responded:

“type something and press Google search - it'll give you a bunch of subjects”

“use to search for dot coms”

“search for stuff you like”

“it's the fastest”

Children in this group also mentioned music classical and multicultural music choices. Children in this group will be referred to as the “Omniscients”.

Identification of Child-Directed Media Consumption Clusters for Fifth Graders

Table 28 contains the mean scores for each of the four media consumption components for each of the 4 clusters. A clustered bar graph of the information is presented in Figure 9.

Table 45

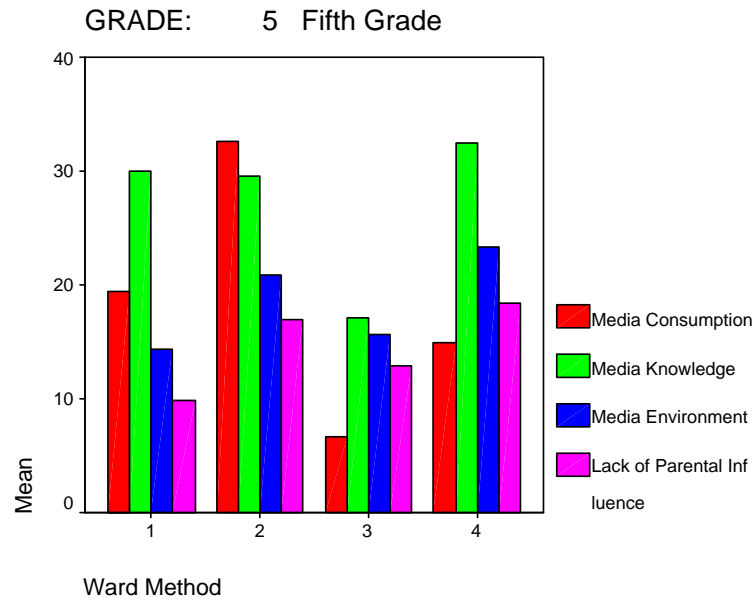
Fifth Grade Media Mean Component Scores, by Cluster

Descriptives ^a									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Media Consumption	1	9	19.444	5.8333	1.9444	14.961	23.928	15.0	30.0
	2	15	32.667	4.9522	1.2786	29.924	35.409	25.0	40.0
	3	3	6.667	2.8868	1.6667	-.504	13.838	5.0	10.0
	4	11	15.000	5.0000	1.5076	11.641	18.359	5.0	20.0
	Total	38	22.368	10.2494	1.6627	19.000	25.737	5.0	40.0
Media Knowledge	1	9	29.944	4.8182	1.6061	26.241	33.648	22.0	38.5
	2	15	29.500	4.7321	1.2218	26.879	32.121	22.0	38.0
	3	3	17.167	1.8930	1.0929	12.464	21.869	15.0	18.5
	4	11	32.455	3.5528	1.0712	30.068	34.841	25.5	38.0
	Total	38	29.487	5.6634	.9187	27.625	31.348	15.0	38.5
Media Environment	1	9	14.333	3.9686	1.3229	11.283	17.384	8.0	20.0
	2	15	20.933	4.6054	1.1891	18.383	23.484	11.0	28.0
	3	3	15.667	4.1633	2.4037	5.324	26.009	11.0	19.0
	4	11	23.277	6.0171	1.8142	19.235	27.320	14.0	33.0
	Total	38	19.633	5.9071	.9583	17.691	21.575	8.0	33.0
Lack of Parental Influence	1	9	9.867	3.5679	1.1893	7.124	12.609	4.4	16.4
	2	15	16.947	5.0695	1.3089	14.139	19.754	5.0	26.2
	3	3	12.867	2.3352	1.3482	7.066	18.668	10.8	15.4
	4	11	18.473	6.7660	2.0400	13.927	23.018	9.0	29.2
	Total	38	15.389	6.0736	.9853	13.393	17.386	4.4	29.2

a. Grade = Fifth Grade

Figure 9

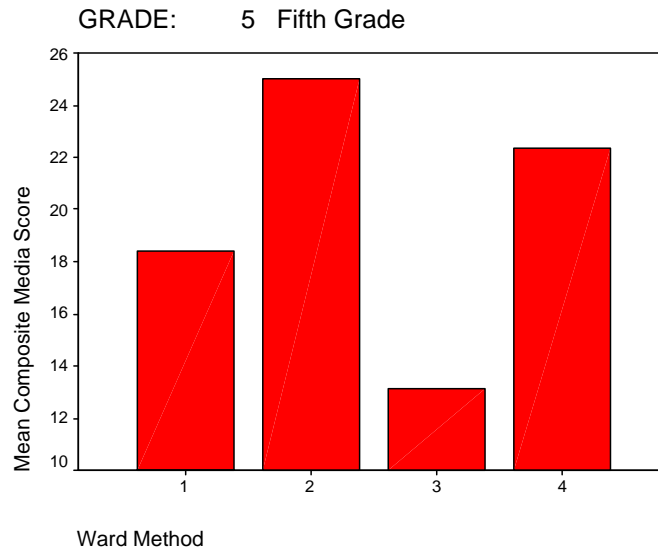
Fifth Grade Media Mean Component Scores, by Cluster



The mean composite consumer intelligence score for each fifth grade consumer intelligence cluster is presented in Figure 10. Results of an ANOVA on the means, showing significant differences, can be found in Appendix E.

Figure 10

Fifth Grade Mean Media Scores, by Cluster



The frequency distribution for the four fifth-grade media clusters can be found in Table 29.

Table 46

Fifth Grade Media Frequency, by Cluster

Ward Method ^a					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	9	23.7	23.7	23.7
	2	15	39.5	39.5	63.2
	3	3	7.9	7.9	71.1
	4	11	28.9	28.9	100.0
	Total	38	100.0	100.0	

a. Grade = Fifth Grade

Cluster 1 contains children who, as a group fall into the middle on the overall composite media score and are characterized by high levels of parental involvement. There are 8 girls and 1 boy in this group. The one boy in this group has two younger sisters and no brothers. All but one of the children in this group have siblings, some with younger, some with older. Movies mentioned by children in this group were: “Holes”, “Cheaper by the Dozen”, “Finding Nemo”, and “Shrek”. Only one subject in this group mentioned an R-rated movie (The Matrix). These children did tend to know a lot about music – naming musicians like Good Charlotte, Simple Plan, Usher, and Smashmouth. Most subjects in this group said that they were not allowed to chat or instant message online, although many recognized a chat session. Comments from these children indicate that they are not very interested in a lot of media offerings. Most do not care that much about television at all. This group – with the most parental influence is not interested in consuming content aimed at an older audience, but has the second highest consumption scores. Children in this group will be characterized as “Tuned Out”. Tuned Out children also tended to have parents that reported the children as not watching television alone until, in several cases, age 7 or older.

Cluster 2 has children with the highest average composite media scores – and the highest average consumption scores. There are 8 boys and 7 girls in this cluster. Sixty-one percent (61%) of the fifth grade boys in the sample fall into this category. Children in this category are overwhelmingly the first-born (14 of 15, with the remaining member of the cluster being an only child). Children in this category mentioned a wide variety of popular movie titles – including the “Matrix”, “Terminator”, “Van Helsing”, “Harry Potter”, and “Freaky Friday”. Favorite musicians were OutKast, Aerosmith, the Dixie Chicks and Shania Twain. Many of these children reporting having restrictions on what they watched and that they often watched movies with their parents. Some reported

being able to watch R rated movies only with parents present. Children in this cluster will be referred to as “Mediaphiles”.

Cluster 3 is the smallest of all the media clusters. There are two girls and one boy in this cluster. All three have at least one older sibling in the home. All report not being allowed to chat online as well as having other restrictions on content. These children have little or no knowledge of popular music – naming instead classical or religious music. Children in this group, on average, have the lowest consumption scores, the lowest knowledge scores, and the most involved parents. They are similar to the first-borns in terms of environment, perhaps having even slightly more access to media. In general these children are not very interested in media as entertainment. Two of the three reported using the Internet for informational purposes only – to shop, or to look up something about horses. Children in this cluster will be referred to as “Castaways”.

The fourth and final cluster contains children with a relatively high average composite media score. This cluster has 3 males and 8 females and all have other children in the home. They mentioned movies such as “Dickie Roberts”, “Elf”, and “Pirates of the Caribbean”. In general these children had more genre specific musical tastes – mentioning artists like Van Halen, Ludacris, Cold Play, Matchbox 20, and Sheryl Crow. Almost all reported not being allowed to see R-rated movies but two in this group said they could watch whatever they wanted to. All but one was familiar with chatting or instant messaging. This group is characterized by having the highest knowledge scores and richest environment with the second lowest average consumption – only the Castaways consumed less media overall. This combination of high knowledge and a lot of access coupled with lower consumption leads to the label of “Self-Regulators” for this cluster of children.

In summary, four child-directed media consumption clusters have been determined and described for each of the grades. For first grade, these clusters are: the Disneys, Sophisticates, Different Drummers, and Omniscients. The Sophisticates have the highest composite media score and the Different Drummers, the lowest.

For fifth graders, the clusters are: Mediaphiles, Castaways, Tuned Out, and Self-Regulators. The Mediaphiles have the highest average composite media scores and the Castaways, the lowest. The Self-Regulators also have a relatively high average composite media score, due primarily to extensive media knowledge.

MAIN HYPOTHESIS TESTING

To test the main hypothesis, a cross tabulation was run of each child's consumer intelligence cluster vs. media cluster. A Chi-Square statistic was calculated using Fisher's Exact Test and then applied to the results.

Support for the hypothesis would show a significant intersection for first grade between the Sophisticates (media cluster 2) and the Spocks (consumer intelligence cluster 4). For fifth grade, a significant intersection would occur between the Mediaphiles (media cluster 1) and the Sgt. Fridays (consumer intelligence cluster 4). The main hypothesis for the current study is:

H₁: Children's consumer intelligence scores will be higher for children engaging in high levels of child-directed media consumption.

As previously stated, the main hypothesis is tested by analyzing a cross tabulation matrix between consumer intelligence clusters and child-directed media clusters for each grade. The Chi-Square test using Fisher's Exact Method tested the hypothesis that the row and column variables are independent. This analysis was run using SPSS version 12.0 for Windows.

The cross tabulation results for first graders are presented in Tables 30 and 31. The cross tabulation results for fifth graders are presented in Tables 32 and 33.

Table 47

Main Hypothesis Crosstabulation, First Grade

M Cluster No, 1 * CI Cluster No, 1 Crosstabulation^a

Count		CI Cluster No, 1				Total
		Unawares	Flip Flops	Conspiracy Theorists	Mr. Spocks	
M Cluster No, 1	Different Drummers	3	2	6	1	12
	Sophisticates	3	1	2	1	7
	Disneys	4	6	4	3	17
	Omniscients	1	1	1	0	3
Total		11	10	13	5	39

a. Grade = First Grade

Table 48

Main Hypothesis Testing, First Grade

Chi-Square Tests^c

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	4.584 ^a	9	.869	.912		
Likelihood Ratio	4.871	9	.845	.947		
Fisher's Exact Test	5.005			.908		
Linear-by-Linear Association	.141 ^b	1	.707	.756	.385	.058
N of Valid Cases	39					

a. 15 cells (93.8%) have expected count less than 5. The minimum expected count is .38.

b. The standardized statistic is -.376.

c. Grade = First Grade

Table 49

Main Hypothesis Crosstabulation, Fifth Grade

M Cluster No, 5 * CI Cluster No, 5 Crosstabulation^a

Count		CI Cluster No, 5				Total
		Unawares	The Smiths	Super Shoppers	Sgt. Fridays	
M Cluster No, 5	Tuned Out	2	4	1	2	9
	Mediaphiles	3	9	1	2	15
	Castaways	1	0	2	0	3
	Self-Regulators	3	5	0	3	11
Total		9	18	4	7	38

a. Grade = Fifth Grade

Table 50

Main Hypothesis Testing, Fifth Grade

Chi-Square Tests^c

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	13.880 ^a	9	.127	.122		
Likelihood Ratio	11.983	9	.214	.340		
Fisher's Exact Test	9.534			.334		
Linear-by-Linear Association	.001 ^b	1	.977	1.000	.514	.054
N of Valid Cases	38					

a. 14 cells (87.5%) have expected count less than 5. The minimum expected count is .32.

b. The standardized statistic is .029.

c. Grade = Fifth Grade

These results do not support H1, indicating that there may not be a relationship between high levels of child-directed media consumption and consumer intelligence, for either first or fifth graders. As the majority of the cells in both cross tabulations had fewer than the 5 expected outcomes, Fisher's Exact test is used to determine the significance of the relationship. For both the first and fifth graders, a $p > .05$ - indicates no significance to the relationships.

For first graders, the Sophisticates have the highest composite media score. Consumer intelligence clusters for this group show the highest intersection with the "Unawares" – though there is no statistical significance to this finding, it would support a theory opposite to the main hypothesis – that children with high levels of child-directed media consumption are actually less consumer intelligent than other children.

Looking at the first grade cluster with the lowest composite media score, Different Drummers, this group has the highest intersection with the "Conspiracy Theorists". While this finding is not statistically significant, it would support a theory that there is a relationship between children who shun mainstream media and hold some skepticism regarding advertising.

For the first grade cluster with the highest consumer intelligence scores - the Mr. Spocks – the highest intersection is with the Disneys.

For children in the cluster with the lowest average composite consumer intelligence scores – the Unawares – media cluster membership is spread across all clusters. This suggests that perhaps the state of being unaware of consumer issues is independent of media consumption.

For fifth graders, the Mediaphiles have the highest composite media score. Consumer intelligence clusters for this group show the highest intersection with the Smiths - children with somewhat average consumer intelligence. As this finding is different from that of first graders (where the highest media consumers, the Sophisticates, tend to be Unaware), there is some support for the theory that perhaps high levels of child-directed media consumption have more detrimental effects on consumer learning for younger, rather than older children.

Looking at the fifth grade cluster with the lowest composite media score, the Castaways, two of the three are “Super Shoppers”. Again, the sample size is too small for the relationship to have any statistical significance, but the findings do support a theory that children can, and do, learn good consumer skills in the absence of large amounts of media consumption.

For the fifth grade cluster with the highest average consumer intelligence scores – the Sgt. Fridays - media cluster membership is evenly spread among all consumer intelligence clusters, except the Castaways – again supporting a theory that by fifth grade, consumer intelligence is independent of child-directed media consumption.

Although the fifth grade cluster with the lowest average composite consumer intelligence scores, the Unawares, have the highest intersections with the Mediaphiles and Self-Regulators, they are actually spread among all media clusters - again supporting a theory that perhaps the state of being unaware of consumer issues is independent of media consumption.

Looking at the data solely from the standpoint of levels of child-directed media consumption as a predictor of consumer intelligence, there appears to be some support for an emerging pattern.

For first graders, Disneys tend to be Flip-Flops; Sophisticates tend to be Unaware; and Different Drummers tend to be Conspiracy Theorists.

For fifth graders, Mediaphiles, Self-Regulators, and Tuned Outs tend to be Smiths while Castaways tend to be Super Shoppers. This tendency for three of the four types of fifth grade media consumption clusters to migrate toward the middle of the consumer intelligence scale support a theory that there are fewer media effects on older children than younger children.

Boxplots showing the spread in consumer intelligence scores for each grade are presented in Figures 11 and 12. The boxplots illustrate the finding that not only are fifth grader's consumer intelligence scores higher than those of first graders but they are also less variable by child-directed media consumption cluster. This means that for fifth graders, there are fewer differences in consumer intelligence when children are categorized in terms of media consumption than for first graders.

Figure 11

First Grade Variance in Consumer Intelligence Scores, by Cluster

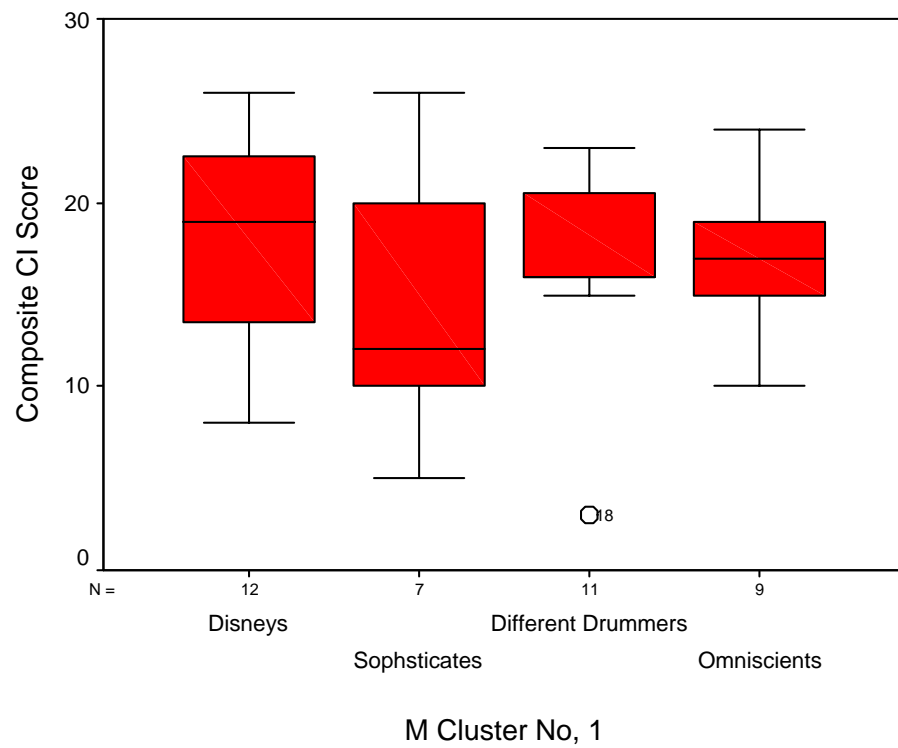
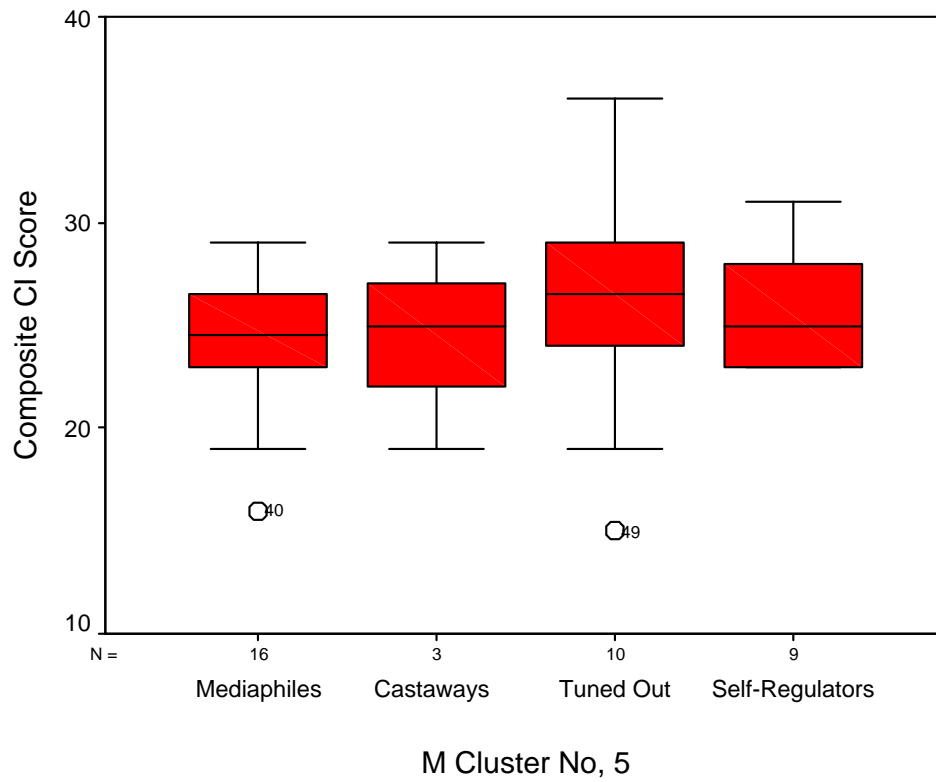


Figure 12

Fifth Grade Variance in Consumer Intelligence Scores, by Cluster



HYPOTHESIS TESTING FOR H2, H3

Recall hypotheses H2 and H3.

H2: Children's consumer intelligence scores will be higher for children whose parents have higher levels of influence on their media consumption.

H3: Children's consumer intelligence scores will be higher for children who consume proportionally more television programming in relation to their overall media consumption.

These hypotheses were tested simultaneously, along with a similar test regarding the proportion of media consumed that is screen-related. An ANOVA was run, using consumer intelligence cluster membership as the delineating factor. Results of this analysis for first graders can be found in Tables 34 and 35. Results for fifth graders can be found in Tables 36 and 37.

Table 51

H2 & H3 Variable Means, by Cluster, First Grade

Descriptives ^a									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Parental Influence	Unawares	11	20.218	5.7477	1.7330	16.357	24.080	11.0	32.0
	Flip Flops	10	19.380	5.6651	1.7914	15.327	23.433	11.2	26.4
	Conspiracy Theorists	13	19.831	4.3580	1.2087	17.197	22.464	12.4	28.0
	Mr. Spocks	5	18.080	2.9210	1.3063	14.453	21.707	14.0	22.2
	Total	39	19.600	4.8617	.7785	18.024	21.176	11.0	32.0
TV Consumption	Unawares	11	22.570	2.8688	.8650	20.642	24.497	18.5	28.1
	Flip Flops	10	23.147	6.7548	2.1360	18.315	27.979	12.3	32.6
	Conspiracy Theorists	13	25.833	6.6992	1.8580	21.784	29.881	14.4	38.3
	Mr. Spocks	5	21.851	9.1975	4.1133	10.431	33.272	9.6	28.8
	Total	39	23.713	6.2053	.9936	21.702	25.725	9.6	38.3
Screen Consumption	Unawares	11	29.749	5.1448	1.5512	26.292	33.205	22.9	40.0
	Flip Flops	10	29.999	7.5583	2.3901	24.592	35.406	13.9	37.6
	Conspiracy Theorists	13	30.820	6.1332	1.7011	27.114	34.526	19.3	40.0
	Mr. Spocks	5	29.969	3.9047	1.7462	25.120	34.817	25.6	36.2
	Total	39	30.198	5.8470	.9363	28.303	32.094	13.9	40.0

a. Grade = First Grade

Table 52

H2 & H3 Hypotheses Testing, ANOVA Results, First Grade

ANOVA ^a						
		Sum of Squares	df	Mean Square	F	Sig.
Parental Influence	Between Groups	16.932	3	5.644	.224	.879
	Within Groups	881.228	35	25.178		
	Total	898.160	38			
TV Consumption	Between Groups	93.332	3	31.111	.795	.505
	Within Groups	1369.873	35	39.139		
	Total	1463.204	38			
Screen Consumption	Between Groups	7.911	3	2.637	.071	.975
	Within Groups	1291.223	35	36.892		
	Total	1299.134	38			

a. Grade = First Grade

Table 53

H2 & H3 Variable Means, by Cluster, Fifth Grade

Descriptives ^a									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Parental Influence	Unawares	9	25.556	5.5685	1.8562	21.275	29.836	18.6	35.0
	The Smiths	18	23.844	6.2435	1.4716	20.740	26.949	10.8	31.6
	Super Shoppers	4	27.700	7.0984	3.5492	16.405	38.995	18.4	35.6
	Sgt. Fridays	7	23.600	6.3119	2.3857	17.762	29.438	15.4	32.0
	Total	38	24.611	6.0736	.9853	22.614	26.607	10.8	35.6
TV Consumption	Unawares	9	21.416	8.5248	2.8416	14.863	27.969	14.0	38.5
	The Smiths	18	19.128	5.9569	1.4041	16.165	22.090	10.4	29.5
	Super Shoppers	4	22.870	7.9769	3.9885	10.177	35.563	16.0	33.9
	Sgt. Fridays	7	19.132	2.6553	1.0036	16.677	21.588	16.1	24.0
	Total	38	20.065	6.3408	1.0286	17.980	22.149	10.4	38.5
Screen Consumption	Unawares	9	32.234	5.9787	1.9929	27.639	36.830	22.9	40.0
	The Smiths	18	31.167	4.7783	1.1263	28.790	33.543	21.8	40.0
	Super Shoppers	4	37.091	3.8023	1.9011	31.041	43.141	32.0	40.0
	Sgt. Fridays	7	28.416	6.5025	2.4577	22.402	34.430	20.0	40.0
	Total	38	31.536	5.6223	.9121	29.688	33.384	20.0	40.0

a. Grade = Fifth Grade

Table 54

H2 & H3 Hypotheses Testing, ANOVA Results, Fifth Grade

ANOVA ^a						
		Sum of Squares	df	Mean Square	F	Sig.
Parental Influence	Between Groups	63.929	3	21.310	.557	.647
	Within Groups	1300.947	34	38.263		
	Total	1364.876	37			
TV Consumption	Between Groups	69.812	3	23.271	.558	.646
	Within Groups	1417.812	34	41.700		
	Total	1487.624	37			
Screen Consumption	Between Groups	198.413	3	66.138	2.315	.093
	Within Groups	971.168	34	28.564		
	Total	1169.582	37			

a. Grade = Fifth Grade

Results indicate no support for either H2 or H3. Also, no significant relationship was found relating the proportion of screen media consumed to consumer intelligence. Although no relationships of statistical significance were found, it is interesting to note several observations.

For first graders, the parental influence scores were lowest for the Spock's, indicating a lack of parental involvement in media choices for the children with the highest average composite consumer intelligence scores – although parental influence scores, on average, were not statistically different among consumer intelligence clusters. Finally, overall screen consumption was similar among the four consumer intelligence groups.

For fifth graders, the parental influence scores were lowest for the Sgt. Fridays and similar to those of the Smiths. Proportional TV consumption and screen consumption was highest for the Super Shoppers as was the level of parental influence. The Sgt. Fridays, those with the highest average composite consumer intelligence score, had the lowest proportional amount of screen consumption.

While these results are not statistically significant, it is interesting to note that for fifth graders – the clusters with the highest levels of parental involvement also have the highest levels of TV and screen consumption.

One final analysis was conducted on the data set. Although there are no hypotheses relating to this finding, it is interesting to look at whether or not a parent explicitly discussing the purpose of advertising with their child has any effect on their knowledge of advertising. This analysis fits into the overriding theme of this dissertation, looking at the areas of interaction between parents and the media.

Table 55

Mean Advertising Knowledge Scores, by Whether or Not Parent Reported Discussing Advertising with Child

Group Statistics

	Discuss Adv	N	Mean	Std. Deviation	Std. Error Mean
Advertising Knowledge	Yes	44	6.545	2.8891	.4355
	No	33	5.697	2.5919	.4512

Table 56

Advertising Knowledge ANOVA Results

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Advertising Knowledge	Equal variances assumed	.505	.480	1.332	75	.187	.8485	.6370	-.4205	2.1175
	Equal variances not assumed			1.353	72.546	.180	.8485	.6271	-.4015	2.0984

There is no statistical evidence here that suggests that parents who explicitly discuss the purpose of advertising have any impact on a child's knowledge of advertising. The mean score is somewhat higher, but this is not statistically significant. A similar analysis was run within each grade, with parallel results.

Chapter 9 Discussion

DISCUSSION

The purpose of this chapter is to discuss the results of the main study – an investigation of the impact of child-directed media consumption on consumer intelligence. Results of this dissertation study serve to further highlight the complexities of studying media effects on children. While previous studies try to tie consumption and exposure levels to specific outcomes and effects, this study presents a different approach by creating consumption profiles or typologies and then using cluster membership as the basis for further analysis. This study successfully applied a mixed methodology to define and describe unique typologies for consumer intelligence and child-directed media consumption for each grade. The overlap of consumer intelligence scores between the first grade cluster with the highest average composite score and the fifth grade cluster with the lowest average composite score is an indication that the typologies for this variable may exist on the same continuum.

Consumer Intelligence Measures

As expected, average composite consumer intelligence scores were higher for fifth graders than first graders. The most significant increase is in advertising knowledge, followed by pricing performance. There are also significant age differences for the other component scores of value and shopping performance. These differences are an indication that the measures are actually measuring some aspects of consumer socialization that are learned or developed over time.

Findings indicate that there are more gender differences in component consumer intelligence scores for first graders than fifth graders. This could potentially be due to the developmental lag that exists for boys as compared to girls at that age. Developmental

differences could also account for the finding that 56% of the first grade boys were in the “Unaware” cluster, while only 23% of fifth grade boys were “Unaware”. First grade girls scored significantly higher on the pricing and relevant value tasks than first grade boys. Several plausible explanations for this finding are that girls have more interest in consumer issues, even at a young age, causing them to more actively attend to consumer information that they encounter. Girls may also be prone to taking more shopping trips with their mother, and more engaged in that activity when they do go along (i.e. helping shop, rather than amusing themselves with other activities). An interesting finding among first graders is that the boys significantly outscored the girls in the decision task – presumably it is easier for boys than girls to make a decision, stick with it, and be satisfied. Girls at that young age were very unsure about what they wanted, even when presented with the full array of choices. While the exact causes are not known, anecdotally, some of the girls seem to fear making an incorrect choice, even in the absence of external risk. One previous study found that young children, like adults, are affected by manipulations of the decision situation, like the one employed in the current study (Davidson and Hudson 1988). The Davidson and Hudson study focused on whether or not children (preschool, first, and third graders) would seek more information when making a decision that was irreversible vs. one that was reversible. So, while it could be reasoned that first grade girls in the current study were merely seeking more information to make a more informed choice, there is no evidence to support this theory. Rather, even when presented with an exhaustive array of choices (all available information), it was observed that the girls still had a more difficult time making a decision.

While previous work has been done in the area of decision-making among children – especially relating to information search and costs (Davidson 1991; Gegan-Paxton and Roedder-John 1995; Gegan-Paxton and Roedder John 1997), it is perhaps

some of the proposed adult models from the 1980s that serve to inform on the current study results. Punj and Stewart (Punj and Stewart 1983) propose a framework that suggests the need to consider interactions between the social environment or situation in which the decision is taking place and the individual (as well as several other interactions not relevant to the current discussion). Several years later, another study identified eight factors for profiling consumer decision-making styles: high-quality consciousness; brand consciousness; novelty-fashion consciousness; hedonistic shopping consciousness; price/value shopping consciousness; impulsiveness; confusion from overchoice; and habitual, brand-loyal orientation (Sproles and Kendall 1986). While the current study did not set out to explore decision-making styles among children, observations and comments from the children suggest that their decision-making is intertwined with the environment and considered within a social context. Additionally, like the adult styles previously identified, there may be child-specific factors that should be considered in developing consumer decisions-making profiles. Several children, during the decision task, made comments about their parent's reaction to what they might choose – some along the lines of “mom won't like this, so I choose it” or, conversely “mom won't let us have that, so I'll take something else”. Some children commented on the durability of the choices, while others sought something they would get immediate satisfaction from. Additionally, a subset of the children asked if they could have more than one (or sought items, such as stickers, that could be distributed) so they could share with a friend or sibling – even if they were alone during the interview. Clearly, just like adults, there is not one way that children make decisions – what is not clear is if there are novel factors, such as parents gate-keeping roles or birth order in relation to consideration of others, to consider when dealing with children. Some studies that inform on this topic in relation to clothing purchases (Haynes, Burts et al. 1993; Meyer and Anderson 2000) found that children do undergo a change in social context – from worrying about parents approval to worrying about what peers think.

In the fifth grade sample, gender differences among component scores for consumer intelligence all but disappeared. The only significant difference was in advertising knowledge – the only component for which there was no difference between boys and girls in first grade. This finding may be inter-related to the finding that first grade boys are better able to reach a satisfying decision than girls. As skepticism toward advertising is present in the vast majority of fifth graders, it may be that boys are not as skeptical because they are more easily satisfied by their choices and therefore disappointed less often. This lack of disappointment may lead them to not be as critical toward advertising as they do not perceive to have been “burned” as often (or perhaps they get it over it faster and have fewer lasting negative impressions).

Describing the clusters that resulted from the statistical analysis of the data was a surprisingly straightforward exercise. Clusters formed naturally in a manner supported by observation and other qualitative responses during the child interview. It was apparent throughout the interview process that some first graders clearly had never thought about consumer issues at all and that commercials were either “placeholders” or just another form of entertainment. These children were later identified as “Unaware”. The next group, “Flip-Flops” were children (mainly girls) that couldn’t really make decisions very well. Their interviews tended to take longer as they couldn’t decide if, for example, they knew which station a show was on or even whether or not a show or character was familiar to them. The third group, the Conspiracy Theorists, told a lot of stories about how the commercials were trying to trick them – these children seemed to have a readily accessible databank of bad consumer experiences. The fourth group, the Mr. Spocks were sometimes (to often) lacking in basic knowledge but were very confident that they could figure out whatever they needed to, just through basic observations (food will run

out) and “knowing”. They also tended to be very self-confident - a trait not observed among the Flip-Flops.

For fifth graders, cluster identification was also fairly straightforward. Like the first graders, a certain proportion of the children clearly had given no thought to or had no interest in consumer issues (Unawares). The largest group, labeled the “Smiths” really had no defining characteristics and was the largest group by double, leading to a conclusion that these children were quite average and unremarkable in their consumer intelligence profiles. While it is impossible to project linkages between the first and fifth grade clusters, it appears that the Smiths exhibit some of the Spock traits found in first graders – where they are dynamically creating responses by “thinking about it” – rather than recalling it.

The next group, the Super Shoppers have higher pricing and shopping scores and observationally are likely children that have engaged in more real-life consumer activities. Not only did these children know the prices, but, they were able to recall them quickly and often presented a range before arriving at a final price. Finally, the Sgt. Fridays – those fifth grade children with “just the facts” seemed to treat consumer topics as “gravity issues” – unlike the Super Shoppers who were visibly excited about consumerism.

Child-Directed Media Consumption

As expected, average composite media consumption scores were higher for fifth graders than first graders. It is expected that older children would experience more “privatization” of their consumption due to the presence of televisions, computers, CD players, and video games in their room. Furthermore, fifth graders would be expected to

have more experience with and exposure to various media forms from media consumption activities taking place outside the home – either at friend’s homes, or in school. One interesting finding is the significant difference between first and fifth graders in lack of parental control – with parents having more influence over media for fifth graders. This may be one indication that the measures are measuring what was intended – how much child-directed media the subjects are consuming. Results of this measure indicate that parents are more likely, on a routine basis, to be involved with media selection and consumption for fifth graders. At first, this finding may seem counter-intuitive, but as the measure was constructed, it is expected that more co-viewing would affect the outcome. Parents of young children are likely to create media-safe environments in their homes and then allow the children, on a daily basis, to self-select from what is available. Since parents’ ability to control access diminishes as the children get older, more active participation is required to exert influence. As some of the parental influence measures were tailored specifically to each grade, and thereby measuring influence in relative terms, this is a somewhat unexpected finding. This finding does not mean that parents of first graders permit viewing of adult-oriented content at the same rate as parents of fifth graders, but rather that media control strategies may be different for each group. It should be noted that permissiveness is just one of the four components of parental influence. This study incorporates measures of additional control strategies such as co-viewing and conflict. In the current study, the finding is that some parents are permissive and some are restrictive – independent of the age of the children.

In terms of gender, there are no statically significant differences between first grade boys and girls on any of the media consumption components or the composite score. While there might be some expected differences between boys and girls in terms

of consumption, the variance within each group is so high that significance is difficult to achieve. Results for fifth graders were similar.

Describing statistically generated clusters for child-directed media measures was also relatively straightforward. For first graders, there were clearly some children who were only interested in, and only consumed, age-appropriate media – such as Disney movies and Nick Jr. television programming. These children might be described as “young” or “innocent” when compared to children in other clusters. This observation should not be confused with the children being “immature” – rather they preferred what they described as “nice” programming and had little interest in media aimed at older children- that is not so nice. The Sophisticates of the first grade were also easy to identify as they tended to consume “older” media and reported being in conflict with at least one parent over content choices (parents of these children tended to disagree with each other also). Children in this group shunned Disney-type offerings as “babyish”. The Different Drummers really didn’t seem to care much about mainstream media and seemed to engage in media consumption on a different level. These children tended to migrate toward content-specific media titles and sought out what they were interested in – as opposed to watching “what’s on”. The final group, the Omnisicents knew a lot about all types of media and tended to have larger families. These children have a lot of access to media and a broad knowledge and understanding of content. The fact that there are many siblings in the home of varying ages may mean there is less opportunity for television and movie viewing (as few titles are appropriate and of interest to wide age groups). Due to the presence of many siblings in the home, computer use, which often occurs alone, may be more appealing to these children – as knowledge of the Internet is one of the defining characteristics of this cluster.

Similarly, fifth grade child-directed media consumption clusters were easily described. The “Castaways” were kids with no interest and little exposure to mainstream (or really any) media. These were kids that were involved in other activities that severely limited the amount of time they have to devote to media consumption. It should be noted that these children (or their parents) choose for them to be Castaways as their media environment is similar to that of other fifth grade clusters. The largest fifth grade cluster, the Mediaphiles, is overwhelmingly comprised of first-born children. It is unclear why this is the case but some theories are that the older children fill their time with media while parents tend to younger children or perhaps that the oldest child in the family tends to watch what everyone in the household watches – consuming younger fare with younger siblings and older fare with parents – as a privilege of being the oldest. The Tuned Out group of fifth graders seem to be similar to the Different Drummers of first grade – in that they are not interested in “what’s on” but rather choose to consume specific media content. The final group of fifth graders, the Self-Regulators are interesting in that they know a lot about media, have a great deal of access to media, and are interested in media, but consume relatively less. One explanation of this phenomenon is that these children are more mature in general and understand the complexities involved in making media decisions. These children tend to make the most of what they are consuming – obviously gaining a great deal of knowledge from relatively lower exposure rates. It is possible that these children are attending to and purposefully consuming media, while the Mediaphiles are using it for less purposeful reasons.

One final note about the findings related to media consumption involves the concept of parental influence over media choices in relation to conflict between parents and children. Findings, both qualitative and quantitative, suggest that there are several possible outcomes of parental influence on children’s media selections – and that they are dependent upon the child’s ability and desire to self-regulate.

Table 40 shows the four possible combinations of parental permissiveness vs. self-regulation by the child.

Table 57

Parental Permissiveness vs. Child Self-Regulation

	Restrictive Parent	Permissive Parent
Self-Regulating Child	No conflict, appropriate content	Potential for reverse conflict and inappropriate content
Un-Regulating Child	Conflict, appropriate content	No conflict, potential for inappropriate content

Note, that conflict occurs in only one cell – yet there is a wealth of both anecdotal evidence and academic investigation into this outcome, with little investigation of the other conditions. Additionally, a great deal of energy has been invested in the effects of having restrictive parents, but little on the how children of permissive parents learn to self-regulate in order to protect themselves from inappropriate content. This study provides anecdotal evidence of the existence of children whose parents “push” them to watch movies aimed at older children (example: Lord of the Rings). Some of these children seem to embrace the chance to “be a big kid” while others openly discuss the fact that they were scared or bored or couldn’t follow the story and just walked away – even as their parents tried to help them maintain interest and urged them to “stick with it”.

Discussion Main Hypothesis Testing Results

As discussed in the findings, there is no support for the main hypothesis that consuming large amounts of child-directed media is related to high levels of consumer intelligence. However, there is some non-statistically significant evidence of emerging patterns in the data. These patterns suggest that perhaps the relationship between media effects and consumer intelligence either exists within another theoretical framework or is mediated by an external condition. Either way, it is clear from the findings of this study that media effects cannot be analyzed in isolation, but rather must be considered in the context of the each child's individual environmental and cognitive state. One potential higher-level explanation for findings (or lack thereof) could be tied to Baumrind's parental discipline typologies (Baumrind 1978). Baumrind describes authoritarian parents as those favoring punitive and forceful measures to curb self-will; permissive parents as those who behave in a affirmative, acceptant and benign manner; and authoritative parents as those who attempt to direct children in a rational, issue-oriented manner. Superimposing the current study upon this framework, we might then begin to expect not an intersection between media consumption and consumer intelligence, but effects of parenting style on both media consumption and consumer intelligence. As parenting styles were not included in this study, it is impossible to gage their impact, or more importantly, the interaction effects that are likely present. A more detailed look at the cross-tabulation matrices, however, does indicate that something is having an effect on both media effects and consumer intelligence – especially among the younger children. For first graders, the high co-incidence of Conspiracy Theorists and Different Drummers suggests that perhaps parents of those children are encouraging them to think for themselves and not accept everything they are told at face value. The second highest co-incidence (crosstabulation cell value) is between Disneys and Flip-Flops, suggesting that perhaps parents of these children are not providing their children with many chances to make independent decisions.

The strongest evidence supporting the presence of an external factor impacting the current study comes from an analysis of observations and comments recorded by the interviewer for first grade children in the “Unaware” cluster. Looking down the column of comments, the following comments were recorded during the interview sessions:

“watches the Simpsons”

“watches the Simpsons, saw Lord of the Rings, goes to ‘Cartoon Network’ on the web alone”

“goes on the Internet alone, like Cops and Fear Factor, Dad purchased “Simpson’s Road Rage [T-rated video game] for him”

“Dad has Halo [M-rated video game] and has watched him play, watches “Fear Factor” by himself”

“owns tons of video games, including Alter Echo and Primeval of P...(?)”

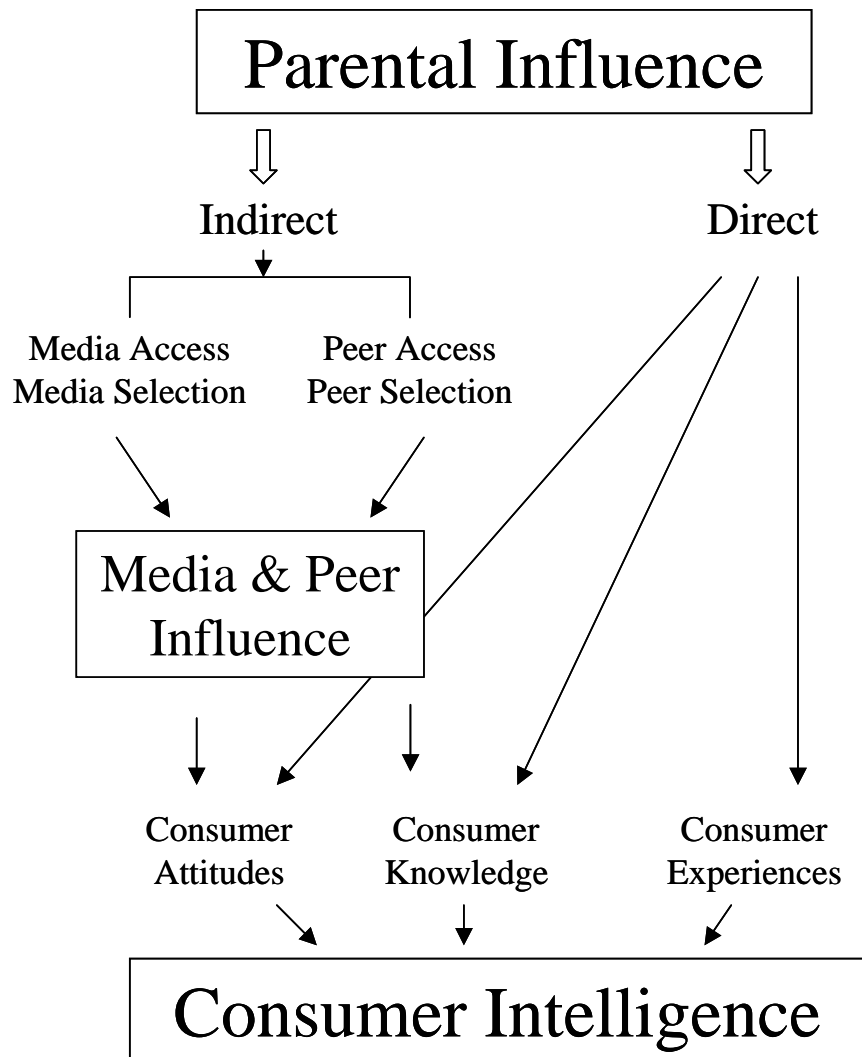
These comments are not representative of all first graders as many indicated that they were not allowed to watch the Simpson’s because “they say bad words”. Few, if any other first graders indicated that they had any experience with violent video games.

Several previous studies have successfully linked parenting styles with consumer socialization, including media-related issues such as restriction of consumption and co-viewing (Carlson and Grossbart 1988; Rose, Dalakas et al. 2003). What previous studies do not directly address is the question of media effects as a function of parental influence – in other words, what happens to children of permissive parents in terms of consumer learning. These studies, in conjunction with findings from the current study, suggest a model shown in Figure 13 – where parents mediate the effects of the media and peers on consumer socialization. The main idea presented in the model is that media and peer effects co-occur with parental effects and that if parental influence is high, there is little

room for direct external media and peer effects. In the absence of parental influence, the media and peers become more influential.

Figure 13

Proposed Model for Parental Mediation of Media Effects on Consumer Intelligence



Discussion of TV and Screen Consumption Hypothesis Testing

In terms of proportional television consumption, it was found that first graders consume significantly more television than first graders. Again this is expected as older children have more access to computers and other media forms. This assertion is confirmed by the finding that the two groups consume similar proportions of all screen-based media (including video games, computers, and television). The only gender differences observed in terms of consumption proportions are between first graders – with boys consuming significantly more screen-based media than girls (this is due to more reported video game usage).

As expected, there is a lack of significant findings related to media effects of consuming high proportions of television or screen media. This finding echoes previous studies' findings that also failed to directly and significantly define the relationship between high levels of television consumption and consumer socialization.

Additional Observations

Several interesting, although anecdotal, observations were noted during the administration of this study. First, it is very clear that many parents do not know about and understand the industry standard rating systems. This finding mirrors similar studies. For a brief review see Abelman and Gubbins (Abelman and Gubbins 1999). Many parents, when filling out the survey of the media environment had to stop and ask about video game ratings of “M” and “T” – even parents of children who spent a significant amount of time playing video games. Also along these lines, parents had a very hard time answering “yes” or “no” to questions about permitting their children to watch “R” or “PG-13” movies. While it is understood that those ratings are a guideline, parents do not seem to be comfortable using those ratings to either allow or disallow their children to

watch them. In the end, it seems as though the parents ultimately rely on their own standards, which often vary within the family, to determine appropriateness. Even the restrictive parents in this study tended to dismiss the ratings and say that instead they preferred to either preview the movie first or read about it before determining appropriateness.

One parent lamented that the survey did not ask about changes in media consumption from year-to-year. This parent was dismayed because “this year he watched a lot of TV” but apparently didn’t watch so much in other years. This sentiment was echoed by other parents – that each child may have a unique year-to-year consumption pattern as they child matures and their tastes change. Anecdotally, there are apparently “transition years” when very little media is consumed – these seem to occur when children switch genres – for example, from “Barney” years to “Cartoon Network”. This phenomenon may help to explain why children with older siblings consume more media in general – as they can seamlessly progress through various maturation stages.

SUMMARY OF DISCUSSION

In summary, this study was unable to either measure or quantify any direct media effects on consumer intelligence scores – which is not surprising given the historical lack of direct empirical evidence in the area. What this study does find is support for a framework for uncovering varied patterns or profiles of media effects, dependent upon factors such as media access and parental involvement or influence. In addition, the construction of the multi-dimensional component variables for each of the composite measures yield results that are both supported by the previous literature and by common sense – providing face validity for the measures unique to this study. It remains a common assertion among academicians, consumer socialization researchers, parents, and

regulators that media effects are inevitable and present. It is hoped that the current study will lead to further insights and discussion regarding the distribution and impact of those effects among various groups of children.

Chapter 10 Conclusions

LIMITATIONS

The study presented in this dissertation has several design characteristics that limit its ability to draw broad generalizations and define causal relationships. First, the sample is reflective of a very narrow segment of society – middle to upper-middle income families, most Caucasian, and most living in two-parent households. Although standard SES data was not collected, the vast majority of the families were known to the researcher and it can be assumed that the majority of the mothers had at least a college education, some with advanced and terminal degrees. Also, as subjects were recruited by word of mouth or personal invitation, the parents were aware of the nature of the study and often expressed a great deal of interest in the topic. While the effects of these conditions are not certain, it should be noted. What is known is that the viewing habits and content consumed by children of other ethnicities is very different from that of Caucasian children. A 1999 review of trends in research communication (Pecora 1999) cites a report by Parks (Parks 1999) that finds that African-American families watch an average of 10 hours of television per day – far more than the average Caucasian family. Parks further finds that the groups' program preferences are almost entirely different. Also relevant to the current study is Parks' finding that the more authoritative parenting style of the African-American families extended to greater parental control of children's television viewing than was the case in more permissive and negotiational Caucasian families. A more recent study echoed earlier findings related to African-American television viewing habits and concludes that African-Americans have more positive attitudes toward advertising than their Caucasian counterparts (Bush, Smith et al. 1999). In light of these findings, the results from the current study cannot be broadly interpreted across ethnicities. The inclusion of children from groups known to consume media at

higher rates may lead to a redefining of the typologies that resulted from this sample. For example, the Mediaphiles from this sample, who have relatively high consumption rates may turn into The Smiths when analyzed with children of other ethnicities found to consume significantly more media. In addition, it is not known how much more authoritative African American parents are than Caucasian parents in general so it is difficult to predict the overall effect on results – it could be that the effects of large amounts of consumption are tempered by higher incidences of parental influence – thus yielding children who do roughly fit into one of the groups identified by this study.

Another general limitation of this study is the exclusion of socially and economically disadvantaged children. Previous research indicates that children from disadvantaged backgrounds would likely experience different effects of heavy amounts of child-directed media consumption. In the same article, Pecora cites findings by Van Evra (Van Evra 1998) that inform on the effects of television viewing on children. Van Evra reports:

Moderate viewing can develop the communication skills of children from disadvantaged backgrounds, although viewing for more than 5 or 6 hours a day is associated with poorer achievement in all groups. This negative aspect of heavy viewing is more operative among the socially advantaged, apparently by displacing ‘more beneficial alternatives’... Heavy viewing by groups with fewer alternative sources of information may involve a more serious ‘effort to derive information and knowledge from what is being viewed’. On the other hand, if viewers already have a rich variety of informational sources and are viewing television simply for diversion or entertainment, not for information, they are more likely to experience the television content in a more emotional and less critical way, to exert less effort, and to take it less seriously. Consequently, even heavy users with this background would be less likely than those with more limited information to be deeply affected by the content they view.”

What this means to the current study is that the sample selected is likely to be less affected, in general, than a broader-cross section of society. It is possible, therefore, that

significant results supporting the main hypothesis might be found in cross-cultural studies.

Next, the current sample looks at only two age groups – first graders and fifth graders. While these groups were intentionally selected to elicit a wide range of responses, lack of similar empirical data for ages in between and a complete lack of longitudinal data prohibit comment on the question of how children in each group or cluster mature. For example, do first grade Sophisticates turn into the Mediaphiles of the fifth grade? Is it possible to regress or lose ground in terms of consumer intelligence or will those children possessing higher consumer intelligence scores in first grade have superior scores in fifth grade as well?

Another limitation of this study is the relatively small sample size. While it is believed that the sample is sufficient to encompass the full range of typologies related to both consumer intelligence and child-directed media consumption, it is difficult to achieve statistical significance for the main hypothesis. Ideally, the scope of future work would be expanded to achieve a minimum cell membership of 5 subjects. Another advantage to a larger sample would be the discovery and validation of enduring typologies for both consumer intelligence and child-directed media consumptions – that verifiably exist on a continuum.

Next, several other limitations of the study, related to study procedures, are examined. First, due to the decision to collect detailed data from the children in order to build up consumer intelligence scores and assess media knowledge (rather than assess at a higher level or rely on parents), there was a limit as to how many other questions could be asked of the children – due to constraints on time and attention span. Information relating to materialism and real-life consumer behavior would have made an excellent

complement to the data set. In addition, some data of a qualitative nature was likely lost due to a decision by the interviewer (author) to record the data manually on paper – rather than audio recording or videotaping the interviews. Although every effort was made to record responses verbatim, it is possible that this procedure caused some of the data to be “pre-coded” or selectively coded. Audio recording or videotaping the interviews would have allowed for multiple coders to access the interviews - adding validity to the results. It should be noted again though, that the interviewer believes that the casual nature of the interviews put the children at ease and allowed for the collection of more complete and candid response sets.

Finally, it is suggested that changes to some of the specific questions and stimuli may have yielded more useful, accurate, or interesting information. First, a question in the parent survey asked to indicate their level of agreement with the following statement: “Nowadays, the media (and advertisers) play an important role in teaching children to be good consumers.” The inclusion of the word “good” was the source of some confusion for some parents and was likely not noticed by others, thereby bringing the validity of the set of responses into question. As a result, responses to this question were not used in the analysis. More accurate results might have been obtained by first asking about the importance of the role of the media and then, whether or not they thought the media had a positive or negative effect on children’s consumer learning. Similarly, parents were asked: “How often would you estimate that you or another adult helps your child select the media they use (pick out a movie, TV program, etc.)?” The response choices were “Always”, “Most of the Time”, “Sometimes”, “Rarely”, and “Never”. During the course of the study, it became apparent that parents would likely have different responses for different media. For example, some children are free to watch TV at will but have movie selections closely monitored. In addition, the question was not specific enough to determine if parents were answering “in general” or on a “selection-by-selection” basis –

in other words, do they help select “Hey Arnold” every time it comes on, or just once and then it becomes a part of the permissible repertoire. It is believed that a series of questions specifically asking about each medium and addressing selection strategies would have yielded more enlightening information. Lastly, it would have been interesting to include a shopping site in the web recognition exercise. Several subjects made comments about shopping on the Internet and a site reflecting this important Internet activity should have been included in the stimuli.

FURTHER STUDY

The study presented in this dissertation opens up a number of avenues of inquiry into the impact of child-directed media consumption on consumer intelligence. First, the principles and procedures could be applied to a broader sample to determine whether the typologies for consumer intelligence and child-directed media consumption are far-reaching enough to embrace children of all ethnicities and SES backgrounds. Additionally, more rigorous research related to each of the components of consumer intelligence and child-directed media consumption is needed. This dissertation presented a comprehensive framework for collecting, measuring, and analyzing media effects on consumer intelligence at the expense of deep exploration of each of the components identified. For example, the media knowledge score was computed from a mixture of qualitative and quantitative responses to a wide variety of stimuli – with little consideration as to whether or not there is a more eloquent method.

Throughout this study, the strategy was to employ direct assessments at the lowest possible level and then use each piece of information to build up composite scores and eventually profiles. For example, within the construct of consumer intelligence, a pricing

knowledge score was obtained by asking children to name the price of an item. While there is very little, if any, current empirical data relating to children's knowledge of pricing, many other studies use proxies and non-verbal, less taxing, approaches to gathering similar information. Further study could help to optimize and streamline each of the component measures, which would allow for more in-depth study of the underlying constructs. Additionally, it would be interesting to construct and administer a similar battery of consumer intelligence assessments to a broad sample of adults to verify the upper bound of the instrument and to demonstrate that adult (or fully mature) consumer intelligence exists on the same continuum.

One of the most important contributions of this study is further insight into the areas of interaction between parents, peers, and the media's role in consumer socialization. Clearly, though, further study is required on the interstices that exist between the main consumer socialization variables. Topics such as how conflict between parents affects media choice and how consuming in the presence of others may enhance or diminish the influence of the media. In this vein, one area of interest would be to look at the question of whether or not having just one parent restrict media consumption amount and content has any effect at all. Anecdotally, several parent participants went out of their way to say, "my spouse filled this out and he/she lets our children watch anything". Additionally, a number of children reported that one parent would allow them to watch something or play a certain video game, but the other would not. More research into this dynamic is required to better assess and measure the output and effects of inconsistent or mixed-message parental controls.

Finally, more study is needed into the specific control strategies and mechanisms employed by parents to regulate children's consumption. It is necessary to better understand what things parents are doing that are having an effect on their children and

those things that do not have any effects. This question becomes even more important as studies relating to methods of parental control, such as use of rating systems, the V-chip and Internet filtering software are surfacing with findings that parents and children in greatest need of ratings information to guide televising in the home are least likely to use it (Abelman and Gubbins 1999).

CONCLUSION

The study presented in this dissertation serves to advance the field of knowledge relating to media effects on consumer intelligence. Typologies related to child-directed media consumption and consumer intelligence are built up from a mixture qualitative and quantitative data collected from parent/child dyads (using a mixed methodology). These typologies were then used to explore the relationship between child-directed media consumption and consumer intelligence. Findings do not support broadly discernable media effects on consumer intelligence. However, results of crosstabulations between consumer intelligence and media cluster do indicate that a more comprehensive study, duplicating the methodology developed in this dissertation would have the potential to yield statistically significant results. In addition, component score measures for each of the main composite measures yield interesting results on their own that may warrant future study. As the topic of media effects on consumer intelligence has been studied throughout the last 40 years with little in the way of statistically significant linkages to effects, the development of a framework for “proving” such effects is a significant contribution to the current body of consumer socialization literature.

In conclusion, this dissertation serves as a starting point for a research program geared toward significantly measuring and documenting media effects on consumer intelligence among children with varying levels of parental involvement and diverse

media environments. A high level framework is developed and presented, with the understanding that future work will serve to develop and validate the proposed and presented component measures of child-directed media consumption and consumer intelligence.

APPENDICES

Appendix A Children's Media Environment

Table 58

Children's Cable Television Networks

Animal Planet
Boomerang
Cartoon Network
Discovery Kids
Disney
Nickelodeon
Noggin / The N
PBS Kids
Toon Disney
Toonami

Table 59

Family-Friendly Television Networks

ABC Family
Biography Channel
Discovery Channel
DIY
Hallmark Channel
National Geographic Channel
TLC

Soap Net

TBN

Trio

TV Land

Table 60

Children's Magazine Titles

American Cheerleader

American Girl

Appleseeds

Ask

Babybug

Boys' Life

Boys' Quest

Child

Child Life

Children's Digest

Children's Magic Window

Children's Playmate

Cicada

Click

Clubhouse

Clubhouse Jr.

Cricket

Dig

Discovery Girls

Disney Adventures

Disney's Winnie The Pooh
Footsteps
Fun For Kidz
Highlights
Hopscotch for Girls
Humpty Dumpty's Magazine
Jack & Jill
Kickoff
Kids Discover
Ladybug
Martha Stewart Kids
Muse
National Geographic Kids
Nick Jr.
Nickelodeon
Preschool Playroom
Ranger Rick
Spider
Sports Illustrated for Kids
Teen Inc.
Time for Kids
Turtle
U.S. Kids
Wild Animal Baby
Your Big Backyard
Zoobooks

Appendix B Data Collection Stimuli

Figure 14

Parental Survey of the Media Environment

Survey of Media Environment

Please circle your child's gender: Male Female

Please circle your child's grade: 1st 5th

How would you describe your child's race/ethnicity? (Check all that apply.)

- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Black or African-American
- ☐ Hispanic or Latino
- ☐ Native Hawaiian or Other Pacific Islander
- ☐ White
- ☐ Other _____

Please list the age and gender of all members of the child's primary household, including parents/guardians. (Don't include child participating in study.)

Member 1: Age _____ Male Female

Member 2: Age _____ Male Female

Member 3: Age _____ Male Female

Member 4: Age _____ Male Female

Member 5: Age _____ Male Female

Member 6: Age _____ Male Female

Member 7: Age _____ Male Female

Member 8: Age _____ Male Female

Please write your child's name below. The name will only be used to ensure that the parental surveys are matched to the correct child. Names are not part of the data and will not be used for reporting purposes.

Child's Name _____

1. Check the boxes below that best describe your child's media activity. For this survey, media activities are watching TV, playing video games, watching movies, listening to music, reading magazines, and using the computer. For each activity listed, please check the box if your child regularly engages in that activity. For each checked activity please estimate the number of times per week your child does each and for how long.

Media Activity	Weekdays		Weekend	
	# Days	Hrs./Day	# Days	Hrs./Day
<input type="checkbox"/> Watch TV Programs				
<input type="checkbox"/> Watch Movies / DVD's				
<input type="checkbox"/> Use Internet to Communicate with Friends				
<input type="checkbox"/> Use Internet for School Work				
<input type="checkbox"/> Play Games on the Internet				
<input type="checkbox"/> Play Computer Games - CD (not Internet)				
<input type="checkbox"/> Listen to Music (Radio, CD)				
<input type="checkbox"/> Read Kids Magazines				
<input type="checkbox"/> Play Video Games				
<input type="checkbox"/> Other (Please write in)				

2. Does your child's media usage change significantly when your child is not in school -during the holidays, spring break, and/or summer vacation?

☐ Yes ☐ No

3. If you answered "Yes" to Question 2, please use the space below (or back of page) to briefly explain how your child's habits change when school is not in session.

4. At approximately what age (if any) do you think your child first started watching television by himself/herself?

5. Please indicate your level of agreement with the following statement by circling the appropriate response. Statement: **'Nowadays, the media (and advertisers) play an important role in teaching children to be good consumers.'**

Strongly Agree Agree Neutral Disagree Strongly Disagree

6. For each magazine listed below, that either you or your child currently reads or has read in the past, please check the appropriate box indicating whether the magazine was/is primarily read at home or at school.

Read		Magazine Title
Home	School	
<input type="checkbox"/>	<input type="checkbox"/>	American Cheerleader
<input type="checkbox"/>	<input type="checkbox"/>	American Girl
<input type="checkbox"/>	<input type="checkbox"/>	Appleseeds
<input type="checkbox"/>	<input type="checkbox"/>	Ask
<input type="checkbox"/>	<input type="checkbox"/>	Babybug
<input type="checkbox"/>	<input type="checkbox"/>	Boys' Life
<input type="checkbox"/>	<input type="checkbox"/>	Boys' Quest
<input type="checkbox"/>	<input type="checkbox"/>	Child
<input type="checkbox"/>	<input type="checkbox"/>	Child Life
<input type="checkbox"/>	<input type="checkbox"/>	Children's Digest
<input type="checkbox"/>	<input type="checkbox"/>	Children's Magic Window
<input type="checkbox"/>	<input type="checkbox"/>	Children's Playmate
<input type="checkbox"/>	<input type="checkbox"/>	Cicada
<input type="checkbox"/>	<input type="checkbox"/>	Click
<input type="checkbox"/>	<input type="checkbox"/>	Clubhouse
<input type="checkbox"/>	<input type="checkbox"/>	Clubhouse Jr.
<input type="checkbox"/>	<input type="checkbox"/>	Cricket
<input type="checkbox"/>	<input type="checkbox"/>	Dig
<input type="checkbox"/>	<input type="checkbox"/>	Discovery Girls
<input type="checkbox"/>	<input type="checkbox"/>	Disney Adventures
<input type="checkbox"/>	<input type="checkbox"/>	Disney's Winnie The Pooh
<input type="checkbox"/>	<input type="checkbox"/>	Footsteps
<input type="checkbox"/>	<input type="checkbox"/>	Fun For Kidz

Read		Magazine Title
Home	School	
<input type="checkbox"/>	<input type="checkbox"/>	Highlights
<input type="checkbox"/>	<input type="checkbox"/>	Hopscotch for Girls
<input type="checkbox"/>	<input type="checkbox"/>	Humpty Dumpty's Mag
<input type="checkbox"/>	<input type="checkbox"/>	Jack & Jill
<input type="checkbox"/>	<input type="checkbox"/>	Kickoff
<input type="checkbox"/>	<input type="checkbox"/>	Kids Discover
<input type="checkbox"/>	<input type="checkbox"/>	Ladybug
<input type="checkbox"/>	<input type="checkbox"/>	Martha Stewart Kids
<input type="checkbox"/>	<input type="checkbox"/>	Muse
<input type="checkbox"/>	<input type="checkbox"/>	National Geographic Kids
<input type="checkbox"/>	<input type="checkbox"/>	Nick Jr.
<input type="checkbox"/>	<input type="checkbox"/>	Nickelodeon
<input type="checkbox"/>	<input type="checkbox"/>	Preschool Playroom
<input type="checkbox"/>	<input type="checkbox"/>	Ranger Rick
<input type="checkbox"/>	<input type="checkbox"/>	Spider
<input type="checkbox"/>	<input type="checkbox"/>	Sports Illustrated for Kids
<input type="checkbox"/>	<input type="checkbox"/>	Time for Kids
<input type="checkbox"/>	<input type="checkbox"/>	Turtle
<input type="checkbox"/>	<input type="checkbox"/>	U.S. Kids
<input type="checkbox"/>	<input type="checkbox"/>	Wild Animal Baby
<input type="checkbox"/>	<input type="checkbox"/>	Your Big Backyard
<input type="checkbox"/>	<input type="checkbox"/>	Zoobooks
<input type="checkbox"/>	<input type="checkbox"/>	Other _____

7. How often would you estimate that you or another adult helps your child select the media they use (pick out a movie, TV program, etc.)?

Always Most of the Time Sometimes Rarely Never

8. Please indicate which of the following items are present in your child's primary residence. The item does not have to be "owned" by the child, just present in the household. If the household has more than one of the devices please indicate how many. If the device is in the child's room please check the appropriate box.

In Home	How Many?	In Child's Room	Item
<input type="checkbox"/>		<input type="checkbox"/>	Desktop Computer
<input type="checkbox"/>		<input type="checkbox"/>	Laptop Computer
<input type="checkbox"/>		<input type="checkbox"/>	High Speed Internet Connection
<input type="checkbox"/>		<input type="checkbox"/>	Dial-Up Internet Connection
<input type="checkbox"/>		<input type="checkbox"/>	Wireless Network / Connection
<input type="checkbox"/>		<input type="checkbox"/>	Cable TV – Basic Channels Only
<input type="checkbox"/>		<input type="checkbox"/>	Cable TV – Premium Package
<input type="checkbox"/>		<input type="checkbox"/>	Satellite Dish
<input type="checkbox"/>		<input type="checkbox"/>	CD Player
<input type="checkbox"/>		<input type="checkbox"/>	DVD Player
<input type="checkbox"/>		<input type="checkbox"/>	VCR
<input type="checkbox"/>		<input type="checkbox"/>	Sony Playstation (PS2)
<input type="checkbox"/>		<input type="checkbox"/>	Nintendo Game Cube
<input type="checkbox"/>		<input type="checkbox"/>	Microsoft X-Box
<input type="checkbox"/>		<input type="checkbox"/>	Game Boy
<input type="checkbox"/>		<input type="checkbox"/>	Home Theater System
<input type="checkbox"/>		<input type="checkbox"/>	Digital Video Recorder (DVR)
<input type="checkbox"/>		<input type="checkbox"/>	Blackberry Wireless Device (or similar)
<input type="checkbox"/>		<input type="checkbox"/>	Palm Pilot (or similar) w/Internet
<input type="checkbox"/>		<input type="checkbox"/>	MP3 Player
<input type="checkbox"/>		<input type="checkbox"/>	Cell Phone
<input type="checkbox"/>		<input type="checkbox"/>	Other:

9. Does your child spend a significant part of his/her time at another residence?

☐ Yes ☐ No

If "Yes" how would you describe the media environment at the other residence?

☐ More Media Choices ☐ Fewer Media Choices ☐ Similar

Comments?

10. How many of each of the following items would you estimate your child owns? Please put an "X" in the applicable box.

Item	None	1 -10	10 - 20	More than 20
DVD's				
Video Tapes				
Computer Games				
Music CD's				
Video Games				
Game Boy Games				

11. Which of the following statements do you think best describes the way your child decides what they want to buy or the activities they want to participate in (places they want to go, movies they see, etc.)?

- ☐ Wants to do things his/her friends do, have what his/her friends have
☐ Often sees things in a store when out shopping and wants them
☐ Sees advertisements and then makes specific requests
☐ Doesn't really seem to think that often about products or buying things, mostly relies on me or another adult to decide on purchases

12. Do you, or have you in the past, specifically discussed the purpose of advertising with your child?

☐ Yes
 ☐ No

13. Does your child get a weekly allowance?

☐ Yes
 ☐ No
 Amount? _____

If "Yes", what does he/she typically do with the money?

- ☐ Save it with no intention of spending it
☐ Spend weekly on low-cost items
☐ Save over many weeks to purchase higher cost items
☐ Other _____

14. How often does your child ask you to buy things they saw advertised?

Often Sometimes Rarely Never

15. The following question has two parts. The first part asks you to decide whether or not you would allow your child to view/consume various media offerings. The second part asks you whether or not you think your child would want to consume such offerings. If you are not familiar with the offering, or are not sure whether or not you would allow your child to view/consume please check the "Don't Know" box.

Parent		Media Offering	Child		
Would Allow	Would NOT Allow		Would want to	Would NOT want to	Don't Know
		<i>Sponge Bob Square Pants</i>			
		"G"-Rated Animated Disney Feature			
		<i>nickjr.com</i>			
		<i>Fairly Odd Parents</i>			
		<i>Hey Arnold</i> or other "Y" TV shows			
		<i>Highlights Magazine</i>			
		<i>Rugrats</i>			
		"PG" - Movies (<i>Shrek, Toy Story</i>)			
		Cartoon Network			
		<i>Barbie Computer Game</i>			
		"T" - Rated Video Games			
		<i>Zoo Tycoon Computer Game</i>			
		<i>disney.com</i>			
		<i>Nickelodeon Magazine</i>			
		Reality TV Shows			
		<i>Yu-Gi-Oh Website</i>			
		BET Network			
		Tony Hawk Video/Computer Game			
		<i>American Girl Magazine</i>			
		Telemundo, Univision Networks			
		<i>Sports Illustrated for Kids</i>			
		<i>Spy Kids Movies</i>			
		Mild "Fighting" Video Games (<i>Smash Brothers, Zelda</i>)			
		<i>Harry Potter Movies</i>			
		<i>Scooby Doo Movie</i>			
		<i>Scooby Doo TV Cartoon</i>			
		<i>Lord of the Rings Movies</i>			

- 16a. When it comes to media selection, which of the following statements would you say is most true for you and your child?
- ☐ We usually agree and there is little conflict over media selection (WHAT to watch/consume).
 - ☐ We sometimes disagree about what is / isn't appropriate content
 - ☐ We are often in conflict over content appropriateness.
- 16b. When it comes to media usage, which of the following statements would you say is most true for you and your child?
- ☐ We usually agree and there is little conflict over media usage (HOW MUCH to consume).
 - ☐ We sometimes disagree about the amount of time spent using media.
 - ☐ We are often in conflict over the amount of time spent with media.

(This is for parents of 1st graders)

15. The following question has two parts. The first part asks you to decide whether or not you would allow your child to view/consume various media offerings. The second part asks you whether or not you think your child would want to consume such offerings. If you are not familiar with the offering, or are not sure whether or not you would allow your child to view/consume please check the "Don't Know" box.

Parent		Media Offering	Child		
Would Allow	Would NOT Allow		Would want to	Would NOT want to	Don't Know
		<i>Lizzy McGuire, The Amanda Show</i>			
		<i>7th Heaven</i>			
		Internet Chat Rooms			
		<i>Sponge Bob Square Pants</i>			
		Disney / Nickelodeon Game Shows			
		<i>Sports Illustrated for Kids</i>			
		<i>Rugrats</i>			
		"R" - Rated Action Movies			
		"T" - Rated Video Games			
		BET Network			
		Online Arcade Gaming Sites			
		Online Interactive Gaming Sites			
		Reality TV Shows (i.e. <i>Survivor</i>)			
		TLC Shows (<i>What Not to Wear, Trading Spaces</i>)			
		"M" -Rated Video Games			
		WWF (or Similar) Wrestling Matches			
		Telemundo, Univision Networks			
		Britney Spears Movies, Music Videos			
		"First Person Shooter" Video Games			
		Teen Magazines			
		"PG" - Movies (<i>Shrek, Toy Story</i>)			
		<i>Spy Kids</i> Movies (PG)			
		Mild "Fighting" Video Games (<i>Smash Brothers, Zelda</i>)			
		MTV Music Videos			
		Cartoon Network			
		MTV Reality Shows			
		<i>Harry Potter</i> Movies			
		<i>Lord of the Rings</i> Movies			

- 16a. When it comes to media selection, which of the following statements would you say is most true for you and your child?

- ☐ We usually agree and there is little conflict over media selection (WHAT to watch/consume).
☐ We sometimes disagree about what is / isn't appropriate content
☐ We are often in conflict over content appropriateness.

- 16b. When it comes to media usage, which of the following statements would you say is most true for you and your child?

- ☐ We usually agree and there is little conflict over media usage (HOW MUCH to consume).
☐ We sometimes disagree about the amount of time spent using media.
☐ We are often in conflict over the amount of time spent with media.

(This is for parents of 5th graders)

Table 61

Interview Procedure

Impact of Child-Directed Media Consumption on Consumer Intelligence
Data Collection Protocol for Child Interview

Step #	Purpose	Supplies Needed	Procedure	Notes
1	Gain Assent	Assent Form (2 copies)	READ the Assent form to the child. ASK if there are any questions. ASK the child to sign both copies. GIVE one copy to the child. COLLECT signed copy of assent form	
2	Collect Media Use Data	Data Collection Sheet	ASK the child who they normally watch television with. RECORD the answer ASK the child who they normally play video games with. RECORD the answer ASK the child who they normally use the computer with. RECORD the answer ASK the child who they normally watch movies with. RECORD the answer	Record the relation the child has with the person they name (example: "mom", "parent", "friend" "brother", "sister"). Maintain the groupings that the child answers in ("the whole family"; "my cousins", my sister and brother")
3	Confirm Elements of Parental Survey	Data Collection Sheet Copy of Q's 15, 16	READ Q15 to child. (1) ADMINISTER question orally; RECORD answers (5) ASK child to fill out questionnaire on own. (B) ASK child Q16 orally; RECORD answer	If perceived to be faster, administer Q15 to 5th graders orally.
4	Assess Child's Television Knowledge	Data Collection Sheet Network Logo Cards List of TV Shows (differ by age)	SHOW the network logo cards to the child (lay out on table). TELL the child you are going to name several television shows. ASK the child to point to the logo of the network they think the show is on. READ the list of television shows to the child, one at a time. RECORD the child's answer.	If the child doesn't know the answer, check the Don't Know box on the data collection sheet.
5	Assess Child's Video Game Knowledge	Data Collection Sheet Video Game Pictures	TELL the child you are going to show them some pictures from video games. ASK the child to tell the name of the character or the name of the game. SHOW the pictures to the child one at a time. RECORD the child's answers.	If the child doesn't know the answer, check the Don't Know box on the data collection sheet.
6	Assess Child's Movie Knowledge	Data Collection Sheet	ASK the child to name three movies they have seen recently. RECORD how long it takes the child to recall movies. RECORD movie titles (if possible).	Record how long it takes the child to answer by selecting the most appropriate answer from the data collection sheet.
7	Assess Child's Music Knowledge	Data Collection Sheet	ASK the child to name three music groups or singers that they like. RECORD how long it takes the child to recall musicians. RECORD groups or singers (if possible).	Record how long it takes the child to answer by selecting the most appropriate answer from the data collection sheet.
8	Assess Child's Web Knowledge	Data Collection Sheet Web Page Powerpoint	TELL the child you are going to show them several web pages. ASK the child to describe the page - what it is used for and what would happen if you clicked on a particular link. RECORD their answers.	Record the child's actual words, not an abstraction. Try to capture key words, phrases, and thoughts.
9	Assess the Child's Knowledge of Advertising	Data Collection Sheet	TELL the child you are going to ask them about advertisements, like they see on TV or in magazines. ASK the child if they know why there are ads - what the purpose of the ads are... also ask if they know who pays for ads. ASK the child if they think ads are "true". RECORD the child's answers.	Record the child's actual words, not an abstraction. Try to capture key words, phrases, and thoughts.

A	Rank Order Products for Tasks by Preference	Data Collection Sheet Product Cards (differs by gender and grade)	<p>SHOW the child the stack of cards.</p> <p>ASK the child to sort the cards from the products they like the most to the products they like the least.</p> <p>RECORD the rank order of each product.</p> <p>ASK the child to identify any of the products they own.</p>	If the child cannot rank all objects ask them to sort them into things they like, don't like, and don't know. Record the ranking for each object on the data collection sheet. If a rank is not available, use (L) for like (D) for Don't Like, and (N) for neutral.
B	Fair Trade Task	Data Collection Sheet Fair Trade Powerpoint (differs by age and gender)	<p>TELL the child you are going to show them a series of products or groups of products. TELL them to pretend that they owned the product (or group) on the left side of the page.</p> <p>ASK the child if they would want to trade what they have (on left side) for what is on right side of page.</p> <p>RECORD their answer.</p>	If the child is not sure, check the "not sure" box on the data collection sheet.
C	Pricing Task	Data Collection Sheet Pricing Powerpoint (differs by age and gender)	<p>TELL the child you are going to show them a series of products and you would like to know what they cost.</p> <p>SHOW the child the first product and point out that the Skittles in the bottom right corner cost about \$1 and the Gameboy Advance in the bottom left corner costs about \$100.</p> <p>SHOW the products to the child, one by one.</p> <p>ASK the child to tell you (in dollars) how much they think the product costs.</p> <p>RECORD the child's answer.</p>	If the child is not sure, check the "not sure" box on the data collection sheet.
13	Shopping Task	Data Collection Sheet Sticker, UT, and Toy stores	<p>TELL the child that they are going to go to "shopping" in three different stores in an order that you are going to choose. One store has stickers, one has small toys, and one has UT school supplies. Tell them that they may select and keep one item of their choice. The item they select can be from any of the stores but they will only get one item in total. Tell them they will be going to one store at a time and may select the item at any point - but once they leave a "store" they cannot go back.</p> <p>SHOW the stores, in the order indicated on the data collection sheet, to the child. After a selection has been made, show the child all the items from all the stores.</p> <p>ASK the child if they are happy with what they selected or if they would rather choose something else they see.</p> <p>RECORD their initial choice and whether or not they changed their mind and what they ended up with.</p> <p>GIVE the item to the child.</p> <p>THANK the child for helping you.</p>	If the child really cannot decide between 2 items allow the child to take both and record that they were unable to decide.

Figure 15

Television Channel Logos



Figure 16

Video Game Images

Pokemon



Crash Bandicoot



Halo



Mario



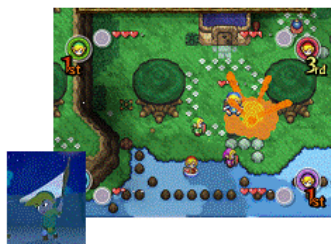
Sonic



Grand Theft Auto



Zelda



Spyro



Web Images (continued)

Browse a category

Arcade
 Sports
 Puzzles
 Music
 Language Arts
 Math
 Animals
 Social Studies
 Science
 ...

Search the Game Guide

Arcade
 All
 Type:
 Search and select options
 Display items as:
 Keywords:

183

Table 62

Pricing and Relative Value Task Item List

Product	1st Boy	1st Girl	5th Boy	5th Girl	Price
Skittles*	1	1	1	1	\$ 0.79
Happy Meal	1	1	1	1	\$ 2.49
24 Crayons	1	1	1	1	\$ 2.50
Rice Krispies	1	1	1	1	\$ 3.49
Matchbox Cars	1				\$ 9.99
Sorry Board Game	1	1	1	1	\$ 12.99
Yu-Gi-Oh Cards	1	1	1	1	\$ 12.99
Target Basketball Shirt			1		\$ 14.99
Target Jeans				1	\$ 16.99
Finding Nemo DVD	1	1			\$ 17.99
Bike Helmet	1	1	1	1	\$ 19.99
1000 Piece Lego Set	1	1			\$ 19.99
Barbie of Swan Lake		1			\$ 19.99
Nike Basketball Shirt			1		\$ 19.99
Harry Potter DVD			1	1	\$ 22.48
Limited Too Jeans				1	\$ 34.50
Razor Scooter			1	1	\$ 34.99
Abercrombie Jeans				1	\$ 39.50
Small Boy's Bike	1				\$ 69.99
Small Girl's Bike		1			\$ 69.99
LA Basketball Jersey			1		\$ 80.00
Game Boy Advance*	1	1	1	1	\$ 99.99
Big Girl's Mountain Bike				1	\$ 109.99
Big Boy's Mountain Bike			1		\$ 114.99

* Prices were supplied to subjects

Figure 19

Pricing Task Images

Skittles



Rice Krispies



Happy Meal



Matchbox Cars



24 Crayons



Sorry Board Game



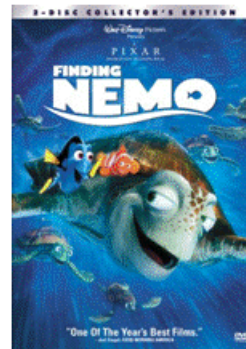
Figure 20

Pricing Task Images (continued)

Yu-Gi-Oh Cards



Finding Nemo DVDs



Target B-Ball Shirt



Bike Helmet



Target Jeans



1,000 Piece Lego Set



Figure 21

Pricing Task Images (continued)

Barbie of Swan Lake



Limited Too Jeans



Nike Basketball Shirt



Razor Scooter



Harry Potter DVD



Abercrombie Jeans



Figure 22

Pricing Task Images (continued)

Small Boy's Bike



GB Advance



Small Girl's Bike



Big Girl's Bike



LA Basketball Jersey



Big Boy's Bike



Table 63

Relative Value Task Differential, First Grade Boy

Set 1	Game Boy vs. Bike	30%
Set 2	Lego vs. Matchbox Cars	50%
Set 3	Yu-Gi-Oh Cards vs. Skittles + Happy Meal	75%
Set 4	Helmet + DVD vs. Bike	46%
Set 5	Sorry + Crayons vs. Lego + Rice Krispies	34%
Set 6	Skittles Thru Nemo vs. Gameboy	37%

Figure 23

Relative Value Images, First Grade Boy



Table 64

Relative Value Task Differential, First Grade Girl

Set 1	Game Boy vs. Bike	30%
Set 2	Lego vs. Matchbox Cars	50%
Set 3	Yu-Gi-Oh Cards vs. Skittles + Happy Meal	75%
Set 4	Helmet + DVD vs. Bike	46%
Set 5	Sorry + Crayons vs. Lego + Rice Krispies	34%
Set 6	Skittles Thru Nemo vs. Gameboy	37%

Figure 24

Relative Value Images, First Grade Girl



Table 65

Relative Value Task Differential, Fifth Grade Boy

Set 1	Game Boy vs. Scooter	65%
Set 2	DVD vs. Sorry	42%
Set 3	Yu-Gi-Oh vs. Skittles + Happy Meal + Cereal	48%
Set 4	Helmet + DVD vs. LA Jersey	47%
Set 5	Sorry + Crayons vs. DVD + Skittles	33%
Set 6	Scooter + Nike Shirt vs. Bike	52%

Figure 25

Relative Value Images, Fifth Grade Boy



Table 66

Relative Value Task Differential, Fifth Grade Girl

Set 1	Game Boy vs. Scooter	65%
Set 2	DVD vs. Sorry	42%
Set 3	Yu-Gi-Oh vs. Skittles + Happy Meal + Cereal	48%
Set 4	Helmet + DVD vs. Gameboy	58%
Set 5	Sorry + Crayons vs. DVD + Skittles	33%
Set 6	Scooter + Abercrombie Jeans vs. Bike	32%

Figure 26

Relative Value Images, Fifth Grade Girl



Figure 27

Decision Task Items



Appendix C Data Sets for Component Scores

Table 67

Pricing Scores, First Grade Girls

Subject ID	Percent (%) Price Differential										PriceP
	Sorry Game	Barbie	Bike Helmet	Yu-Gi-Oh Cards	Nemo Video	Legos	Cereal	Happy Meal	Crayons	Bike	Count Within 50%
6	30.7%	50.0%	50.1%	15.5%	38.9%	400.3%	43.3%	181.1%	660.0%	28.6%	6
7	76.9%	95.0%	85.0%	38.4%	50.0%	4902.5%	14.6%	221.3%	20.0%	84.3%	4
9	23.0%	-	50.1%	61.5%	33.3%	55.0%	129.2%	763.5%	180.0%	71.4%	3
17	7.6%	87.5%	80.0%	23.2%	11.2%	-	129.2%	301.6%	380.0%	14.3%	5
19	69.2%	62.5%	90.0%	61.5%	77.8%	35.0%	186.5%	261.4%	220.0%	77.1%	1
24	84.7%	45.0%	50.0%	7.8%	88.9%	400.3%	186.5%	83.9%	860.0%	99.8%	3
26	92.5%	50.0%	50.0%	76.9%	100.0%	25.1%	186.5%	100.0%	860.0%	1333.1%	3
41	23.0%	65.0%	55.0%	46.1%	47.2%	50.0%	215.2%	341.4%	260.0%	81.6%	4
44	-	-	-	-	-	-	-	-	-	-	0
46	84.6%	75.0%	375.2%	284.9%	122.3%	50.0%	358.5%	381.9%	500.0%	614.4%	1
47	54.0%	75.0%	50.0%	61.5%	11.1%	150.1%	14.0%	59.8%	100.0%	42.9%	4
48	61.5%	50.0%	35.0%	-	33.3%	30.0%	186.5%	100.8%	300.0%	71.4%	5
49	15.3%	50.0%	99.5%	30.7%	38.9%	50.1%	42.7%	60.6%	20.4%	99.3%	6
52	23.0%	50.0%	-	100.0%	66.8%	100.1%	42.7%	141.0%	20.0%	28.6%	6
53	130.9%	75.0%	45.0%	23.2%	177.9%	400.3%	43.3%	20.5%	140.0%	15.7%	5
54	19.9%	50.0%	-	61.5%	14.1%	25.0%	42.7%	122.9%	140.0%	42.8%	7
59	523.5%	395.2%	45.0%	61.5%	88.9%	405.2%	214.9%	341.4%	739.6%	82.9%	1
60	61.5%	50.0%	25.0%	23.0%	66.8%	50.0%	186.5%	39.8%	300.0%	71.4%	5
61	61.5%	90.0%	75.0%	76.9%	61.1%	50.0%	71.3%	59.8%	70.0%	82.1%	1
63	92.3%	75.0%	75.0%	23.0%	44.4%	-	43.3%	100.8%	300.0%	28.6%	5
65	15.5%	60.0%	80.0%	30.7%	33.3%	25.0%	186.5%	100.8%	620.0%	72.9%	4
71	14.8%	69.3%	26.6%	22.9%	3.1%	25.5%	277.7%	45.8%	860.0%	13.9%	7
74	23.0%	50.0%	10.0%	23.0%	5.6%	45.1%	258.2%	1024.5%	860.0%	57.2%	6

Note: " - " means subject had no guess at price of item

Table 68

Pricing Scores, First Grade Boys

Subject ID	Price Differential										PriceP
	MB Cars	Cereal	Bike	Bike Helmet	Sorry Game	Yu-Gi-Oh Cards	Happy Meal	Legos	Crayons	Nemo Video	Count Within 50%
1	90.0%	42.7%	71.4%	50.0%	61.5%	75.0%	100.0%	-	100.0%	66.6%	3
2	70.0%	71.3%	90.0%	50.0%	438.9%	50.0%	100.8%	400.3%	860.0%	66.6%	2
12	90.0%	71.3%	350.1%	73.0%	81.5%	85.0%	59.8%	70.0%	64.0%	65.6%	0
13	901.0%	71.3%	257.2%	62.5%	85.4%	75.0%	120.9%	47.0%	860.0%	68.9%	1
16	70.0%	215.2%	127.2%	70.0%	23.0%	90.0%	60.6%	25.0%	859.6%	11.2%	3
20	70.1%	214.9%	28.6%	70.0%	15.4%	90.0%	60.2%	20.0%	860.0%	61.1%	3
27	70.0%	42.7%	72.9%	90.0%	42.3%	90.0%	59.8%	-	300.0%	94.4%	3
28	90.0%	71.3%	71.5%	75.0%	23.0%	75.0%	60.6%	52.5%	60.0%	41.4%	2
42	80.0%	43.3%	100.0%	80.0%	61.5%	45.0%	703.2%	400.3%	500.0%	122.3%	2
45	70.0%	43.3%	31.4%	60.0%	69.2%	50.0%	60.6%	50.0%	60.0%	72.2%	4
50	49.9%	358.5%	44.3%	195.1%	15.5%	71.0%	3112.9%	375.2%	900.0%	150.1%	3
67	89.5%	41.8%	57.1%	94.7%	76.9%	75.0%	261.4%	50.0%	60.0%	72.2%	2
69	75.0%	100.0%	1328.8%	50.0%	88.5%	94.0%	19.7%	400.3%	20.0%	27.7%	4
72	50.2%	623.5%	63.4%	-	22.2%	28.1%	104.8%	26.3%	910.0%	1.4%	5
73	-	258.2%	57.2%	25.0%	23.2%	25.0%	663.1%	45.1%	900.0%	55.6%	5
77	70.0%	100.0%	42.9%	150.1%	23.0%	650.4%	100.8%	400.3%	1900.0%	455.9%	2

Note: " - " means subject had no guess at price of item

Table 69

Pricing Scores, Fifth Grade Girls

Subject ID	Price Differential										PriceP
	Bike	Limited Too Jeans	Happy Meal	Cereal	Sorry Game	Crayons	Bike Helmet	Harry Potter Video	Scooter	Yu-Gi-Oh Cards	Count Within 50%
3	26.7%	72.5%	75.0%	65.1%	13.4%	50.0%	299.8%	124.8%	65.0%	29.9%	3
4	120.0%	331.3%	24.5%	39.6%	29.9%	50.0%	99.9%	124.8%	16.6%	116.5%	4
5	56.0%	15.0%	17.0%	16.3%	8.3%	64.3%	20.0%	18.3%	30.0%	3.9%	8
10	120.0%	187.5%	17.0%	74.5%	7.2%	16.7%	24.9%	12.4%	56.3%	35.1%	6
14	5399.5%	81.6%	37.8%	16.3%	29.9%	25.0%	99.9%	18.3%	61.1%	-	5
18	358.5%	91.8%	28.9%	12.5%	18.2%	49.9%	186.0%	221.6%	75.0%	30.0%	5
21	83.3%	50.7%	17.0%	12.8%	116.5%	25.0%	185.6%	12.4%	12.5%	45.9%	6
25	120.0%	15.0%	50.2%	65.1%	35.1%	37.5%	99.9%	35.8%	12.5%	35.1%	6
30	50.8%	56.9%	37.0%	34.2%	30.6%	16.4%	1232.7%	40.6%	51.7%	116.9%	5
32	27.1%	122.6%	17.0%	40.8%	13.4%	79.2%	135.2%	51.1%	63.2%	30.6%	5
34	26.7%	72.5%	17.0%	22.4%	8.3%	50.0%	99.9%	49.9%	40.0%	159.8%	6
35	10.0%	245.0%	50.2%	74.5%	29.9%	50.0%	99.9%	12.4%	16.6%	29.9%	5
36	266.6%	130.0%	37.6%	22.4%	29.9%	50.0%	33.3%	12.4%	40.0%	99.8%	6
37	69.2%	15.0%	21.9%	51.9%	29.9%	25.0%	14.2%	10.1%	16.6%	-	8
38	26.7%	15.0%	16.7%	16.3%	30.0%	25.6%	236.0%	125.9%	65.0%	159.8%	6
40	120.0%	15.0%	66.8%	65.1%	35.1%	50.0%	20.0%	12.4%	16.6%	13.4%	6
51	26.7%	38.0%	149.0%	16.3%	25.8%	68.8%	33.3%	49.9%	65.0%	159.8%	6
55	10.0%	64.3%	50.2%	50.1%	13.4%	50.0%	99.9%	7.0%	12.5%	35.1%	5
56	29.4%	31.0%	17.0%	39.6%	29.9%	150.0%	99.9%	49.9%	40.0%	7.2%	8
57	15.8%	31.0%	16.7%	39.6%	159.8%	-	185.6%	124.8%	61.1%	224.8%	5
62	57.1%	15.0%	149.0%	53.5%	29.9%	50.0%	99.9%	49.9%	12.5%	13.4%	5
64	57.1%	130.0%	17.0%	74.5%	116.5%	50.0%	20.0%	22.5%	75.0%	419.6%	3
68	37.5%	19.0%	28.9%	16.7%	31.6%	58.3%	149.9%	25.0%	48.5%	13.4%	8
70	18.5%	1.4%	50.2%	30.2%	73.2%	16.7%	20.0%	12.4%	46.2%	333.0%	7
76	26.7%	25.5%	58.5%	132.7%	3.9%	37.5%	59.9%	-	65.0%	13.4%	6

Note: " - " means subject had no guess at price of item

Table 70

Pricing Scores, Fifth Grade Boys

Subject ID	Price Differential										PriceP
	Bike	Cereal	Crayons	Bike Helmet	Scooter	Sorry Game	Yu-Gi-Oh Cards	Harry Potter Video	Happy Meal	Nike Shirt	Count Within 50%
8	23.3%	365.3%	127.3%	-	30.0%	-	35.1%	12.4%	-	-	6
11	27.8%	39.6%	64.3%	-	53.3%	116.5%	1199.0%	149.8%	37.8%	33.4%	5
15	64.3%	16.3%	50.0%	81.7%	12.5%	61.8%	549.5%	40.6%	-	166.5%	4
22	64.3%	16.3%	25.0%	66.6%	41.7%	62.4%	18.1%	32.2%	17.0%	99.9%	6
23	43.7%	16.3%	66.7%	38.5%	53.3%	13.4%	29.9%	18.3%	-	-	7
29	53.3%	65.1%	150.0%	-	30.0%	29.9%	13.4%	49.9%	50.2%	99.9%	5
31	27.8%	74.5%	16.7%	-	30.0%	29.9%	8.3%	12.4%	17.0%	99.9%	8
33	64.3%	74.5%	-	66.6%	41.7%	-	8.3%	12.4%	80.5%	-	6
39	49.1%	70.9%	50.0%	207.5%	51.4%	-	-	18.6%	17.0%	100.1%	5
43	130.0%	74.5%	66.7%	99.7%	30.0%	35.1%	1199.0%	124.8%	17.0%	233.2%	3
58	77.0%	74.5%	64.3%	99.9%	88.3%	-	8.3%	25.1%	24.5%	33.4%	5
66	-	12.8%	58.1%	150.2%	54.0%	-	-	32.5%	16.7%	33.7%	5
75	23.3%	30.2%	50.0%	99.9%	65.0%	35.1%	13.4%	12.4%	64.4%	-	6

Note: " - " means subject had no guess at price of item

Table 71

Relevant Value Task Data, First Grade Girls

Subject ID	Set Choice (Left or Right)							
	Set 1	Set 2	Set 3	Set 4	Set 5	Set 6	Count Correct	TradeP
6	R	R	L	R	R	L	3	5
7	L	R	R	R	L	R	3	5.0
9	L	L	R	R	R	R	1	1.7
17	L	L	L	R	R	L	1	1.7
19	R	R	L	L	L	R	4	6.7
24	L	R	R	L	R	L	4	6.7
26	R	R	R	L	L	L	6	10.0
41	R	R	L	L	L	L	5	8.3
44	L	L	NS	R	L	R	1	1.7
46	L	R	R	R	R	L	3	5.0
47	R	L	L	L	R	L	3	5.0
48	R	L	R	L	R	L	4	6.7
49	L	R	L	L	L	R	3	5.0
52	L	R	L	L	L	R	3	5.0
53	R	L	L	L	R	L	3	5.0
54	L	R	L	R	R	L	2	3.3
59	R	R	R	R	L	R	4	6.7
60	L	R	R	R	L	R	3	5.0
61	R	L	R	L	L	L	5	8.3
63	R	R	L	R	L	R	3	5.0
65	R	L	R	L	L	L	5	8.3
71	L	R	L	R	R	R	1	1.7
74	R	L	L	L	L	L	4	6.7

Note: NS = Not Sure (tallied as incorrect)

Table 72

Relevant Value Task Data, First Grade Boys

Subject ID	Set Choice (Left or Right)							
	Set 1	Set 2	Set 3	Set 4	Set 5	Set 6	Count Correct	TradeP
1	L	L	L	R	R	R	0	0.0
2	R	L	L	R	L	R	2	3.3
12	R	R	L	L	R	L	4	6.7
13	R	L	L	R	R	L	2	3.3
16	L	L	L	R	L	L	2	3.3
20	L	L	L	L	L	R	2	3.3
27	L	L	L	R	R	R	0	0.0
28	L	L	L	R	R	R	0	0.0
42	R	L	L	R	L	R	2	3.3
45	L	L	L	R	R	L	1	1.7
50	L	L	L	R	R	NS	0	0.0
67	R	R	L	R	L	R	3	5.0
69	R	R	L	L	L	L	5	8.3
72	L	R	L	L	R	L	3	5.0
73	R	L	R	L	R	R	3	5.0
77	R	L	L	L	R	L	3	5.0

Note: NS = Not Sure (tallied as incorrect)

Table 73

Relevant Value Task Data, Fifth Grade Girls

Subject ID	Set Choice (Left or Right)						Count Correct	TradeP
	Set 1	Set 2	Set 3	Set 4	Set 5	Set 6		
3	R	R	R	L	R	R	3	5.0
4	L	L	L	R	L	R	4	6.7
5	R	R	R	L	R	L	2	3.3
10	L	R	R	R	L	L	5	8.3
14	R	R	R	R	L	NS	4	6.7
18	L	R	L	R	L	L	4	6.7
21	R	L	R	L	R	L	1	1.7
25	L	R	R	R	L	R	6	10.0
30	L	R	R	L	R	L	3	5.0
32	L	L	R	R	L	R	5	8.3
34	L	L	L	R	L	R	4	6.7
35	NS	R	R	R	R	R	4	6.7
36	L	R	R	R	R	L	4	6.7
37	NS	R	R	R	L	R	5	8.3
38	L	L	L	NS	R	L	1	1.7
40	R	L	L	L	R	R	1	1.7
51	R	L	R	R	L	L	3	5.0
55	L	L	R	R	L	L	4	6.7
56	L	R	L	R	L	L	4	6.7
57	L	R	L	R	L	L	4	6.7
62	L	L	L	R	R	R	3	5.0
64	L	NS	R	R	R	L	3	5.0
68	L	L	R	R	L	R	5	8.3
70	R	L	R	R	L	L	3	5.0
76	R	R	R	R	L	L	4	6.7

Note: NS = Not Sure (tallied as incorrect)

Table 74

Relevant Value Task Data, Fifth Grade Boys

Subject ID	Set Choice (Left or Right)							
	Set 1	Set 2	Set 3	Set 4	Set 5	Set 6	Count Correct	TradeP
8	L	L	L	L	L	L	2	3.3
11	NS	L	L	L	L	R	2	3.3
15	R	L	L	R	L	L	2	3.3
22	L	R	L	R	R	L	3	5.0
23	R	R	L	L	R	L	1	1.7
29	L	R	L	R	L	L	4	6.7
31	L	R	L	R	R	L	3	5.0
33	L	R	L	R	L	L	4	6.7
39	L	R	R	R	R	NS	4	6.7
43	L	R	L	L	R	R	3	5.0
58	L	L	L	R	L	R	4	6.7
66	NS	R	L	R	L	L	3	5.0
75	L	R	L	R	NS	R	4	6.7

Note: NS = Not Sure (tallied as incorrect)

Table 75

Advertising Knowledge Scores, First Grade Girls

Subject ID	Advertising Knowledge		
	Purpose Score	Truth Score	ADVSC
6	2	4	6
7	2	4	6
9	0	0	0
17	0	2	2
19	1	2	3
24	3	5	8
26	0	1	1
41	4	1	5
44	0	0	0
46	3	5	8
47	1	5	6
48	1	5	6
49	1	5	6
52	0	4	4
53	0	4	4
54	1	5	6
59	1	5	6
60	5	5	10
61	5	5	10
63	1	2	3
65	3	5	8
71	3	1	4
74	1	4	5

Table 76

Advertising Knowledge Scores, First Grade Boys

Subject ID	Advertising Knowledge		
	Purpose Score	Truth Score	ADVSC
1	0	0	0
2	0	2	2
12	0	5	5
13	1	0	1
16	1	4	5
20	5	1	6
27	0	3	3
28	1	3	4
42	3	1	4
45	0	5	5
50	2	1	3
67	4	4	8
69	1	1	2
72	1	1	2
73	1	3	4
77	3	5	8

Table 77

Advertising Knowledge Scores, Fifth Grade Girls

Subject ID	Advertising Knowledge		
	Purpose Score	Truth Score	ADVSC
3	4	2	6
4	5	5	10
5	5	3	8
10	4	4	8
14	3	5	8
18	5	4	9
21	5	0	5
25	5	3	8
30	5	3	8
32	5	3	8
34	5	5	10
35	3	5	8
36	5	5	10
37	5	5	10
38	5	5	10
40	5	5	10
51	5	5	10
55	3	5	8
56	4	5	9
57	3	3	6
62	5	5	10
64	3	3	6
68	5	5	10
70	3	3	6
76	5	3	8

Table 78

Advertising Knowledge Scores, Fifth Grade Boys

Subject ID	Advertising Knowledge		
	Purpose Score	Truth Score	ADVSC
8	3	5	8
11	3	3	6
15	3	5	8
22	3	3	6
23	5	3	8
29	3	3	6
31	3	1	4
33	1	3	4
39	5	4	9
43	5	4	9
58	3	4	7
66	4	4	8
75	3	4	7

Table 79

Shopping Performance Scores, First Grade Girls

Subject ID	Shopping Performance		
	Shopping Score	Shopping Bonus	SHOPSC
6	3	1	4
7	0	0	0
9	0	0	0
17	0	1	1
19	1	0	1
24	5	0	5
26	2	0	2
41	4	0	4
44	1	0	1
46	5	0	5
47	3	0	3
48	3	5	8
49	2	0	2
52	3	0	3
53	2	0	2
54	5	0	5
59	5	1	6
60	5	0	5
61	5	0	5
63	2	3	5
65	0	0	0
71	2	0	2
74	5	3	8

Table 80

Shopping Performance Scores, First Grade Boys

Subject ID	Shopping Performance		
	Shopping Score	Shopping Bonus	SHOPSC
1	5	0	5
2	4	0	4
12	5	0	5
13	5	0	5
16	5	0	5
20	5	0	5
27	4	0	4
28	5	0	5
42	5	5	10
45	5	0	5
50	3	0	3
67	1	0	1
69	4	5	9
72	2	3	5
73	5	5	10
77	4	3	7

Table 81

Shopping Performance Scores, Fifth Grade Girls

Subject ID	Shopping Performance		
	Shopping Score	Shopping Bonus	SHOPSC
3	2	0	2
4	5	0	5
5	5	5	10
10	5	0	5
14	4	0	4
18	5	0	5
21	2	0	2
25	2	5	7
30	4	5	9
32	4	0	4
34	5	0	5
35	5	0	5
36	5	0	5
37	5	0	5
38	5	0	5
40	5	0	5
51	5	3	8
55	5	0	5
56	5	0	5
57	2	5	7
62	5	0	5
64	5	0	5
68	5	5	10
70	1	5	6
76	5	5	10

Table 82

Shopping Performance Scores, Fifth Grade Boys

	Shopping Performance		
Subject ID	Shopping Score	Shopping Bonus	SHOPSC
8	5	0	5
11	5	5	10
15	4	0	4
22	5	0	5
23	2	5	7
29	5	0	5
31	5	3	8
33	5	5	10
39	5	3	8
43	2	0	2
58	5	0	5
66	5	3	8
75	3	3	6

Table 83

Consumer Intelligence Composite Scores, First Grade Girls

Subject ID	Consumer Intelligence Components				TOTCI
	PRICEP	TRADEP	ADVSC	SHOPSC	
6	6	5	6	4	21
7	4	5	6	0	15
9	3	2	0	0	5
17	5	2	2	1	10
19	1	7	3	1	12
24	3	7	8	5	23
26	3	10	1	2	16
41	4	8	5	4	21
44	0	2	0	1	3
46	1	5	8	5	19
47	4	5	6	3	18
48	5	7	6	8	26
49	6	5	6	2	19
52	6	5	4	3	18
53	5	5	4	2	16
54	7	3	6	5	21
59	1	7	6	6	20
60	5	5	10	5	25
61	1	8	10	5	24
63	5	5	3	5	18
65	4	8	8	0	20
71	7	2	4	2	15
74	6	7	5	8	26

Table 84

Consumer Intelligence Composite Scores, First Grade Boys

	Consumer Intelligence Components				
Subject ID	PRICEP	TRADEP	ADVSC	SHOPSC	TOTCI
1	3	0	0	5	8
2	2	3	2	4	11
12	0	7	5	5	17
13	1	3	1	5	10
16	3	3	5	5	16
20	3	3	6	5	17
27	3	0	3	4	10
28	2	0	4	5	11
42	2	3	4	10	19
45	4	2	5	5	16
50	3	0	3	3	9
67	2	5	8	1	16
69	4	8	2	9	23
72	5	5	2	5	17
73	5	5	4	10	24
77	2	5	8	7	22

Table 85

Consumer Intelligence Composite Scores, Fifth Grade Girls

Subject ID	Consumer Intelligence Components				TOTCI
	PRICEP	TRADEP	ADVSC	SHOPSC	
3	3	5	6	2	16
4	4	7	10	5	26
5	8	3	8	10	29
10	6	8	8	5	27
14	5	7	8	4	24
18	5	7	9	5	26
21	6	2	5	2	15
25	6	10	8	7	31
30	5	5	8	9	27
32	5	8	8	4	25
34	6	7	10	5	28
35	5	7	8	5	25
36	6	7	10	5	28
37	8	8	10	5	31
38	6	2	10	5	23
40	6	2	10	5	23
51	6	5	10	8	29
55	5	7	8	5	25
56	8	7	9	5	29
57	5	7	6	7	25
62	5	5	10	5	25
64	3	5	6	5	19
68	8	8	10	10	36
70	7	5	6	6	24
76	6	7	8	10	31

Table 86

Consumer Intelligence Composite Scores, Fifth Grade Boys

	Consumer Intelligence Components				
Subject ID	PRICEP	TRADEP	ADVSC	SHOPSC	TOTCI
8	6	3	8	5	22
11	5	3	6	10	24
15	4	3	8	4	19
22	6	5	6	5	22
23	7	2	8	7	24
29	5	7	6	5	23
31	8	5	4	8	25
33	6	7	4	10	27
39	5	7	9	8	29
43	3	5	9	2	19
58	5	7	7	5	24
66	5	5	8	8	26
75	6	7	7	6	26

Table 87

Media Consumption Scores, First Grade Girls

	Media Consumption Hours per Week						
Subject ID	TV	Video Games	Computer	Music	Other	Raw Total	CONSTD
6	13.5	0	2	5.25	0.33	21.08	15
7	9	1	1	1.25	0	12.25	5
9	26	0	0	7	4	37	30
17	16	0	2	12	1.5	31.5	25
19	24	0	2.5	14	0	40.5	35
24	12	0	3.5	2.5	1.5	19.5	10
26	7.5	0	1	3	0.5	12	5
41	13.75	0	0	4.88	0	18.63	10
44	6	0	0	3.5	1	10.5	5
46	13	0	0	14	0	27	20
47	5.375	0	0	2.5	0	7.875	0
48	25.5	1	1.5	4.75	4	36.75	30
49	17.5	0	0	7	1	25.5	20
52	21.5	0	2.82	45	0.75	70.07	40
53	15.5	0	1.5	1.5	0.5	19	10
54	11	0	7	2	0	20	15
59	13.75	4	2	11	0	30.75	25
60	15.5	0	2	5	1	23.5	15
61	11.5	1	8.25	7	4.25	32	25
63	13.75	0	0.5	3	0.5	17.75	10
65	5	0	0	1.5	0	6.5	0
71	14	6	12	1.05	1	34.05	25
74	18	0	0	7	0	25	20

Table 88

Media Consumption Scores, First Grade Boys

	Media Consumption Hours per Week						
Subject ID	TV	Video Games	Computer	Music	Other	Raw Total	CONSTD
1	12	0	6.5	2.5	0	21	15
2	30	2	0	15	0	47	40
12	18	4.5	10	0	0	32.5	25
13	18	4.5	10	0	0	32.5	25
16	4	1	1	2.5	0	8.5	0
20	14	2	3.25	3.75	1	24	15
27	11.5	0	3.5	8.5	0	23.5	15
28	15	6	1	9	1.5	32.5	25
42	7.5	3	8.5	1	1	21	15
45	12	0	1	2	5	20	15
50	22	5	7	5	0	39	30
67	11	0	0	0	0.5	11.5	5
69	2	0	3.32	3	0	8.32	0
72	14	6	12	1.05	1	34.05	25
73	18	0	0	7	0	25	20
77	44	2	4	0	1	51	40

Table 89

Media Consumption Scores, Fifth Grade Girls

	Media Consumption Hours per Week						
Subject ID	TV	Video Games	Computer	Music	Other	Raw Total	CONSTD
3	10.5	0	12.5	7	0	30	25
4	15	4	14	6	1	40	35
5	4	0	6	0	0	10	5
10	18.5	0	6.5	10.5	0	35.5	30
14	17.5	0.75	11.5	4	7	40.75	35
18	16.5	0	1.125	3.5	3	24.125	15
21	25	0	0	1	0	26	20
25	11.25	4	5.75	5	2	28	20
30	9	0	2.75	9	0	20.75	15
32	9	2	7	3.5	0.5	22	15
34	21.5	0	16.5	3.5	2	43.5	35
35	11	0	11.5	14	1.5	38	30
36	7	0	5	7	3	22	15
37	11.25	4	5.75	5	2	28	20
38	11.25	4	5.75	5	2	28	20
40	9	4	4	0	0	17	10
51	12	0	1	2	5	20	15
55	3	0	5.5	1.5	1.5	11.5	5
56	24	0	10.5	0	0	34.5	25
57	24	0	5	3.5	0	32.5	25
62	11.5	1	8.25	7	4.25	32	25
64	4.5	0	4.7	1.9	0.7	11.8	5
68	10	4	3	5	0	22	15
70	27.5	0	1.5	10	2.5	41.5	35
76	8	0	0	7	1	16	10

Table 90

Media Consumption Scores, Fifth Grade Boys

Subject ID	Media Consumption Hours per Week						
	TV	Video Games	Computer	Music	Other	Raw Total	CONSTD
8	35	5	2	16	3	61	40
11	12.5	7	2	0	0	21.5	15
15	24	7	8.25	11	3.16	53.41	40
22	24.5	6.75	5.25	5.25	3	44.75	35
23	13	0	7	14	1	35	30
29	18	6	0.5	3.5	1	29	20
31	14	0	1	0	1.5	16.5	10
33	16	2	10	7	0	35	30
39	18.08	7.31	4.63	8.96	1.93	40.91	35
43	18	0	4.5	0	0	22.5	15
58	18	19	2	6	0	45	35
66	16	8	7	0	0	31	25
75	8	5	6	0	1	20	15

Table 91

Media Knowledge Scores, First Grade Girls

Subject ID	Media Knowledge Scores					
	TV	Video Games	Movies	Music	Internet	KTOT
6	4	1	2	2	3	12
7	0	1.5	6	4	0	11.5
9	5	1	6	4	3	19
17	3	1.5	6	4	0	14.5
19	9	4.5	6	2	2	23.5
24	5	2.5	6	0	1	14.5
26	4	1.5	4	2	2	13.5
41	6	1	4	0	0	11
44	5	0	6	2	1	14
46	0	2	6	6	2	16
47	9	3.5	6	4	4	26.5
48	7	4	4	6	4	25
49	6	2.5	6	6	2	22.5
52	2	0	4	4	2	12
53	9	3	4	6	5	27
54	5	2	4	6	3	20
59	7	4	6	0	1	18
60	4	0	4	6	2	16
61	5	3.5	4	6	6	24.5
63	2	0	4	6	1	13
65	9	1	6	6	5	27
71	7	2.5	4	4	2	19.5
74	7	2	2	4	2	17

Table 92

Media Knowledge Scores, First Grade Boys

Subject ID	Media Knowledge Scores					
	TV	Video Games	Movies	Music	Internet	KTOT
1	6	4	0	0	0	10
2	8	5	6	6	3	28
12	6	1.5	4	2	4	17.5
13	5	1.5	4	2	4	16.5
16	6	5	6	2	4	23
20	10	4.5	6	2	2	24.5
27	9	7	4	4	5	29
28	9	6.5	6	6	5	32.5
42	8	7	6	2	5	28
45	3	0	6	0	1	10
50	8	3	6	2	4	23
67	4	4	2	2	2	14
69	0	0.5	2	6	2	10.5
72	7	4.5	6	6	1	24.5
73	6	1.5	2	2	3	14.5
77	9	3.5	6	6	8	32.5

Table 93

Media Knowledge Scores, Fifth Grade Girls

Subject ID	Media Knowledge Scores					
	TV	Video Games	Movies	Music	Internet	KTOT
3	6	6.5	5	4	7	28.5
4	10	5	4	4	9	32
5	2	1	6	0	6	15
10	7	4.5	2	6	10	29.5
14	9	4	6	6	10	35
18	10	4	4	6	6	30
21	7	1	4	6	4	22
25	8	6	6	6	9	35
30	7	4	2	6	10	29
32	9	5.5	4	6	10	34.5
34	7	2	6	6	7	28
35	9	4	6	6	8	33
36	10	6.5	6	6	10	38.5
37	9	4.5	4	6	10	33.5
38	10	6	6	6	10	38
40	7	4.5	4	4	10	29.5
51	6	3	6	6	9	30
55	7	5.5	6	6	10	34.5
56	8	5.5	4	6	10	33.5
57	10	5	6	2	9	32
62	9	3.5	6	4	5	27.5
64	2	3	0	6	7	18
68	9	4	2	2	8	25
70	6	2.5	2	6	6	22.5
76	8.5	6	6	6	8	34.5

Table 94

Media Knowledge Scores, Fifth Grade Boys

	Media Knowledge Scores					
Subject ID	TV	Video Games	Movies	Music	Internet	KTOT
8	7	6	6	2	4	25
11	5	4	6	6	8	29
15	10	4.5	6	6	9	35.5
22	10	5	6	6	6	33
23	10	1	4	6	8	29
29	10	6	6	6	5	33
31	9	1.5	4	0	4	18.5
33	9	7	2	4	0	22
39	8	6	4	0	10	28
43	9	3.5	4	2	7	25.5
58	9	8	6	6	9	38
66	6	4.5	6	0	9	25.5
75	10	7	6	0	7	30

Table 95

Media Environment Scores, First Grade Girls

Subject ID	Media Environment Scores			ETOT
	Number of Items in Home	Number of Items in Room	Number of Media Titles (Coded)	
6	13	1	8	22
7	8	1	8	17
9	7	1	7	15
17	9	1	5	15
19	10	3	7	20
24	7	0	9	16
26	6	2	5	13
41	4	0	5	9
44	8	1	8	17
46	12	6	8	26
47	9	0	6	15
48	11	5	5	21
49	6	0	6	12
52	7	1	7	15
53	15	1	6	22
54	8	0	5	13
59	10	5	11	26
60	12	1	10	23
61	11	1	11	23
63	10	2	10	22
65	8	0	5	13
71	12	1	9	22
74	8	2	6	16

Table 96

Media Environment Scores, First Grade Boys

	Media Environment Scores			
Subject ID	Number of Items in Home	Number of Items in Room	Number of Media Titles (Coded)	ETOT
1	8	0	10	18
2	10	3	7	20
12	9	0	5	14
13	9	0	5	14
16	11	0	4	15
20	11	0	8	19
27	8	1	7	16
28	14	1	7	22
42	9	0	5	14
45	7	1	6	14
50	5	1	6	12
67	6	0	7	13
69	6	1	3	10
72	12	1	9	22
73	8	2	6	16
77	8	5	8	21

Table 97

Media Environment Scores, Fifth Grade Girls

Subject ID	Media Environment Scores			ETOT
	Number of Items in Home	Number of Items in Room	Number of Media Titles (Coded)	
3	9	0	9	18
4	9	1	6	16
5	10	1	8	19
10	11	2	10	23
14	11	3	14	28
18	9	1	3	13
21	6	1	1	8
25	13	2	12	27
30	9	2	5	16
32	12	1	9	22
34	7	0	4	11
35	6	4	6	16
36	9	0	5	14
37	4	4	8	16
38	10	5	7	22
40	12	1	10	23
51	7	1	6	14
55	10	3	14	27
56	5	2	2	9
57	9	0	12	21
62	11	1	11	23
64	7	1	9	17
68	9	3	8	20
70	10	1	3	14
76	12	5	11	28

Table 98

Media Environment Scores, Fifth Grade Boys

Subject ID	Media Environment Scores			ETOT
	Number of Items in Home	Number of Items in Room	Number of Media Titles (Coded)	
8	13	6	6	25
11	9	2	6	17
15	10	4	9	23
22	5	5	13	23
23	10	5	9	24
29	12	6	15	33
31	6	1	4	11
33	9	3	8	20
39	8	0	9	17
43	9	2	3	14
58	9	6	6	21
66	9	7	9	25
75	12	5	11	28

Table 99

Parental Influence Scores, First Grade Girls

Subject ID	Parental Influence Component Scores										Raw INFT	INFT
	TV with Parents	Video Games w/Parents	Movies with Parents	Raw Presence Score	Coded Presence Score	Permissiveness	Coded Permissiveness	Presence of Conflict	Age First Watched TV	TV Age Coded		
6	1	0	0	1	7	11	3	5	5	5	20	16
7	1	0	0	1	7	18	10	1.25	4	6	24.25	19.4
9	1	0	0	1	7	16	8	0	4	6	21	16.8
17	0	0	0	0	10	15	7	6.25	1.5	8.5	31.75	25.4
19	1	0	0	1	7	17	9	1.25	2	8	25.25	20.2
24	1	0	0	1	7	17	9	5	4	6	27	21.6
26	1	0	0	1	7	0	0	0	2	8	15	12
41	1	0	1	2	4	11	3	2.5	2	8	17.5	14
44	0	0	0	0	10	12	4	5	2.5	7.5	26.5	21.2
46	0	0	0	0	10	18	10	2.5	4	6	28.5	22.8
47	0	0	1	1	7	13	5	2.5	2.5	7.5	22	17.6
48	1	0	1	2	4	17	9	6.25	7	3	22.25	17.8
49	1	0	1	2	4	16	8	1.25	4	6	19.25	15.4
52	1	0	0	1	7	17	9	3.75	4	6	25.75	20.6
53	0	0	0	0	10	20	12	1.25	2	8	31.25	25
54	0	1	1	2	4	14	6	0	0	10	20	16
59	0	1	0	1	7	16	8	3.75	2	8	26.75	21.4
60	1	0	1	2	4	18	10	3.75	2	8	25.75	20.6
61	0	0	0	0	10	19	11	3.75	2	8	32.75	26.2
63	0	0	1	1	7	10	2	5	7	3	17	13.6
65	0	0	0	0	10	11	3	3.75	3	7	23.75	19
71	0	0	0	0	10	21	13	3.75	2	8	34.75	27.8
74	0	0	1	1	7	18	10	3.75	4	6	26.75	21.4

Table 100

Parental Influence Scores, First Grade Boys

Subject ID	Parental Influence Component Scores										Raw INFT	INFT
	TV with Parents	Video Games w/Parents	Movies with Parents	Raw Presence Score	Coded Presence Score	Permissiveness	Coded Permissiveness	Presence of Conflict	Age First Watched TV	TV Age Coded		
1	1	0	1	2	4	16	8	7.5	4	6	25.5	20.4
2	1	0	1	2	4	26	18	3.75	3	7	32.75	26.2
12	1	0	0	1	7	16	8	3.75	2	8	26.75	21.4
13	1	0	0	1	7	16	8	3.75	2	8	26.75	21.4
16	0	0	0	0	10	3	0	0	3	7	17	13.6
20	0	0	1	1	7	21	13	0	1	9	29	23.2
27	1	1	0	2	4	16	8	3.75	2	8	23.75	19
28	0	0	0	0	10	21	13	6.25	3	7	36.25	29
42	0	0	1	1	7	23	15	2.5	2	8	32.5	26
45	1	0	1	2	4	11	3	0	7	3	10	8
50	1	0	1	2	4	13	5	7.5	3	7	23.5	18.8
67	1	0	0	1	7	5	0	5	2	8	20	16
69	0	0	0	0	10	17	9	2.5	4	6	27.5	22
72	0	0	0	0	10	21	13	5	2	8	36	28.8
73	0	0	1	1	7	18	10	5	4	6	28	22.4
77	0	0	0	0	10	21	13	5	3.5	6.5	34.5	27.6

Table 101

Parental Influence Scores, Fifth Grade Girls

Subject ID	Parental Influence Component Scores										Raw INFT	INFT
	TV with Parents	Video Games w/Parents	Movies with Parents	Raw Presence Score	Coded Presence Score	Permissiveness	Coded Permissiveness	Presence of Conflict	Age First Watched TV	TV Age Coded		
3	1	1	1	3	0	0	0	2.5	2	8	10.5	8.4
4	0	0	0	0	10	12	4	6.25	5	5	25.25	20.2
5	0	0	1	1	7	12	4	2.5	8	2	15.5	12.4
10	1	1	1	3	0	18	10	3.75	7	3	16.75	13.4
14	0	0	1	1	7	9	1	1.25	5	5	14.25	11.4
18	1	0	1	2	4	12	4	3.75	4	6	17.75	14.2
21	1	0	1	2	4	8	0	2.5	4	6	12.5	10
25	1	0	1	2	4	11	3	2.5	3	7	16.5	13.2
30	0	0	1	1	7	21	13	3.75	4	6	29.75	23.8
32	0	0	1	1	7	12	4	2.5	6	4	17.5	14
34	1	0	0	1	7	11	3	5	6	4	19	15.2
35	1	0	1	2	4	9	1	2.5	7	3	10.5	8.4
36	1	1	1	3	0	13	5	2.5	7	3	10.5	8.4
37	0	0	1	1	7	25	17	2.5	0	10	36.5	29.2
38	1	0	1	2	4	17	9	2.5	5	5	20.5	16.4
40	1	0	1	2	4	13	5	3.75	3	7	19.75	15.8
51	1	0	1	2	4	11	3	0	7	3	10	8
55	1	0	1	2	4	8	0	3.75	5	5	12.75	10.2
56	1	0	1	2	4	15	7	2.5	3	7	20.5	16.4
57	1	1	1	3	0	23	15	2.5	2	8	25.5	20.4
62	0	0	0	0	10	19	11	3.75	2	8	32.75	26.2
64	0	0	1	1	7	10	2	1.25	1	9	19.25	15.4
68	0	0	1	1	7	12	4	1.25	9	1	13.25	10.6
70	0	0	1	1	7	13	5	6.25	3.5	6.5	24.75	19.8
76	0	0	0	0	10	16	8	3.75	1	9	30.75	24.6

Table 102

Parental Influence Scores, Fifth Grade Boys

	Parental Influence Component Scores											
Subject ID	TV with Parents	Video Games w/Parents	Movies with Parents	Raw Presence Score	Coded Presence Score	Permissiveness	Coded Permissiveness	Presence of Conflict	Age First Watched TV	TV Age Coded	Raw INFT	INFT
8	0	1	1	2	4	27	19	1.25	8	2	26.25	21
11	1	1	1	3	0	9	1	2.5	8	2	5.5	4.4
15	1	1	1	3	0	11	3	1.25	8	2	6.25	5
22	1	0	1	2	4	14	6	1.25	2	8	19.25	15.4
23	1	0	1	2	4	21	13	3.75	10	0	20.75	16.6
29	1	1	1	3	0	11	3	1.25	3	7	11.25	9
31	0	0	1	1	7	5	0	2.5	6	4	13.5	10.8
33	0	0	1	1	7	16	8	5	3	7	27	21.6
39	0	0	1	1	7	11	3	3.75	3	7	20.75	16.6
43	1	0	1	2	4	21	13	3.75	4	6	26.75	21.4
58	1	1	1	3	0	15	7	3.75	4	6	16.75	13.4
66	1	0	1	2	4	18	10	2.5	4	6	22.5	18
75	0	0	0	0	10	16	8	5	1	9	32	25.6

Table 103

Child-Directed Media Consumption Composite Scores, First Grade Girls

Subject ID	Child-Directed Media Components					
	CONSTD	KTOT	ETOT	INFT	RAW TOTMED	TOTMED
6	15	12	22	16	65	16.3
7	5	11.5	17	19.4	52.9	13.2
9	30	19	15	16.8	80.8	20.2
17	25	14.5	15	25.4	79.9	20.0
19	35	23.5	20	20.2	98.7	24.7
24	10	14.5	16	21.6	62.1	15.5
26	5	13.5	13	12	43.5	10.9
41	10	11	9	14	44	11.0
44	5	14	17	21.2	57.2	14.3
46	20	16	26	22.8	84.8	21.2
47	0	26.5	15	17.6	59.1	14.8
48	30	25	21	17.8	93.8	23.5
49	20	22.5	12	15.4	69.9	17.5
52	40	12	15	20.6	87.6	21.9
53	10	27	22	25	84	21.0
54	15	20	13	16	64	16.0
59	25	18	26	21.4	90.4	22.6
60	15	16	23	20.6	74.6	18.7
61	25	24.5	23	26.2	98.7	24.7
63	10	13	22	13.6	58.6	14.7
65	0	27	13	19	59	14.8
71	25	19.5	22	27.8	94.3	23.6
74	20	17	16	21.4	74.4	18.6

Table 104

Child-Directed Media Consumption Composite Scores, First Grade Boys

Subject ID	Child-Directed Media Components				RAW	
	CONSTD	KTOT	ETOT	INFT	TOTMED	TOTMED
1	15	10	18	20.4	63.4	15.9
2	40	28	20	26.2	114.2	28.6
12	25	17.5	14	21.4	77.9	19.5
13	25	16.5	14	21.4	76.9	19.2
16	0	23	15	13.6	51.6	12.9
20	15	24.5	19	23.2	81.7	20.4
27	15	29	16	19	79	19.8
28	25	32.5	22	29	108.5	27.1
42	15	28	14	26	83	20.8
45	15	10	14	8	47	11.8
50	30	23	12	18.8	83.8	21.0
67	5	14	13	16	48	12.0
69	0	10.5	10	22	42.5	10.6
72	25	24.5	22	28.8	100.3	25.1
73	20	14.5	16	22.4	72.9	18.2
77	40	32.5	21	27.6	121.1	30.3

Table 105

Child-Directed Media Consumption Composite Scores, Fifth Grade Girls

Subject ID	Child-Directed Media Components					
	CONSTD	KTOT	ETOT	INFT	RAW TOTMED	TOTMED
3	25	28.5	18	8.4	79.9	20.0
4	35	32	16	20.2	103.2	25.8
5	5	15	19	12.4	51.4	12.9
10	30	29.5	23	13.4	95.9	24.0
14	35	35	28	11.4	109.4	27.4
18	15	30	13	14.2	72.2	18.1
21	20	22	8	10	60	15.0
25	20	35	27	13.2	95.2	23.8
30	15	29	16	23.8	83.8	21.0
32	15	34.5	22	14	85.5	21.4
34	35	28	11	15.2	89.2	22.3
35	30	33	16	8.4	87.4	21.9
36	15	38.5	14	8.4	75.9	19.0
37	20	33.5	16	29.2	98.7	24.7
38	20	38	22	16.4	96.4	24.1
40	10	29.5	23	15.8	78.3	19.6
51	15	30	14	8	67	16.8
55	5	34.5	27	10.2	76.7	19.2
56	25	33.5	9	16.4	83.9	21.0
57	25	32	21	20.4	98.4	24.6
62	25	27.5	23	26.2	101.7	25.4
64	5	18	17	15.4	55.4	13.9
68	15	25	20	10.6	70.6	17.7
70	35	22.5	14	19.8	91.3	22.8
76	10	34.5	28	24.6	97.1	24.3

Table 106

Child-Directed Media Consumption Composite Scores, Fifth Grade Boys

Subject ID	Child-Directed Media Components					
	CONSTD	KTOT	ETOT	INFT	RAW TOTMED	TOTMED
8	40	25	25	21	111	27.8
11	15	29	17	4.4	65.4	16.4
15	40	35.5	23	5	103.5	25.9
22	35	33	23	15.4	106.4	26.6
23	30	29	24	16.6	99.6	24.9
29	20	33	33	9	95	23.8
31	10	18.5	11	10.8	50.3	12.6
33	30	22	20	21.6	93.6	23.4
39	35	28	17	16.6	96.6	24.2
43	15	25.5	14	21.4	75.9	19.0
58	35	38	21	13.4	107.4	26.9
66	25	25.5	25	18	93.5	23.4
75	15	30	28	25.6	98.6	24.7

Table 107

TV and Screen Consumption Scores, First Grade Girls

Subject ID	Variables for H2, H3			
	Raw TV Proportion	TVCONS	Raw Screen Proportion	SCRCON
6	64%	25.62	74%	29.41
7	73%	29.39	90%	35.92
9	70%	28.11	70%	28.11
17	51%	20.32	57%	22.86
19	59%	23.70	65%	26.17
24	62%	24.62	79%	31.79
26	63%	25.00	71%	28.33
41	74%	29.52	74%	29.52
44	57%	22.86	57%	22.86
46	48%	19.26	48%	19.26
47	68%	27.30	68%	27.30
48	69%	27.76	76%	30.48
49	69%	27.45	69%	27.45
52	31%	12.27	35%	13.88
53	82%	32.63	89%	35.79
54	55%	22.00	90%	36.00
59	45%	17.89	64%	25.69
60	66%	26.38	74%	29.79
61	36%	14.38	65%	25.94
63	77%	30.99	80%	32.11
65	77%	30.77	77%	30.77
71	41%	16.45	94%	37.59
74	72%	28.80	72%	28.80

Table 108

TV and Screen Consumption Scores, First Grade Boys

Subject ID	Variables for H2, H3			
	Raw TV Proportion	TVCONS	Raw Screen Proportion	SCRCON
1	57%	22.86	88%	35.24
2	64%	25.53	68%	27.23
12	55%	22.15	100%	40.00
13	55%	22.15	100%	40.00
16	47%	18.82	71%	28.24
20	58%	23.33	80%	32.08
27	49%	19.57	64%	25.53
28	46%	18.46	68%	27.08
42	36%	14.29	90%	36.19
45	60%	24.00	65%	26.00
50	56%	22.56	87%	34.87
67	96%	38.26	96%	38.26
69	24%	9.62	64%	25.58
72	41%	16.45	94%	37.59
73	72%	28.80	72%	28.80
77	86%	34.51	98%	39.22

Table 109

TV and Screen Consumption Scores, Fifth Grade Girls

Subject ID	Variables for H2, H3			
	Raw TV Proportion	TVCONS	Raw Screen Proportion	SCRCON
3	35%	14.00	77%	30.67
4	38%	15.00	83%	33.00
5	40%	16.00	100%	40.00
10	52%	20.85	70%	28.17
14	43%	17.18	73%	29.20
18	68%	27.36	73%	29.22
21	96%	38.46	96%	38.46
25	40%	16.07	75%	30.00
30	43%	17.35	57%	22.65
32	41%	16.36	82%	32.73
34	49%	19.77	87%	34.94
35	29%	11.58	59%	23.68
36	32%	12.73	55%	21.82
37	40%	16.07	75%	30.00
38	40%	16.07	75%	30.00
40	53%	21.18	100%	40.00
51	60%	24.00	65%	26.00
55	26%	10.43	74%	29.57
56	70%	27.83	100%	40.00
57	74%	29.54	89%	35.69
62	36%	14.38	65%	25.94
64	38%	15.25	78%	31.19
68	45%	18.18	77%	30.91
70	66%	26.51	70%	27.95
76	50%	20.00	50%	20.00

Table 110

TV and Screen Consumption Scores, Fifth Grade Boys

	Variables for H2, H3			
Subject ID	Raw TV Proportion	TVCONS	Raw Screen Proportion	SCRCON
8	57%	22.95	69%	27.54
11	58%	23.26	100%	40.00
15	45%	17.97	73%	29.40
22	55%	21.90	82%	32.63
23	37%	14.86	57%	22.86
29	62%	24.83	84%	33.79
31	85%	33.94	91%	36.36
33	46%	18.29	80%	32.00
39	44%	17.68	73%	29.35
43	80%	32.00	100%	40.00
58	40%	16.00	87%	34.67
66	52%	20.65	100%	40.00
75	40%	16.00	95%	38.00

Appendix D Cluster Analysis Procedures

The following section describes the procedure for arriving at a 4-cluster solution for both first and fifth grade consumer intelligence score analysis. As the procedure for determining the number of media clusters is similar, that procedure is not described, but the relevant tables and figures follow the consumer intelligence tables and figures.

First, a hierarchical cluster analysis with solutions ranging from 2-6 clusters was run in SPSS using Ward's method. As previously stated, these analyses are performed independently for each grade. Next, the fusion density plot of the coefficients from the agglomeration schedule for each grade was generated. These plots are presented in Figures 17 and 18. From the dendrogram (not pictured) and fusion density plot, a solution of between 4 and 6 clusters is suggested for first graders, and a solution of between 3 and 5 clusters is suggested for fifth graders.

Next, an ANOVA analysis for each suggested solution was run. This analysis looks for significant mean differences between the component variables. SPSS ANOVA output results of these analyses are found in Tables 50 - 55. For first graders, significant mean differences for each of the four components was found for each solution – for 4 to 6 clusters. For fifth graders, significance was only found for all 4 components for a 5-cluster solution. For a 4-cluster solution, pricing performance was the only component score shown not to be significantly statistically different.

The final step in determining how many clusters were selected for further analysis was to look for interpretability of the clusters. To aid in this process, a graph of each solution option was created – showing means scores of each component for each cluster. These graphs can be found in Figures 19 - 23. From the graphic analysis, a solution of 4-

clusters was selected for both the first and fifth graders. While a solution of 5-clusters for fifth graders seemed to be indicated by the statistics, it was determined, through the graphical and qualitative analysis that the results could not be interpreted.

CONSUMER INTELLIGENCE CLUSTER ANALYSIS

Figure 28

Consumer Intelligence Cluster Analysis Fusion Density Plot, First Grade

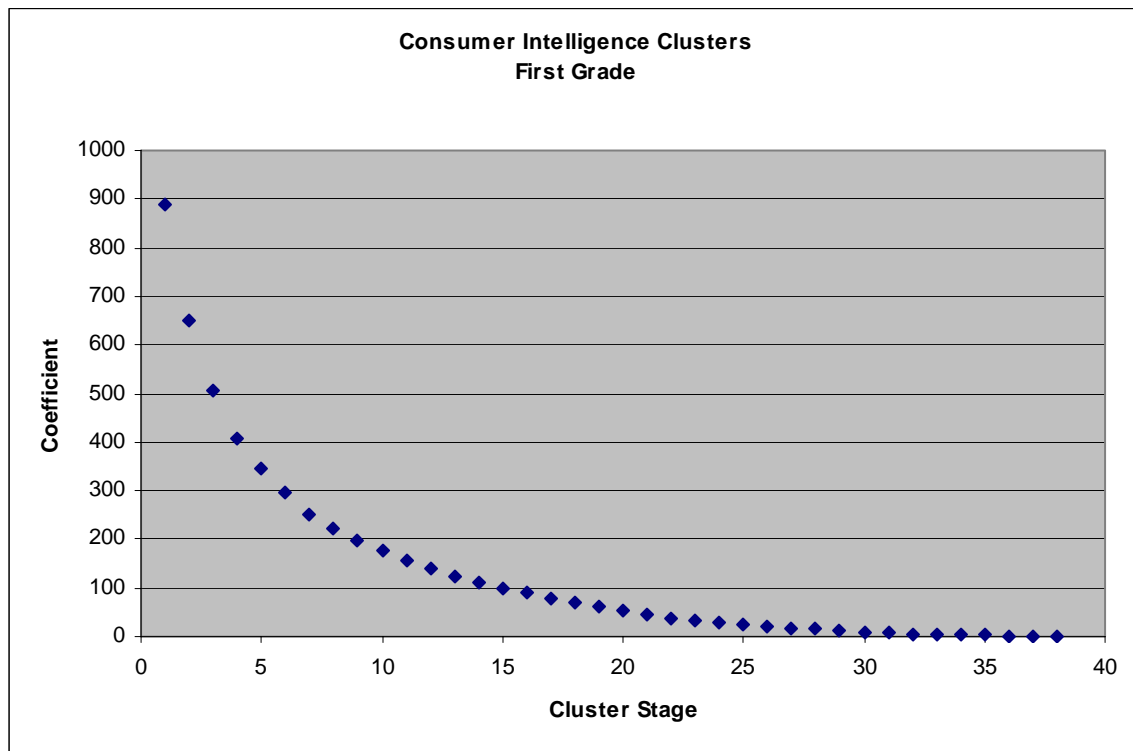


Figure 29

Consumer Intelligence Cluster Analysis Fusion Density Plot, Fifth Grade

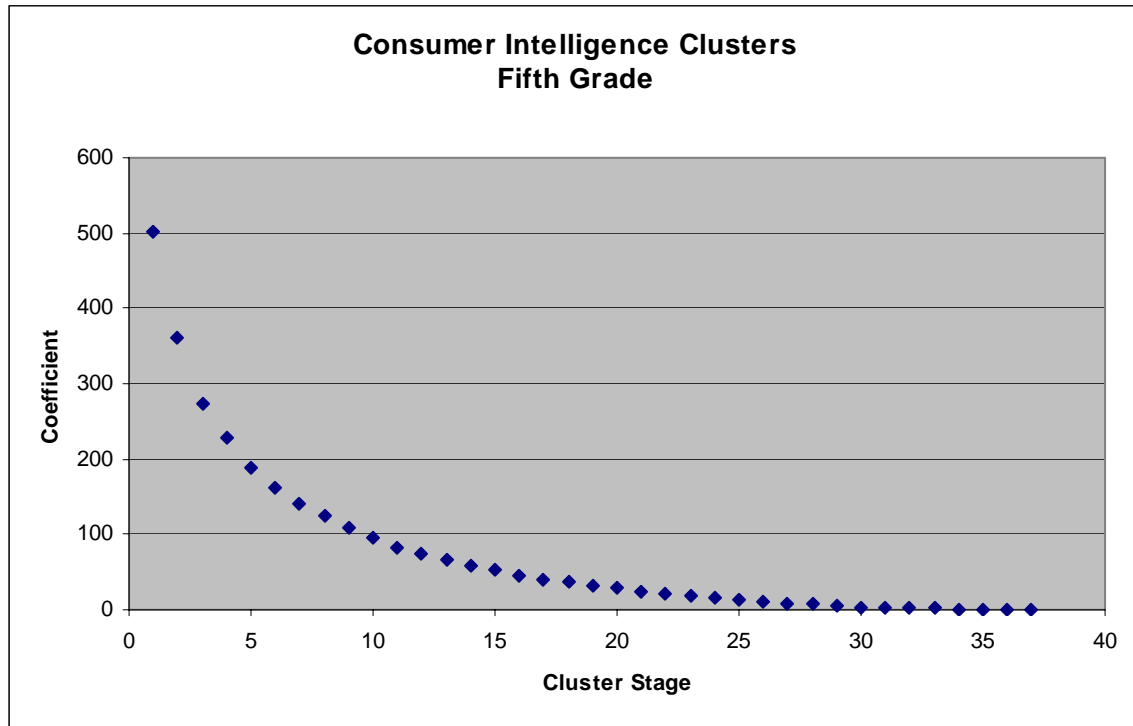


Table 111

Between Group Differences for a 4-Cluster Solution, First Grade

ANOVA^a

		Sum of Squares	df	Mean Square	F	Sig.
Pricing Performance	Between Groups	76.339	3	25.446	14.993	.000
	Within Groups	59.404	35	1.697		
	Total	135.744	38			
Value Performance	Between Groups	164.778	3	54.926	23.758	.000
	Within Groups	80.915	35	2.312		
	Total	245.692	38			
Advertising Knowledge	Between Groups	105.386	3	35.129	8.526	.000
	Within Groups	144.204	35	4.120		
	Total	249.590	38			
Shopping Performace	Between Groups	132.456	3	44.152	12.415	.000
	Within Groups	124.467	35	3.556		
	Total	256.923	38			

a. Grade = First Grade

Table 112

Between Group Differences for a 5-Cluster Solution, First Grade

ANOVA^a

		Sum of Squares	df	Mean Square	F	Sig.
Pricing Performance	Between Groups	76.341	4	19.085	10.924	.000
	Within Groups	59.402	34	1.747		
	Total	135.744	38			
Value Performance	Between Groups	168.672	4	42.168	18.615	.000
	Within Groups	77.020	34	2.265		
	Total	245.692	38			
Advertising Knowledge	Between Groups	137.387	4	34.347	10.408	.000
	Within Groups	112.202	34	3.300		
	Total	249.590	38			
Shopping Performace	Between Groups	160.612	4	40.153	14.175	.000
	Within Groups	96.311	34	2.833		
	Total	256.923	38			

a. Grade = First Grade

Table 113

Between Group Differences for a 6-Cluster Solution, First Grade

ANOVA^a

		Sum of Squares	df	Mean Square	F	Sig.
Pricing Performance	Between Groups	77.466	5	15.493	8.773	.000
	Within Groups	58.277	33	1.766		
	Total	135.744	38			
Value Performance	Between Groups	174.797	5	34.959	16.273	.000
	Within Groups	70.895	33	2.148		
	Total	245.692	38			
Advertising Knowledge	Between Groups	152.512	5	30.502	10.369	.000
	Within Groups	97.077	33	2.942		
	Total	249.590	38			
Shopping Performace	Between Groups	188.737	5	37.747	18.268	.000
	Within Groups	68.186	33	2.066		
	Total	256.923	38			

a. Grade = First Grade

Table 114

Between Group Differences for a 3-Cluster Solution, Fifth Grade

ANOVA^a

		Sum of Squares	df	Mean Square	F	Sig.
Pricing Performance	Between Groups	8.317	2	4.158	2.575	.091
	Within Groups	56.525	35	1.615		
	Total	64.842	37			
Value Performance	Between Groups	78.851	2	39.426	18.407	.000
	Within Groups	74.965	35	2.142		
	Total	153.816	37			
Advertising Knowledge	Between Groups	1.282	2	.641	.234	.792
	Within Groups	95.692	35	2.734		
	Total	96.974	37			
Shopping Performace	Between Groups	139.398	2	69.699	53.525	.000
	Within Groups	45.576	35	1.302		
	Total	184.974	37			

a. Grade = Fifth Grade

Table 115

Between Group Differences for a 4-Cluster Solution, Fifth Grade

ANOVA^a

		Sum of Squares	df	Mean Square	F	Sig.
Pricing Performance	Between Groups	10.346	3	3.449	2.152	.112
	Within Groups	54.496	34	1.603		
	Total	64.842	37			
Value Performance	Between Groups	91.332	3	30.444	16.566	.000
	Within Groups	62.484	34	1.838		
	Total	153.816	37			
Advertising Knowledge	Between Groups	28.168	3	9.389	4.640	.008
	Within Groups	68.806	34	2.024		
	Total	96.974	37			
Shopping Performace	Between Groups	141.593	3	47.198	36.991	.000
	Within Groups	43.381	34	1.276		
	Total	184.974	37			

a. Grade = Fifth Grade

Table 116

Between Group Differences for a 5-Cluster Solution, Fifth Grade

ANOVA^a

		Sum of Squares	df	Mean Square	F	Sig.
Pricing Performance	Between Groups	23.685	4	5.921	4.748	.004
	Within Groups	41.157	33	1.247		
	Total	64.842	37			
Value Performance	Between Groups	98.137	4	24.534	14.541	.000
	Within Groups	55.679	33	1.687		
	Total	153.816	37			
Advertising Knowledge	Between Groups	34.974	4	8.743	4.654	.004
	Within Groups	62.000	33	1.879		
	Total	96.974	37			
Shopping Performance	Between Groups	155.482	4	38.870	43.494	.000
	Within Groups	29.492	33	.894		
	Total	184.974	37			

a. Grade = Fifth Grade

Figure 30

Mean Consumer Intelligence Component Scores for a 4-Cluster Solution, First Grade

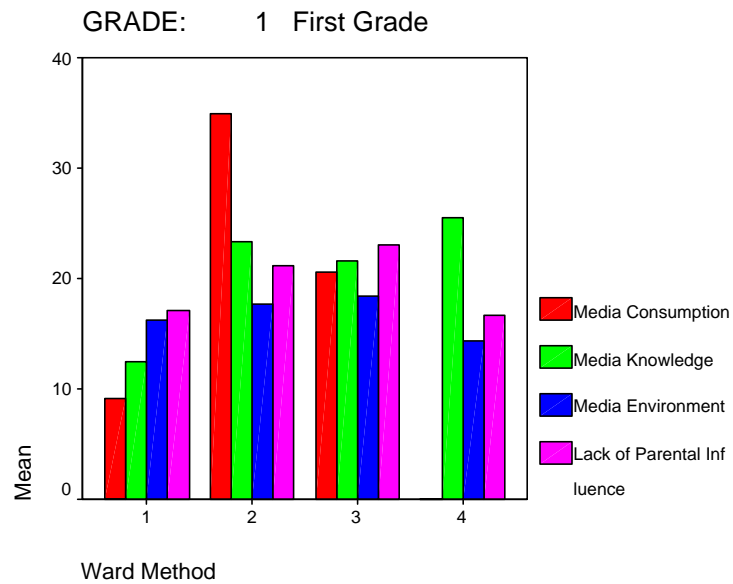


Figure 31

Mean Consumer Intelligence Component Scores for a 5-Cluster Solution, First Grade

Figure 32

Mean Consumer Intelligence Component Scores for a 6-Cluster Solution, First Grade

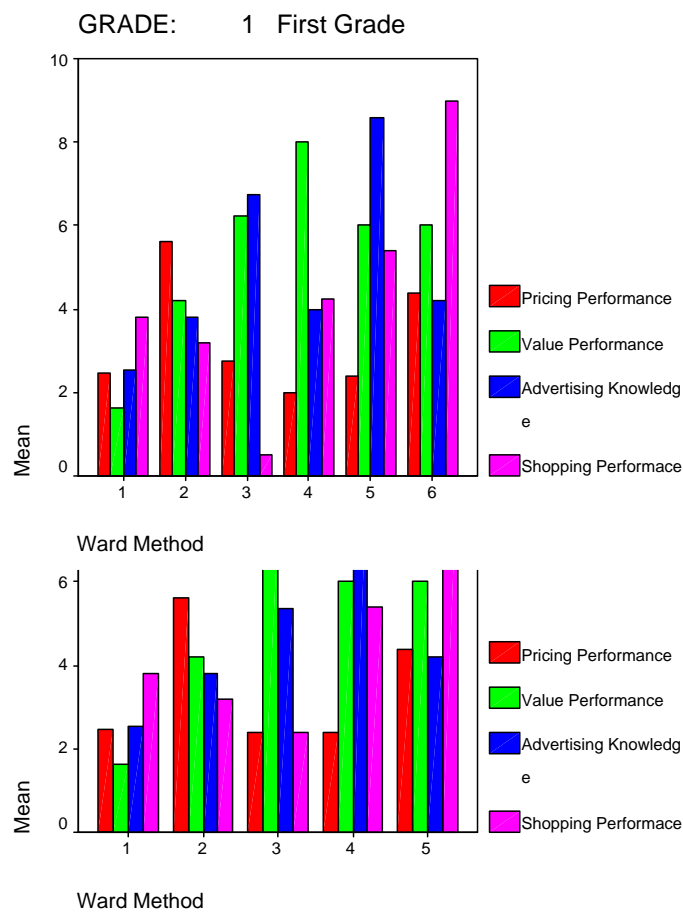


Figure 33

Mean Consumer Intelligence Component Scores for a 4-Cluster Solution, Fifth Grade

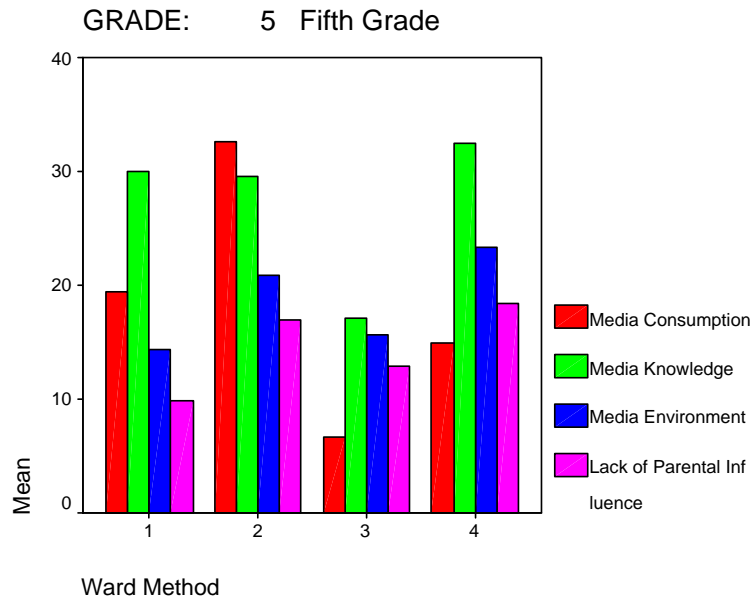
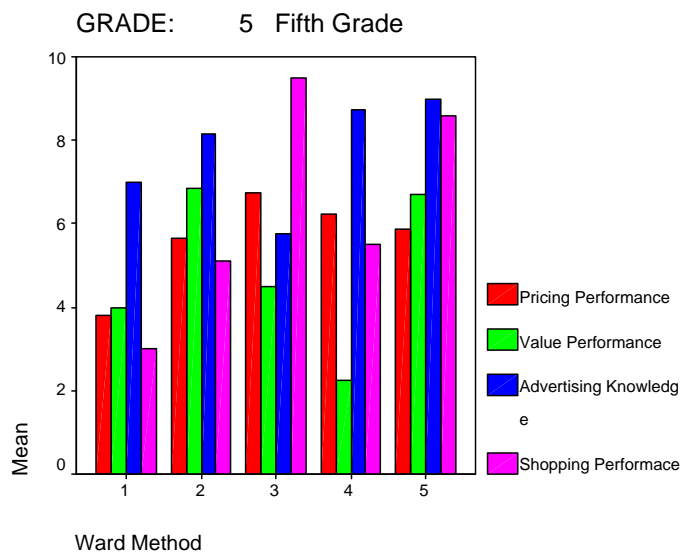


Figure 34

Mean Consumer Intelligence Component Scores for a 5-Cluster Solution, Fifth Grade



MEDIA CLUSTER ANALYSIS

Figure 35

Media Cluster Analysis Fusion Density Plot, First Grade

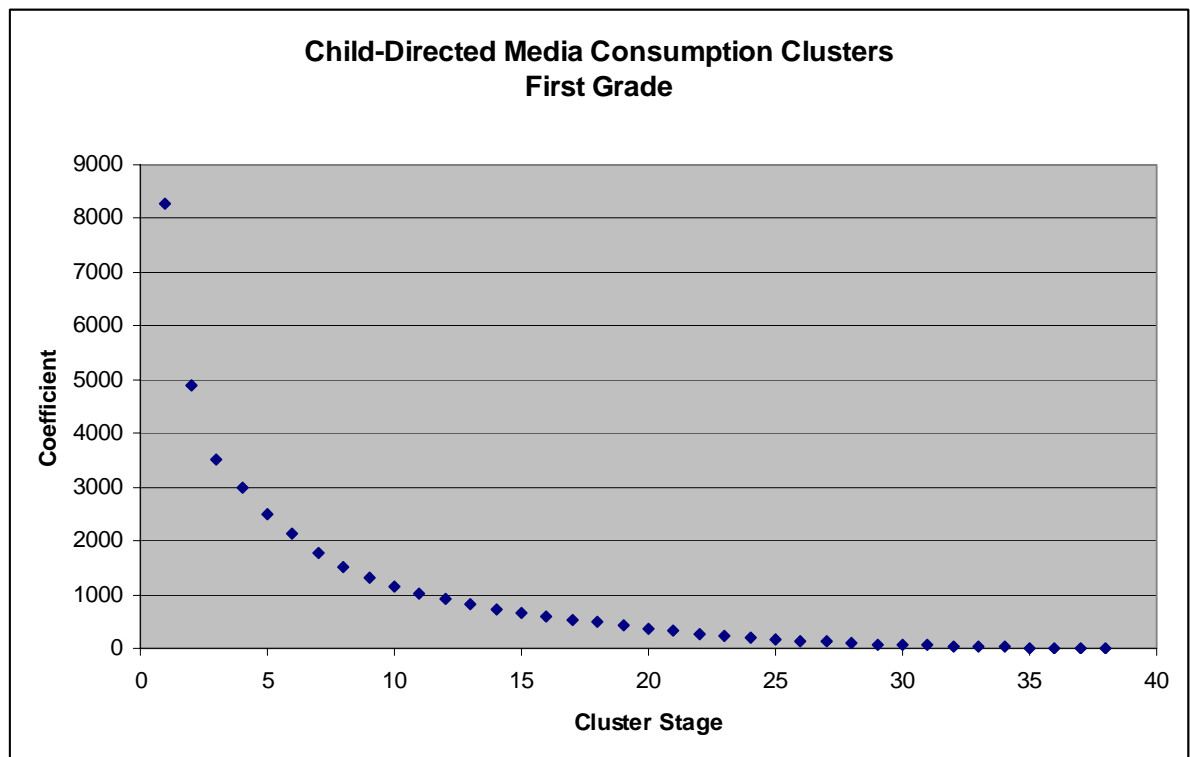


Figure 36

Media Cluster Analysis Fusion Density Plot, Fifth Grade

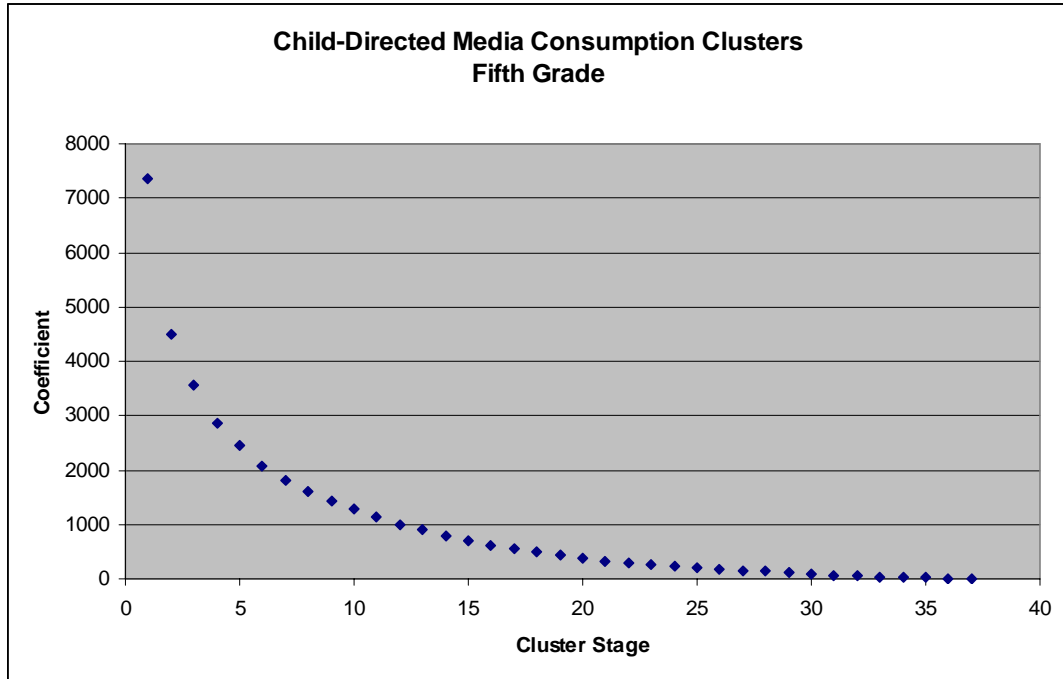


Table 117

Between Group Differences for a 3-Cluster Solution, First Grade

ANOVA^a

		Sum of Squares	df	Mean Square	F	Sig.
Media Consumption	Between Groups	3916.484	2	1958.242	73.108	.000
	Within Groups	964.286	36	26.786		
	Total	4880.769	38			
Media Knowledge	Between Groups	240.632	2	120.316	3.054	.060
	Within Groups	1418.227	36	39.395		
	Total	1658.859	38			
Media Environment	Between Groups	188.310	2	94.155	6.339	.004
	Within Groups	534.756	36	14.854		
	Total	723.066	38			
Lack of Parental Influence	Between Groups	411.251	2	205.626	12.282	.000
	Within Groups	602.732	36	16.743		
	Total	1013.984	38			

a. Grade = First Grade

Table 118

Between Group Differences for a 4-Cluster Solution, First Grade

ANOVA^a

		Sum of Squares	df	Mean Square	F	Sig.
Media Consumption	Between Groups	4044.985	3	1348.328	56.464	.000
	Within Groups	835.784	35	23.880		
	Total	4880.769	38			
Media Knowledge	Between Groups	865.695	3	288.565	12.734	.000
	Within Groups	793.164	35	22.662		
	Total	1658.859	38			
Media Environment	Between Groups	61.775	3	20.592	1.090	.366
	Within Groups	661.291	35	18.894		
	Total	723.066	38			
Lack of Parental Influence	Between Groups	300.920	3	100.307	5.878	.002
	Within Groups	597.240	35	17.064		
	Total	898.160	38			

a. Grade = First Grade

Table 119

Between Group Differences for a 3-Cluster Solution, Fifth Grade

ANOVA^a

		Sum of Squares	df	Mean Square	F	Sig.
Media Consumption	Between Groups	3078.070	2	1539.035	66.602	.000
	Within Groups	808.772	35	23.108		
	Total	3886.842	37			
Media Knowledge	Between Groups	526.445	2	263.223	13.952	.000
	Within Groups	660.298	35	18.866		
	Total	1186.743	37			
Media Environment	Between Groups	57.601	2	28.801	.817	.450
	Within Groups	1233.480	35	35.242		
	Total	1291.081	37			
Lack of Parental Influence	Between Groups	141.048	2	70.524	2.909	.068
	Within Groups	848.585	35	24.245		
	Total	989.634	37			

a. Grade = Fifth Grade

Table 120

Between Group Differences for a 4-Cluster Solution, Fifth Grade

ANOVA^a

		Sum of Squares	df	Mean Square	F	Sig.
Media Consumption	Between Groups	3004.620	3	1001.540	38.598	.000
	Within Groups	882.222	34	25.948		
	Total	3886.842	37			
Media Knowledge	Between Groups	554.127	3	184.709	9.927	.000
	Within Groups	632.616	34	18.606		
	Total	1186.743	37			
Media Environment	Between Groups	471.425	3	157.142	6.518	.001
	Within Groups	819.657	34	24.108		
	Total	1291.081	37			
Lack of Parental Influence	Between Groups	434.550	3	144.850	5.294	.004
	Within Groups	930.326	34	27.363		
	Total	1364.876	37			

a. Grade = Fifth Grade

Figure 37

Mean Media Component Scores for a 3-Cluster Solution, First Grade

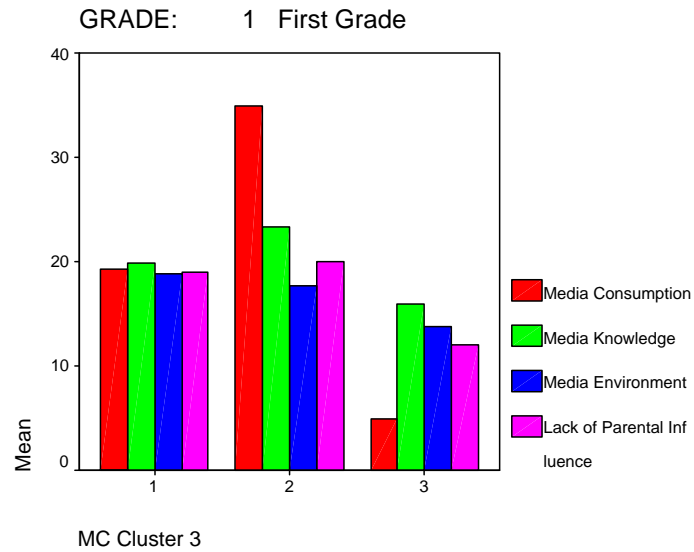


Figure 38

Mean Media Component Scores for a 4-Cluster Solution, First Grade

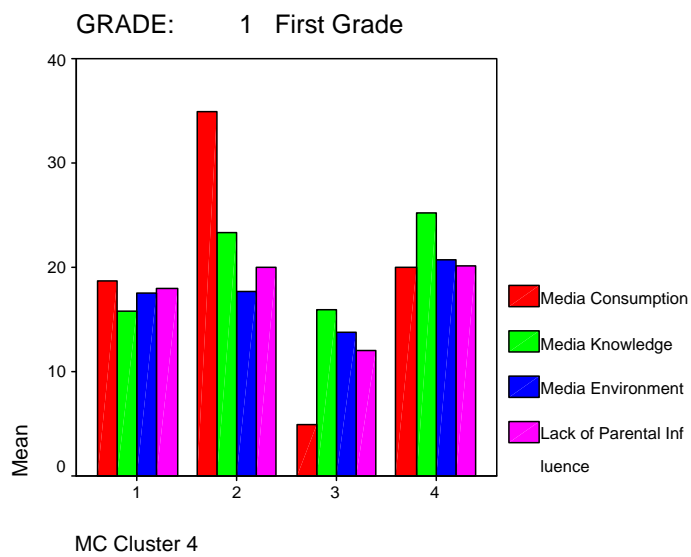


Figure 39

Mean Media Component Scores for a 3-Cluster Solution, Fifth Grade

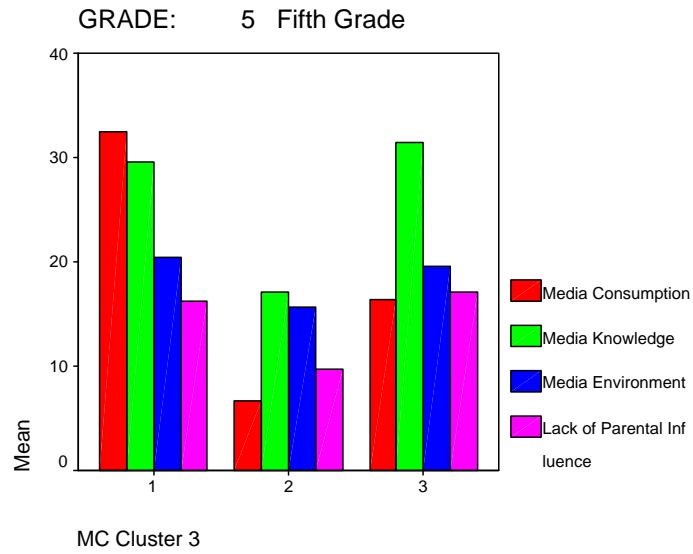
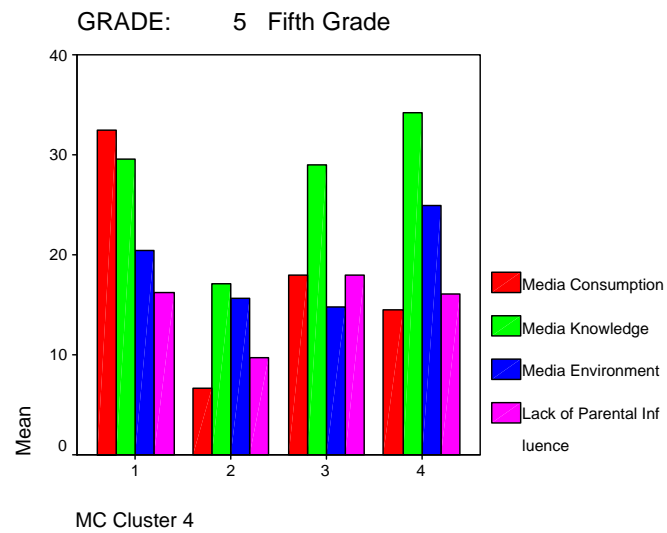


Figure 40

Mean Media Component Scores for a 4-Cluster Solution, Fifth Grade



Appendix E ANOVAs for Composite Scores

Table 121

ANOVA for the Composite Consumer Intelligence Score between Clusters, First Grade

ANOVA^a

Composite CI Score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	876.771	3	292.257	27.925	.000
Within Groups	366.306	35	10.466		
Total	1243.077	38			

a. Grade = First Grade

Table 122

ANOVA for the Composite Consumer Intelligence Score between Clusters, Fifth Grade

ANOVA^a

Composite CI Score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	393.577	3	131.192	17.415	.000
Within Groups	256.133	34	7.533		
Total	649.711	37			

a. Grade = Fifth Grade

Table 123

ANOVA for the Composite Media Score between Clusters, First Grade

ANOVA^a

Composite Media Score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	659.263	3	219.754	25.646	.000
Within Groups	299.904	35	8.569		
Total	959.168	38			

a. Grade = First Grade

Table 124

ANOVA for the Composite Media Score between Clusters, Fifth Grade

ANOVA^a

Composite Media Score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	486.456	3	162.152	40.682	.000
Within Groups	135.518	34	3.986		
Total	621.974	37			

a. Grade = Fifth Grade

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Vita

Suzanne Kalar was born in Buffalo, New York on December 19, 1967, the daughter of Catherine Patricia Hetzler and Robert James Hetzler. After completing her work at City Honors High School in Buffalo, New York in 1985 she entered GMI Engineering & Management Institute (now Kettering University) in Flint, Michigan. She received the degree of Bachelor of Science in Manufacturing Systems Engineering from GMI Engineering & Management Institute in 1990. From 1985 to 1988 she was employed by New Departure Hyatt, a division of General Motors, in Tonawanda, New York as an engineering co-op. From 1988 to 1995 she was employed by Cardiac Pacemakers, Inc. / Guidant Corporation in St. Paul, Minnesota, first as a process engineer and then as a manufacturing supervisor. She attended the University of Minnesota's Carlson School of Management from 1990 to 1994. She received the degree of Masters of Business Administration in 1994. In August of 1998 she entered the Graduate School of the University of Texas. She began teaching at St. Edward's University in Austin, Texas in the fall of 2003.

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