11-2010

Researching the Influence of Families Sharing Viewing Experiences on Motivation and Attention in the Classroom

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Researching the Influence of Families Sharing Viewing Experiences on Motivation and Attention in the Classroom

by

Jill Anne Albertson

Fall 2010

A thesis or project submitted to the Department of Education and Human Development of the State University of New York College at Brockport in partial fulfillment of the requirements for the degree of Master of Science in Education
Researching the Influence of Families Sharing Viewing Experiences on Motivation and Attention in the Classroom

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Chapter 1: Introduction

The freshman initiative program in the school where I work was developed to help students who have had negative or unproductive experiences in school that have adversely affected their achievement. There are many factors that affect their performance, including motivation, interest, past experiences in school, curriculum, and parental involvement to name a few. In my search to find ways to motivate and engage my students, I hope to involve the students in multi-media literacy experiences with their families to promote motivation in the classroom and provide opportunities for families to share multi-media literacy experiences in science. After providing a series of viewing opportunities to share and discuss at home, I observed how these family viewing experiences were shared in the classroom. I also surveyed both students and parents regarding their experience as it pertained to their emotional, social and educational perceptions of the viewing activities.

This problem is significant as it pertains to multiple aspects for student motivation and interest. Students perform better and enjoy a sense of pride and ownership when given a choice in their learning. Lyons (2003) considers a sense of autonomy a condition that supports motivation. This can be achieved by the teacher choosing what type of viewing experiences they can choose from that will best suit the learning goals, but students are allowed to choose the experiences in which they
are most interested. By giving them a choice of multi-media viewing experiences, they may take more interest in the topic.

Many of these students with limited academic success have low lexile scores. Lexile scores refer to a measurement of reading abilities based on the Lexile Framework for Reading (www.lexile.com), a nationally accepted scale designed to measure text and reading abilities. Lexile scores are a guide for choosing reading material at an instructional level that will not frustrate the reader because it is either too difficult, or bore the reader because the text is too elementary. The students were assessed for reading and comprehension levels using the Qualitative Reading Inventory (QRI) (Leslie & Caldwell, 2005) and the Read 180 software program (Hasselbring, 2009). The QRI is an informal reading inventory designed to provide diagnostic information about the conditions under which students can identify words and comprehend text successfully and the conditions that appear to result in unsuccessful word identification, decoding and comprehension. The Read 180 software program is an intervention program used by the school that addresses individual needs through differentiated instruction. These assessments have placed the majority of the students in the Freshman Initiative Program between a 5th and 7th grade reading level. Challenges like word identification, making inferences, and general background knowledge are areas that hinder their comprehension. The students generally score lower on informational text than on narratives. This may be because narratives tell a story that they may be able to make connections to, picture in their minds or use other comprehension tools that will help them to understand the
text. Informational texts present new information and vocabulary that is typically completely unfamiliar to the student. Students cannot make connections to topics when they have no experience in the subject. Science textbooks also have a high incidence of multisyllabic scientific terminology. These difficult to read and unfamiliar sounding words, as well as the students’ limited background knowledge make the high school textbooks extremely difficult for them to comprehend.

Offering students opportunities for viewing science topics with their parents may help students construct knowledge (http://tip.psychology.org/bruner.html). Theorists suggest that the constructivist theory helps students make meaning from their learning experiences. Roschelle looks at several constructivist theorists for ways to enhance learning. The constructivist theory as interpreted by Bruner suggests, “Learning is an active process in which learners construct new ideas or concepts based upon their current/past knowledge”. Bruner suggests that teachers should create experiences that engage students in actively making sense of concepts for themselves. Dewey supported the idea that we should provide experiences that support the process of inquiry that is providing students with the time, talk and tools to enhance their learning. Vygotsky suggests teachers provide social models of an appropriate activity and that new concepts will first appear socially and gradually become psychological. It is through social interaction that children can experiment with new concepts. Adults help to shape these experiences into a cultural practice that leads to the receipt of background knowledge. Offering students viewing opportunities that they can share and discuss with a parent or guardian will present
them with an alternative media that they may be more familiar with and therefore be more successful with constructing knowledge. Becoming more familiar with a topic will hopefully enable them to grasp the concepts in the classroom and become more motivated and interested in the topic. Background knowledge is critical to learning new material. Our students come from very different home lives culturally and economically. The diversity of their literacy experiences must be recognized to even attempt to level out the playing field. Owocki and Goodman (2002) state, “Arguably, one of the principal reasons poor and minority children fail more often in school is that they face the challenge of mastering the unfamiliar, while their more successful peers practice the familiar” (Murphy & Dudley-Marling, 2000, p.381). These viewing activities will expand their background knowledge through a media format of their choice.

The purpose of this study was to observe the students’ motivation and interest in a subject after sharing multi-media experiences in science with their parents/guardians. I also compared the parents’ and students’ perceptions of the experience as it pertained to emotion, comprehension, and relation to past-shared viewing experiences. I would like to see if a shared experience in science literacy reflected in their classroom participation and motivation. The questions I asked in this study were:

1) How do students and their parents perceive the importance of sharing family literacy experiences at home?
2) How do family viewing literacy experiences in science influence the student’s motivation and interest in the topic?

3) In what ways are the students making connections between home and school after sharing experiences in media literacy?

Definitions:

Family Literacy: Federal Definition of Family Literacy

The term "family literacy services" is defined in Section 9101(20) of the Elementary and Secondary Education Act (ESEA) of the No Child Left Behind Act (2001) as "services provided to participants on a voluntary basis that are of sufficient intensity in terms of hours, and of sufficient duration, to make sustainable changes in a family, and that integrates all of the following activities:

• Interactive literacy activities between parents and their children

• Training for parents regarding how to be the primary teacher for their children and full partners in the education of their children

• Parent literacy training that leads to economic self-sufficiency

• An age-appropriate education to prepare children for success in school and life experiences”. (http://www.ed.gov/policy/elsec/leg/esea02/pg107.html.)

Multi-media literacy:

“Multimedia literacy is a new aspect of literacy that is being recognized as technology expands the way people communicate. The concept of literacy emerged as
a measure of the ability to read and write” (Daley, 2003, p. 33). Today’s media opportunities include a much more diverse array of literacy experiences. Media literacy is therefore more of a challenge to function in today’s society within cultural norms of media availability. Multimedia is media that offers many forms to convey information. Some of these forms include but are not limited to Internet sites, films, television programming, and documentaries.

**Motivation:** The “inner drive, impulse, incentive, goal to be reached and intention that causes a person to act in a certain way” (Neufeldt, 1988).

There are two main kinds of motivation: intrinsic and extrinsic. Intrinsic motivation is internal. It occurs when people are compelled to do something out of pleasure, importance, or desire. Extrinsic motivation occurs when external factors compel the person to do something (Lyons, 2003).

**Conclusion:**

This is a qualitative study. I explored how sharing science literacy viewing experiences influenced the student’s motivation and interest in the classroom. The methods I used will address the parent and student perceptions of shared literacy experiences as well as observations of the student’s motivation and interest in science after watching science related topics at home with their parent(s). A questionnaire was given before and after the shared experiences to see how their perceptions changed as they shared multiple experiences.
Chapter 2: Literature Review

Introduction

Engaging and motivating students in literacy experiences lies in part in their interest in the subject and whether or not they find these experiences important. Today’s students have literacy opportunities that were not available to past generations of learners. Today’s media and media literacy experiences are emerging with new and innovative productions that tend to engage and motivate students to attempt new learning experiences. Struggling students may find that computer software, television programming, surfing the Internet, or viewing DVDs hold their interest and motivate them to learn new material.

Motivation comes from both extrinsic and intrinsic sources. Learners will be more receptive to new experiences if they associate these experiences with a positive emotional experience and deem it important to their lives. Studies of brain function show that there are mechanisms in the brain that associate positive emotional experiences with positive learning experiences. The sharing of positive literacy experiences helps support learning through dialogue with adults and peers (Lyons, 2003).

It is through these shared experiences that families can help support their student’s learning. Family literacy programs have been in the forefront of government studies for over twenty years (Caspe, 2003). Many programs have come and gone as the particulars of what makes up a successful program evolves. One important point
remains constant; and that is how important it is that parents are involved and show interest in their child’s learning.

It is the purpose of this study to explore how students sharing media literacy experiences with parents influences students’ motivation and interest in science. I will also analyze the parents’ and child’s perceptions and feeling associated with these experiences. I hope to see how it may impact the child’s participation in the classroom and his or her making connections between home and school.

The literature review will explore what media literacy is and why it is important to include this form of literacy in our curricula. Multi-media literacy experiences are a tool to promote motivation in reluctant learners. The section on motivation looks at how the brain functions in terms of motivating factors such as emotion and interest. Lastly, research is presented regarding the influence of sharing family literacy experiences. Family literacy has become a hot topic in the last twenty years. Motivation and self-efficacy have been shown to improve when families share literacy experiences and use dialogue to reflect on these experiences.

**Media Literacy**

In 2003, Alvermann, Swafford and Montero offered this definition of media literacy from The Alliance for a Media Literate America (AMLA):

Media literacy empowers people to be both critical thinkers and creative producers of an increasingly wide range of messages using image, language, and sound. It is the skillful application of literacy skills to media and technology messages (http://www.amedialiteramerica.org).
The term media literacy refers to our ability to think critically about the information that is projected on us in a wide variety of formats. Today’s information and entertainment technology provides us with a combination of words and images that we have to sort through to interpret what they mean to us as individuals. The Aspen Media Literacy Leadership Institute (1993) states that media literacy is the “...ability to access analyze, evaluate and create media in a variety of forms” (Hobbs, 2001, para. 1). In analyzing media one needs to think critically, that is, to be able to ask the right questions about what is being experienced. Media is all around us and just about everything we see on television, the Internet or the movies is trying to change our perceptions, beliefs and attitudes. Students need to be taught to interpret these signals and patterns of information in order to glean factual information from the image or presentation. They need to recognize what is imbedded in what they are watching and how it is meant to persuade or change their point of view.

Media literacy is important because of the ever-changing ways in which we view the world, receive information and seek entertainment (Seglem & Witte, 2009). We are deluged with information and entertainment-based images and productions. Our students need to be aware of the sources from which they attain their viewing experiences. Are these sources commercial, educational, government subsidized? And what does each of these sources bring to the underlying meaning of their work? Knowing who the author or producer of the material is can aid a student in determining its credibility. Not only do students need to be able think critically in
deciphering the messages they receive, but it is imperative that they are also able to construct the messages of a multimedia culture in a variety of forms.

A component of media literacy is visual literacy. Debes (1969) suggests that visual literacy can be described as the ability for someone to discriminate and interpret the visuals encountered in the environment as fundamental learning (Seglem & Witte, 2009). Seglen and Witte (2009) offer that in “...helping students to understand the diversity of print and non-print texts as well as the visual connections that can be made between them is a practical way to connect concrete and abstract thinking of students who struggle to make meaning from text” (p. 216). Some students have difficulties visualizing what they are reading. Visualizing allows the student to see a picture in their head that will help them to make meaning of what they are reading. Incorporating visual literacy experiences can help them to make that leap and augment their background knowledge.

Multimedia literacy has become a social need and a part of our culture. If this is so, then as prescribed by the social constructivist theories of Vygotsky, we owe it to our students to promote what has become acculturated to help them to decipher the world around them. Gee suggests, “…if the culture teens are immersed in revolves around the visual and the media, their minds recognize the patterns created by these images, creating a persuasive argument for incorporating these patterns within the classroom” (Seglem & Witte, 2009, p. 222).

Our students have a whole world of media experiences available to them. Today’s students have a wider array of informational opportunities than any other
generation has experienced. Television programming, DVDs, and the Internet are available to most every student whether they are able to have these viewing opportunities at home, the local library or at school, their opportunities can encompass recreational and educational experiences.

A variety of informational experiences are strategic in keeping students interested and motivated. Walker (2009) addresses the challenge of teachers meeting the needs of today’s students using technology while employing the media that is of interest to the students. Our students spend their personal time on blogs and social networks such as Facebook and MySpace. They scroll Youtube for topics of interest and are able to view videos for information and recreation on the Internet and on their home DVD or VHS players. With the hundreds of television channels available to cable and satellite owners, our students can watch programming for recreation and information. Networks such as the History Channel and National Geographic offer programming that is informative and produced so that it is engaging for a wide variety of viewers. Educators need to tap into these media experiences to initiate higher levels of engagement.

Routman (2000) discusses the implication of technology and learning in today’s society. She voices her concerns that technology and media will replace the written word, thus reducing the quality of research and the ability of students to analyze and interpret informational text. She does agree that with technology, information on any topic is available at our fingertips and that students have more opportunities to expand their informational literacy. She understands that through
these media experiences "students are highly motivated to read, write, publish, and inquire" (p. 501). Motivation is critical to a student's success. As teachers we need to be comfortable with utilizing a wide variety of media experiences to keep our students engaged and motivated. Many Internet sites for cultural, historic and scientific information are given in her resource section of her book. She also lists favorite videos produced to help expand student's knowledge as well as initiate critical thinking.

Websites such as

www.exploratorium.edu/IF1/resources/lifescienceinquiry.html offer inquiry-based opportunities for students to explore. Links such as North American Association for Environmental Education (http://www.naaee.org/ee-link) offer activities such as Worm Worlds where students can engage in the study of worms living in their own backyard. Many zoos have web cams that allow children to experience live the habits of exotic animals in captivity. The opportunities are vast and of great interest to students who may not ever have the opportunity to partake in this type of experience in person.

One definition of media literacy is the ability to access, analyze, evaluate, and communicate messages in a wide variety of forms (Hobbs, 1998). It is imperative that our students learn about media literacy in school. With the plethora of information available, they need to be able to sift through this information to find out what is credible as well as being able to evaluate and integrate their experiences into their academic work. Hobbs relates the problems that many critics, including public health
officials, identify with media exposure. The media often portrays situations with undue violence, unhealthy lifestyle choices, including nutrition and body image. In order to make their viewing experience more marketable, they incorporate risky behaviors, stereotyping and bias in their productions. Hobbs notes that by providing media literacy in our schools, our students can learn to protect themselves from the extreme or exaggerated situations that may be portrayed. She considers the possibility that the students’ first curriculum is their home viewing and personal media consumption experience.

In my study, I hope to be able to see what influence providing home-viewing experiences in a format students find enjoyable, has on their motivation and interest. By incorporating media literacy, specifically viewing media, I hope students will be able to better visualize the topics encountered in Earth Science and relate them to what they may have already experienced. Watching science programming using various media may promote critical thinking. By watching unfamiliar topics in a format that is familiar, may provide the link between these experiences and classroom topics. These experiences tie into the teen culture of multi media information and entertainment sources available to them. By incorporating these opportunities, the students may find a culturally acceptable format to share their knowledge and tie it into what they are learning in the classroom.

Motivation

How do we motivate our students? What is it that gets them excited about what we are teaching? And where does that desire or excitement stem from? Some
students have a desire to learn and do well. Other students do not have that internal 
desire to learn what you are trying to teach. Research shows that there are different 
types of motivation as well as motivating factors. Largely, students will be motivated 
to learn if they can see themselves as successful in learning, take interest in the topic 
and can associate positive feelings with learning. Studies of the brain can identify the 
neurological activity that happens when a student is attentive and how their emotions 
affect motivation.

“Motivation is based on emotion...by building children's intrinsic 
motivation, we can turn indifference...into total engagement” (Fountas & Pinnell, 

Fountas and Pinnell (2009) discuss their findings regarding attention and memory, 
and emotion and motivation to support successful learning experiences. They state 
that students need repeated successful experiences to build self-efficacy.

Motivation is what gets you up in the morning. It is the excitement or desire to 
reach a goal, whether it is to get up and eat breakfast or learn a new concept in the 
classroom. There has to be some reason for performing the task that makes the action 
enjoyable or rewarding. Motivation is said to come in different forms: extrinsic or 
intrinsic. Extrinsic motivation comes in the form of material rewards for an expected 
behavior. Intrinsic motivation is something that meets the students needs and rewards 
them without material benefit. “Extrinsic motivators may be powerful and work for 
short periods of time”(Rogers, et al., 1999, p. 10). Short term, students may feel 
smart or capable and valued as part of the group. In the long run, Rogers et al, suggest
that intrinsic motivation is what drives a student to succeed. If they feel the activity will not meet their basic needs of feeling safe, accepted and valued, they will not be motivated to learn. Vygotsky’s theories of learning lend to the belief that behavioral motivation is extrinsic, a person responds to the experience and whether they find it a positive or negative experience. However, he sees cognitive development as intrinsically motivated. Social constructivists find motivation to be influenced by both extrinsic and intrinsic factors. In social constructivism, learning is a social phenomenon, therefore the learner is motivated by the reward of being a part of the learning community as well as the learner’s drive to seek knowledge (Vygotsky, 1978).

Self-efficacy is the belief that one is capable of performing in a certain manner to attain certain goals (Fountas & Pinnell, 2009). So many of our students feel that because of past negative experiences that they will never be able to be successful in achieving the goals set for them by their teachers. One strategy that Fountas and Pinnell (2009) suggest to support these apprehensive students is to reinforce effective behaviors. Whenever the student performs in a way that will support his or her learning, we as teachers need to give the student the positive reinforcement he needs to feel that he is capable of attaining these goals.

One way to support this is to engage students with an activity or experience that they deem familiar. New learning experiences are easier to grasp if they are presented in a way that seems familiar (Fountas & Pinnell, 2009). Educational television programming uses this concept by introducing and promoting characters
that the children can relate to and enjoy. When these characters approach educational topics, children enjoy the experience because they may be familiar with the approach and character; therefore the topic is not as intimidating to them. Repeating these experiences enhances the familiarity of the activity and supports their learning.

Background knowledge is another aspect of learning that affects motivation. When students are presented unfamiliar material or concepts, they may be afraid to tackle the challenge. Helping them to make connections to what they may already know eases the transition from the unfamiliar to the familiar. This study was designed to offer experiences that they deem familiar, such as watching television programming, Internet viewing, or watching films. Offering these science literacy experiences to watch with their parents may promote familiarity with the topic in the classroom as well as giving them a safe and comfortable environment that they may connect to. “Recent brain research tells us that when people do not feel safe there is an actual shift in how the brain functions” (Rogers, Ludington & Graham, 1999, p. 7). One way for a student to feel safe is to allow the student to participate without feeling embarrassed because he is unfamiliar with the topic. Teaching the unfamiliar through the familiar aids students to be able to make connections to experiences that they already know enhancing their learning experience (Rogers, et al., 1999). Familiarity breeds success. Students will tend to repeat experiences that they feel they can perform successfully.

When we consider how we can motivate our students, we should consider the neurological activity that supports motivation and attention. Lyons (2003) discusses
how the brain works and how children's emotions are connected with brain function as it pertains to their attention and motivation. When a student is faced with a new concept, the information is categorized as to whether it is important to remember or associated with a positive experience. Part of the brainstem, the reticular activating system (RAS) is essential to function in our everyday life. The importance and level of interest of a new experience is not only critical in learning but in sustaining life. The RAS serves as a trap door. If the new information is not deemed important or interesting, the trap door stays closed, but if the information is associated with a pleasurable experience and found important, then the trap door opens and lets the information in for processing. Providing students with new information in a pleasurable format or environment helps to ensure that the RAS trap door opens and new information is received, stored in memory and processed. Memories of the positive and negative emotional reactions will direct and dictate how individuals respond. Learning cannot happen without motivation, and these emotional reactions based on past experiences are an integral component of the learning process.

Lyons (2003) looks at emotion, memory, and learning. She discusses the importance of the amygdala, a site of basic emotion memory, as imperative to learning. “The amygdala catalogues, files, and stores emotional information and determines if it is emotionally important for long-term storage” (2003, p. 63). There are some emotional responses that happen without our being aware of them. They have been ingrained in us from past experiences. The amygdala brands our experiences with emotions that label them on their scale of perceived importance.
Previous experiences are associated with the emotions that were experienced with them. If a learning experience is perceived as unimportant or associated with a negative experience, the brain will not categorize this new experience as interesting or important enough to store in memory.

This study includes the component of student choice to promote motivation. The students are given the choice to view one of many viewing opportunities within the Earth science curriculum. These choices range from viewing opportunities that relate to weather, astronomy, Earth history, geology, geography, and current issues such as global warming. Rogers et al. (1999) suggest that people like choices and that the teacher should plan deliberately to promote student choice. In offering students the choice in their viewing experiences, students will take more interest in their assignment. Routman offers that in her experience “children had a greater interest in their work” (2000, p. 163). The viewing opportunities were chosen to guide the students to keep the experiences within the students’ areas of interest, yet offer them meaningful choices that would support the curriculum. People have a basic need to feel free and independent (Glasser, 1990). If students feel this need is not being met, there may be a loss of motivation to learn.

Motivating students has always been a challenge. Teachers need to notice if their students are intrinsically or extrinsically motivated. They need to take into account how the child feels about themselves and how that affects their learning. They also need to be sure to provide a safe environment where the child can experiment and explore without fear of looking inferior. A student’s emotional
experiences tie in here; if they have experienced negative emotions in past learning experiences then they may perceive new learning experiences will also offer them a negative experience. This may hinder their ability to store new experiences to memory.

**Family Literacy Experiences**

Talking about shared experiences supports learning. When parents, teachers, or peers share their understanding and thoughts about a shared experience, different perspectives are shared as well as new questions asked. “The meaningful talk that surrounds every literacy activity is interesting, enjoyable, and highly motivating for students”(Fountas & Pinnell, 2009, p. 491). John Dewey, an American philosopher, psychologist, and educational reformer, believed shared experiences supported learning. He believed that you should socially expand children’s experiences and that the interaction associated with these shared experiences helped to solve their common problems (Ornstein & Levine, p. 123).

For over 20 years, educational policies have promoted family literacy programs in schools and community-based organizations. Family literacy appears in the Elementary and Secondary Education Act, Reading Excellence Act, Workforce Investment Act, Community Services Block Grant Act, and the Head Start Act (National Center for Family Literacy, 2002). The ideals of what a strong family literacy program looks like, how it should function and what areas are most pertinent change from year to year and vary with the agency that is defining it. Because literacy
can mean different things to different people, family literacy can also take on multiple connotations. However, there are major themes that resound and this study will explore several of these themes.

Caspe (2003) looks at several principles that should be a part of family literacy experiences. Several of the principles will be discussed as they pertain to this study:

- Belief that literacy is acquired through shared dialogue, where learners are actively contributing to their own learning.
- Provide opportunities for adults and children to reflect on literacy practices in their daily lives.
- Grow out of needs of participants and examine resources in a socio-cultural context.
- Respond to the interests of adults and children.
- Document their experiences and learn from them (Emerging Principles for Family Literacy Programs, 2003, para. 1).

The belief that literacy is acquired though shared dialogue reflects Dewey’s philosophy of the importance of shared learning (Ornstein & Levine, 2000) as well as Fountas and Pinnells’ (2009) discussion of how shared talk promotes interest and motivation while learning a new subject. This ties into the next principle that through dialogue families will have opportunities for reflection about these experiences. These opportunities may or may not be a part of how they share experiences. It is
through this reflection process that adults may learn the perspectives and emotions that their children associate with an experience. Children may understand the experience better if they see it through the adult’s eyes. The adults can bring in their past experiences associated with the new learning experience with characters or events that the child may find familiar. It is important to establish the needs and interests of adults and children. As suggested earlier, if the experiences are not deemed important or interesting to the learner, the reticular activating system (RAS) will not accept the information and the learner will not be motivated to engage in the opportunity. Lastly, documenting the experiences for analysis and interpretation is pertinent to the study as it is through this documentation that we may find patterns; discover new interests and avenues to support family literacy experiences.

Providing experiences for adults and children to reflect on literacy experiences in their daily lives can be a challenge (Canter, 2001). Opportunities for viewing science literacy media can be rewarding and worthwhile for the student as well as the parent. Many parents do not know how to help their children with their homework or how to guide them in reflection regarding their schoolwork. Home and work responsibilities often take precedence over their children’s school responsibilities. It can be frustrating and inconvenient for a parent to come home and find out that their child has an assignment due that requires parental support. Providing parents with a schedule of multiple viewing experiences on a weekly basis may give them the notice they need to be successful in supporting their child in their science literacy viewing experiences. Television and Internet sites may be familiar to both parent and child.
They can support each other in their viewing experiences and share their interpretations of these experiences in a relaxed home environment. Parents won’t have to try to figure out what it is that is required of them; they can enjoy the opportunity to take the time to share a science literacy experience with their child without worrying about whether or not they have the right answers. By giving them the schedule of weekly viewing opportunities with choices of formats and topics, parents and their child will have the choice to choose a convenient literacy experience that responds to their interests and time constraints.

Canter (2001) cites a United States Department of Education study that concludes, “the family is critical to success in school”, and that the “curriculum of the home is twice as predictive of academic learning as socioeconomic status” (p. 5).

A study by Joyce Epstein (2006) of John Hopkins University showed that when …parents were involved there were positive changes in student achievement. Students themselves stated that they had a more positive attitude toward school. If the parent is too busy or uninterested in their child’s academics, it sends the child the message to the child that their academic success is not important enough for them to spend the time needed to support their child (p. 10).

Lev Vygotsky, a socio-cultural theorist believed that social interactions change a child’s thoughts and behaviors as well as increases knowledge (Kids Development (UK) on Vygotsky & Socio-Cultural Theory, n.d.). Children need to be given the tools they need to succeed. Interacting with their parents in an informal setting watching science programming may help the child to learn and take an interest
in a topic outside of the typical format of a question and answer homework worksheet. According to Vygotsky, "Every function in the child’s cultural development appears twice: first, on the social level and, later on, on the individual level...This applies equally to voluntary attention, to logical memory, and to the formation of concepts” (p. 57).

Jean Lave (1988) takes Vygotsky’s Socio-Cultural theory a bit further by suggesting that situated learning is a function of the activity, context and culture in which it occur. Situated learning is critical for motivation and involvement. Learners can sit comfortably on the outside of the learning experience, then, over time and experience become actively engaged as they accept the new activity or concept as a cultural practice. These learning experiences are usually unintentional. In my study, the students are viewing Science literacy television programming, viewing Internet sites or watching videos with their parents. These opportunities may motivate them to take greater interest in the Science topics when they deem their experience as a culturally acceptable practice within their family unit.

It is my hope that by offering family literacy opportunities through multiple media viewing experiences, my students will become more interested and motivated in the classroom. Family literacy experiences should include the element of student choice. Student choice will dictate which of the prescribed experiences they will share with their families. With today’s hectic lifestyles many families do not have the opportunity to partake in family literacy experiences. Offering a variety of experiences that are not individually time consuming or outside their comfort zone
may promote continued enjoyment of these experiences. These viewing experiences may help to enhance their background knowledge in the subject and promote interaction with their peers and the learning community. From a socio-cultural aspect, the viewing experiences are meant to be enjoyed as a family with shared dialogue. By sharing dialogue, the student may feel that the parent is taking interest in what they are doing, thus making the experience seem more important. My analysis of their interactions will provide insight into the feelings and perceptions of the topics and of their shared experiences. These feelings and perceptions may or may not present themselves in the classroom. I will be watching closely for any type of behaviors and interactions that may show a change in their motivation and interest in the topics covered in their Earth Science classroom.
Chapter 3: Methodology

The methods outlined in this chapter will address the questions I have pertaining to how students and their parents perceive the importance of sharing family literacy experiences at home. The research looks at how family literacy experiences in science influence the student’s motivation and interest in the topic. In what ways are the students making connections between home and school with regard to shared family literacy experiences? My research questions are:

1) How do students and their parents perceive the importance of sharing family literacy experiences at home?

2) How do family viewing literacy experiences in science influence the student’s motivation and interest in the topic?

3) In what ways are the students making connections between home and school after sharing experiences in media literacy?

Participants

The students are enrolled in a high school in western NY, where 40.8% of the population is considered economically disadvantaged (www.schoolmatters.com). The school district is in a rural, western New York farming community. According to the 2000 US Census, the district encompasses 200 square miles with approximately 2500 students. There are approximately 200 students in the 9th grade. Student population
consists of 8.1% African-American, 7.2% Hispanic, 82.5% from European descent, 1.1% Asian and 1.1% American Indian.

The county, as of the 2000 census, has 43,387 residents, of which 76% are high school graduates. Only 13% of the population has a bachelor's degree or higher level of education. The average per capita income is $16,457 (US Census Bureau, 2000).

The students selected for participation in the study are in the 9th grade, age level between 14 and 16 years of age. The students meet every other day, first block of the school day, which starts at 7:45 and ends at 9:24 AM. The class runs for forty weeks with topics ranging from astronomy, geology, meteorology, and geography. There are 28 students; sixteen female and twelve male students who were asked to participate in the study. Of the 28 students, two are Hispanic; there are two African American females, and five special education inclusion students.

The classroom where these students receive science instruction is located on the 2nd floor of the high school in what is classified as the science wing. The room is a lab room with seating for 24 students. The front of the room has a lab counter for teacher displays with white boards on the front wall. The room is equipped with 10 student computers and one teacher computer. There is a television mounted in a corner of the classroom for science viewing opportunities. A bank of five windows covers the back wall. There are three sinks and counter space to put together laboratory materials. The students are seated at four long laboratory tables that can accommodate six students per row. The walls are lined with storage cabinets, which
leave very little room to post announcements or show student work. Many of the
students’ questions become answer posters created by the students to share with their
fellow classmates. These graphic displays are mounted on the cabinet doors and
recycled as new questions are asked and answered.

The participants were selected from those students who were chosen to be
involved in the Freshman Initiative program. The program was designed to assist
students who the district deem at risk of failing the New York State Regents exams or
who are at risk of dropping out of school due to academic difficulties or student
behavioral issues. The majority of the students have had a history of low academic
achievement; the majority of them come from low-income homes. The students were
chosen by a group of administrators who looked at their behavioral records, their
achievement scores, and their level of engagement in curricular and extra-curricular
activities. A letter was sent home explaining the purpose of the study to this group of
students (See Appendix A). The parents were asked if they would be willing to
participate in the study to investigate family-based science literacy experiences and
the possible influence these experiences have on student interest and motivation.

Materials

The materials used in this study consist of two questionnaires. The first
questionnaire addressed family viewing experiences, such as television, movies and
the Internet (See Appendix B). The questionnaire addressed who shares these
experiences, what kind of programming is watched and what kinds of interactions
they have before, during and after the experience. The questionnaire was developed
with the help of a fellow graduate student who was studying the influence of parental involvement on children’s literacy experiences. I also took suggestions from the department chairperson who helped me focus what I was asking to best reflect the research questions, particularly question #1: *How do students and their parents perceive the importance of sharing family literacy experiences at home?* I developed the first questionnaire to become more familiar with the participating families’ typical viewing practices. Such as what they watch at home, who shares these experiences, interactions the family has before, during, and after the experience; and whether these interactions enhanced their enjoyment or understanding of the program watched. I also wanted to see whom they typically shared these viewing experiences with. The first questionnaire was developed to get a better understanding of the participant’s family unit and to get a feel for their perception of the importance and level of enjoyment they attached to sharing educational viewing experiences.

The second questionnaire was given after the families participated in a science literacy viewing experience at home (See Appendix C). The questionnaire was developed with the assistance of the same research partner as well as the suggestions from the department chairperson. This activity consisted of viewing a science program addressing a current topic being studied in the student’s science classroom. The questionnaire that followed somewhat mirrored the first questionnaire. In the first questionnaire I wanted to see what the family’s typical viewing experiences looked like. In the second questionnaire, similarly formatted questions asked about the actual experience. First, I wanted to see how different their typical viewing experiences
were from the actual. I wanted to see if their reactions changed over time and how they changed, such as did they find the experiences more or less enjoyable, were they choosing various formats for viewing opportunities, and did the people sharing the viewing experiences vary? I wondered what kind of conversations were going on during this experience, were they about the topic, or was this time spent on other family issues?

Other materials included the availability of television, cable access, and computers with Internet access, and DVD player in the participants’ homes. Not all families have available to them all the different types of electronic equipment and services required for viewing. I offered a variety of viewing choices to accommodate for the availability of electronic devices and services in the home.

Movies such as *An Inconvenient Truth* (Bender, Burns, David & Guggenheim, 2006) were provided for Science literacy opportunities. I chose from a variety of websites with an educational focus such as the NASA and National Geographic, History Channel and Weather Channel websites. Television programming was selected from the available options when the research proposal was approved. Television programming offered for viewing came from channels such as The Weather Channel, National Geographic, and the History Channel. Programs chosen from The Weather Channel included: *Storm Stories* (http://stormstories.com), *Full Force Nature* (http://www.weather.com/tv/programs/FFN.html), *Weather Proof* (http://www.weather.com/tv/programs/weatherproof.html), *Cantore Stories* (http://www.weather.com/tv/programs/CantoreStories.html). Viewing opportunities
from National Geographic included *Hawking’s Universe*
(http://channel.nationalgeographic.com/series/naked-science/3898/Overview), *Naked Science: Hubble’s Amazing Universe*
(http://channel.nationalgeographic.com/series/naked-science/3636/Overview), *A Traveler’s Guide to the Planets: Mars; Venus and Mercury; Neptune and Venus; and Pluto and Beyond* (http://www.portaltotheuniverse.org/blogs/posts/view/45907/), *Naked Science: Preventing Armageddon*
(http://channel.nationalgeographic.com/series/naked-science/4277/Overview), *Naked Science: Earth’s Invisible Shield*
(http://channel.nationalgeographic.com/series/naked-science/3838/Overview), and *Journey to the Edge of the Universe*
atoms.html), and *Meteorite Men* (http://www.meteoritemen.com/). Programming was typed up on a weekly schedule and distributed to the students with viewing options ranging from 3:00 PM to 9:00 PM on weekdays and from 10:00 AM to 9:00 PM on weekends. The programming availability varied on a weekly basis (See Appendix D).

**Procedure**

Students were chosen based on their placement in the Freshman Initiative program, their interest and their parent's willingness to participate in the study. The students along with their families shared the science literacy experience of viewing scientific television programming, DVD, or a science topic on the Internet.

First, the parents were surveyed to assess which families would actually participate with their children. The parents had to agree to watch these assignments, discuss them with their students and complete a questionnaire before and after viewing pertaining to how they interacted with their child and the significance of the experience. There were six families who agreed to participate. From the six families, there were five male students and one female student. One of the males in the study lives in a home where Spanish is the predominant language. The students are between the ages of fourteen and sixteen and are in the ninth grade. Four of the male students live in single parent homes with their mothers. These four students receive free or reduced lunches, which reveals their families are at or near the poverty level.

The students selected from a variety of Earth science based viewing opportunities to share with their families. They chose from television programming, DVDs, or Internet sites. Over the course of the study, they were asked to watch at two
to three different programs and respond to the experience by completing the questionnaires before and after each experience. Parents and students completed the questionnaires together.

Later the students were observed in the classroom to see how the home experience might bridge to their classroom motivation and interest. I used a basic T-chart with the actual observations I made on the left side of the chart and my interpretations of their behavior on the right side of the chart (See Appendix E). During the observations I was looking for conversations with other students where they were talking about the viewing experiences. I looked for any references they may have made to a program they watched as it pertained to the topic in the classroom. I hoped to see them make connections between what they’ve watched at home and new material in the classroom. I looked to see if their interest in the topics was enhanced because of their prior knowledge of the topic, and if they decided to share that knowledge. Any sharing of the experiences was documented and analyzed as to how it may influence their motivation and interest in the classroom. These students were in the classroom every other day from 7:45 to 9:15 AM. I made my observations daily for five weeks during this time period. There were not reportable behaviors on a daily basis. The behaviors were observed mostly during note taking, when we discuss the topics prior to a laboratory experiment. They were also observed and reported during the time when they worked cooperatively with others on the laboratory experiments.
The study began as soon as the Institutional Review Board (IRB) at SUNY Brockport gave approval and letters of assent had been returned. The study took place over the course of five weeks. Analysis of the findings took four weeks after the research was completed.

**Limitations**

A possible limitation to this study was the willingness of parents to participate. There seems to be a trend of decreasing parental involvement in educational experiences as the child progresses through their school years (Gonzalez-DeHass & Willems, 2003). Another possible limitation was the availability of computers, Internet access, cable access, and/or DVD players that were necessary to watch the science programs chosen for the family literacy activity. The last part of the study was for me to observe what kind of connections the child was making between home and school experiences and if it influenced his motivation and interest. The timing of when the letters of assent were sent seemed to have an effect on the initial responses and acceptance to participate in the study. The letters were sent at the end of January, as soon as the IRB gave the project approval. Letters requesting assent were sent out the first week of February. The following week was the students’ February break. When the students returned to school, many had forgotten to bring in their letters. A second round of letters were sent out later in February with still a limited number of students responding to agree to be a part of the study.

**Data Analysis**
The questionnaires were analyzed for similarities in topics of interest and common viewing experiences among the participating families. I also tracked similarities and differences with whom the experiences were shared, such as siblings or friends. Furthermore, I looked at what kind of interactions the family had before, during and after the viewing experiences. The information from these questionnaires was coded to provide any emerging trends or similarities in shared viewing experiences. I looked at each family’s responses for similarities and differences across the viewing experiences. I then compared them with the responses from the other families to see if there were any trends in the data. Informal observations in the classroom were analyzed as they pertained to the student’s interest and motivation. I looked closely at whether or not they shared these home experiences in the classroom and how they shared them. How they shared this experience with their friends, the teacher, or the whole classroom was triangulated with their classroom participation and motivation.

The questionnaires were reviewed to see how they pertained to my research questions. The questionnaires were mainly about the types of viewing experiences and the participants’ perception of the importance that the viewing experience had on their understanding and enjoyment of the activity. I looked at both questionnaires to provide evidence for the first research question:

1) How do students and their parents perceive the importance of sharing family literacy experiences at home?
I compared the responses from the first questionnaire, which was done prior to the first viewing experience, to the responses from the second questionnaire, which was completed after each viewing experience. I looked for changes within each family’s perceptions, the kinds of responses they gave and how each family compared to the other five families. The kinds of responses they submitted helped me to better understand the importance they attached to these experiences and why they felt the way they did. I looked to see if their perceptions changed over time as they shared more viewing experiences together.

The informal observations were analyzed to answer research questions two and three:

2) How do family viewing literacy experiences in science influence the student’s motivation and interest in the topic?

3) In what ways are the students making connections between home and school after sharing experiences in media literacy?

I coded the types of behaviors I witnessed by when and with whom they shared information from the viewing opportunities. I coded the behaviors for when they shared new information with the class, during note taking. Observations were also coded for sharing with their lab partners, questioning new topics by comparing with their interpretations and misunderstandings of viewing experiences. I recorded several quotes that exemplified their interactions and provided insights into how it affected their motivation and interest.
Many of the observations were of the students sharing new information. I observed whether or not they made reference to sharing the experiences with family members. When the student did share that the viewing experience was with a family member, I noted whom they shared this with (lab partner or whole classroom) and which family member they said they shared it with. This helps to answer the third question in what ways are students making home connections as well as the first question about the importance of sharing these experiences with family members.
Chapter 4: Analysis of Data

Purpose

The purpose of this study was to observe the students’ motivation and interest in a subject after sharing multi-media experiences in science with their parents/guardians. I also compared the parents’ and students’ perceptions of the experience as it pertained to emotion, comprehension, and relation to past, shared viewing experiences. I wanted to see if a shared experience in science literacy reflected in their classroom participation and motivation. The questions I asked in this study were:

Research Questions:

1) How do students and their parents perceive the importance of sharing family literacy experiences at home?

2) How do family viewing literacy experiences in science influence the student’s motivation and interest in the topic?

3) In what ways are the students making connections between home and school after sharing experiences in media literacy?

Findings and Interpretations:
While interpreting the questionnaires and my observations, I found many interesting connections to my research questions. The students started out feeling that this was another assignment, another chore to endure. The experiences turned out to be mostly positive. The ensuing interactions I observed seemed to spur conversations around the topics in the curriculum. Interactions and questionnaire responses promoted the idea that these viewing experiences supported their understanding, interest, and motivation to participate in classroom discussions about Earth science. Private conversations also suggest that the viewing experiences were integral in their interest and motivation.

Research Question 1: How do students and their parents perceive the importance of sharing family literacy experiences at home?

Questionnaires

The first questionnaire was developed to gain an understanding of each family’s typical viewing experiences and how each family interacted during the experience. The first three questions on the questionnaire addressed what shows they usually watch, whom they watch the with, and what genre was typical in their viewing experiences. The last two of the five questions asked what they would typically talk about and whether or not the verbal exchange aided their understanding or overall enjoyment of the experience. All of the families involved included comedy as a viewing experience that they frequently enjoy. Four of the six families included reality programs as something that they enjoy. Questionnaire #1 can be found in appendix B. Actual responses to questionnaire #1 can be found in appendix E: Table
2, Synopsis of Responses with the first question coded as Q1, second question coded as Q2, and so on.

Other genres included music, action, adventure, drama, and sports. When asked about their educational programs that they watch, four of the six included shows about animals, three included the History Channel, three included the Discovery Channel, and three included National Geographic. Three families also stated they watched the news. When asked about the venue with which they share viewing opportunities, six of the six families included watching television, five of the six included watching movies, and one family included Internet viewing.

On the first questionnaire, which was a preliminary survey of typical viewing practices, when asked what they talked about during the viewing experience, three of the six participants said that they would predict what was going to happen, three also said they talked about what was going on during the viewing. After the viewing, three of the six said that they would share with each other their favorite parts of the viewing experience. While the answers did not directly respond to whether or not the family deemed the experience of sharing family literacy experiences at home important, five of the six participants stated that sharing the viewing experience helped them to better enjoy the show. Four of the six participants stated that sharing the experience helped them to understand what they saw. One family stated that sharing the experience added to their enjoyment or understanding only if they found it interesting. Their responses seemed to reflect that sharing viewing experiences enhanced the enjoyment and understanding of the activity (see Tables 2.1, 2.2, 2.3).
Each family completed three after-viewing questionnaires, with the exception of one family, who only completed two questionnaires. Ten of the 17 responses to the question “How did sharing and talking about the viewing experience add to your enjoyment or understanding” stated that it helped them in their understanding of the topic. Three participants stated that sharing the experience made it more enjoyable. One participant stated that while she didn’t particularly enjoy the show, she enjoyed the experience of sharing it with her son. Three of the six participants said that after viewing they enjoyed being able to share their expertise on the subject with their parent. One student stated “I could explain some of the things to my mother”. One response was that the family was able to tie what was happening on the show to current events, such as the volcanic eruptions in Iceland. Another family responded that they connected what they were watching to (weather) events they shared in their past. They wrote, “It was cool to watch but I’m glad we don’t get storms like that.” This interaction while watching the show helped them to connect to real-life situations that they had experienced.

One mother stated that she and her son talked during the show because the program frightened her son. She obviously felt it was important to communicate with her son to alleviate his fears. By sharing this experience together, she was able to help him to understand the reality of the topic and to put his fears into perspective. One participant responded by saying that her father agreed with the ideas presented in Unstoppable Solar Cycles, but disagreed with the ideas about global warming presented in An Inconvenient Truth. While they did not say that sharing this experience was important, the student did express that having her father explain his views helped her to understand what she was
watching. I would interpret the father voicing his views to his daughter about the topic of global warming that it would make the experience important for him. He could share his knowledge about the subject using the viewing experience as a focal point for the discussion.

A table of these responses can be found in Appendix E, Synopsis of Responses:

Questionnaire #2, tables 2.1, 2.2, and 2.3. Each table represents the families’ responses to the three different viewing experiences.

Research Questions 2 and 3:

Research question #2:
How do family viewing literacy experiences in science influence the student’s motivation and interest in the topic?

Research question #3:
In what ways are the students making connections between home and school after sharing experiences in media literacy?

Observations

Notes were taken whenever I noticed an interaction that involved students’ home-viewing experience. I observed two of the six students sharing with his lab partner the experience of viewing a science program with their parent(s). Both times the student was not connecting to the lab exercise, simply sharing the fact that they watched a science program with their parent(s). One student shared “... and then I watched this show about hurricanes. It was awesome, there was all this destruction from just one storm, the people were out filming it and they had to run for their lives because there was stuff flying everywhere! My mom said it was in New Orleans and she’d been there before, but she doesn’t think she’d go
there again now.” The fact that they shared this information with their partner implies that
the student found the experience interesting enough to share.

After completion of a laboratory exercise, the students answered discussion questions
cooperatively. Four of the six participating students used the viewing experiences with
families as part of the discussion. The viewing experience added to their background
knowledge that they could share with the group. When discussing how a mid-latitude cyclone
moves, one student interjected that the program he watched showed the cyclone moving
counter-clockwise and toward the center. He shared “You could see it from the top, like you
were in an airplane right above it, it really does move toward the middle and then there are
all these clouds above it. It was raining like crazy.” He described a real-life situation that he
had viewed which motivated him to share his knowledge with his group. This not only
seemed to increase his interest in the topic, but also spurred curiosity and interest by his peers
about the viewing experience. One of his group mates asked what program he watched. He
wanted to see for himself the visual illustration of the hurricane. The other student thought it
was “…awesome”.

During note taking, four of the six students added information that they experienced
during their viewing experiences. While taking notes during class time, three of the students
questioned new material that was presented to them based on the information they acquired
during the viewing experience. Two of the three students rarely participate in class
discussion. Since note taking is typically not a venue for lively discussion, I interpreted this
exchange as an increase in interest. While I was giving notes on the how hurricanes develop,
one of the students brought up his viewing experience involving tornadoes. He questioned
the difference between what powers a tornado and a hurricane. He wondered, “Why do tornadoes jump around but hurricanes seem to keep going?” After I gave him an explanation he continued to question, “Why do hurricanes get bigger when they are crossing the ocean?” This interchange was spurred by his viewing experience of tornadoes. Had he not seen the weather related program, I doubt he would have made these important connections.

Five observations were of students trying to clarify what they were learning compared to what they perceived during the viewing experience. At times the students questioned the information from the viewing. Four students viewed a science fiction film that was exaggerated for dramatic effect. One of the students observed that the earthquakes depicted in the movie showed uplift on a fault zone that they learned was a strike-slip boundary. He made an astute observation of the differences in types of fault lines. He first questioned my teaching of the topic saying “I thought the fault line in California moved side-ways, but the movie showed things lifting and turning. Which one is real?” I was able to tie this observation into their learning by presenting the plate boundaries in the New York State Earth Science Reference Tables used in the course. The student recognized this discrepancy and questioned the difference, taking interest in not only the discrepancy, but appeared to add to his level of interest of the topic.

Four students viewed the science fiction film 2012, two of them misinterpreted the dramatization for how the natural disasters actually happen. The students were able to talk about their background knowledge freely without fear of being wrong since this was not something they learned but something they watched so they weren’t actually wrong, the movie was. Sharing with their peers what they watched at home helped to bridge the home-
school connection and open up dialogue on the topic. One student shared, “See, I told you. The effects were cool, but not real.” Another student stated, “My dad didn’t think it was very realistic”. These students seemed to grasp the difference between the reality that films offer and what science offers as fact. Recognizing the difference between film reality and scientific reality provided them opportunities to discuss these differences and what they learned from their parents.

Two students offered DVDs of science related topics to other students to watch after their viewing experience. They wanted to share with them the experience they had at home. This connection to home and offering the experience to others, not only implies a tie to the importance of the family viewing experience, but suggests that the students wanted to expand this experience by making social connections, by wanting others to share the experience. Vygotsky’s theories of the importance of social interaction are represented here. The students were more motivated to share the experience when they were able to offer the same experience to their classmates. They wanted them to experience what they had seen possibly with the hope of future social interaction about the movie. The home viewing experience opened up conversation about the topic that probably would not have happened otherwise. Several of the students viewed the same DVD and joined in the excitement of watching the DVD. One interaction was “yeah, did you see the part where volcano exploded? It was so cool.” Watching the other students’ reactions was very interesting. They seemed to really want to see the same DVD so that they could share in their conversation. This type of social interaction seemed to motivate the students to talk about the topic on a more social level without the restrictions of the academic protocol.
Chapter 5: Conclusions and Implications

Literacy extends beyond the acquisition of reading and writing skills. It entails the ability to use these skills in a socially appropriate context. The very notion of literacy is also evolving to include the skills required to function in a technological society (Caspe, 2003, p. 1).

It is the students' socio-cultural experiences with the media and the influence it has on their motivation and interest that is the basis of my study. In particular, my questions address the family literacy viewing experiences and the impact these experiences had on their classroom behaviors. My observations in the classroom showed multiple ways in which the students were making connections between home and school. The importance of the socio-cultural connections with their families as well as their peers was evident throughout the analysis of my data and observations. My conclusions and implications for education are based on my data, observations, and research as it pertains to the following research questions.

Research Questions:

1) How do students and their parents perceive the importance of sharing family literacy experiences at home?
2) How do family viewing literacy experiences in science influence the student’s motivation and interest in the topic?

3) In what ways are the students making connections between home and school after sharing experiences in media literacy.

Conclusions

Upon reflection of my analysis of the data and observations taken during the study, I think that the interpretations support my original thoughts about the sharing of viewing literacy experiences and how it would influence a student’s motivation and interest. That is that these experiences would positively influence the student’s motivation and interest. It was very motivating for me as teacher to see how many ways the students made connections between home and school. The students contributed more and seemed less apprehensive to ask questions when they could connect the questions to something they experienced outside the classroom.

However, I do not think the data are conclusive enough to make any judgments regarding changes in how students and their parents perceive the importance of sharing family literacy experiences at home.

I cannot say that I can conclusively interpret the students’ and parents’ initial responses to the importance of sharing family literacy experiences at home. Even though the questionnaires were anonymous, I tend to think that most of the participants would answer affirmatively to the question of how important the sharing of literacy experiences at home is because a positive response is more socially acceptable. I think the initial question asking their perception of the importance of family viewing experiences was too general. All of the
families stated that they felt sharing family literacy experiences at home was important. The questionnaire did not allow them to elaborate about what kind of experiences they felt were important to share. The questionnaire did ask what kinds of recreational and educational viewing experiences they watched, but the respondents did not elaborate as to whether or not they shared these experiences. The after-viewing questionnaires, while asking basically the same initial question about the importance of the experience, became more specific as it pertained to a specific viewing experience. They could respond specifically to a real life experience and judge whether they thought it was important on an individual basis rather than on the generality of their overall perception. I think the answers were more honest in the second questionnaire. I had planned on comparing the two responses but think that the questions did not support a comparison of their actual perceptions as I had hoped they would.

This study supported my belief that sharing science related viewing experiences at home would support the students’ motivation and interest. Through my observations of the students’ classroom interactions, I noticed on numerous occasions, students making connections to these experiences and comparing them to what they were learning. They were motivated to share these experiences partly because it was a socially acceptable pastime; that is watching television or DVDs. Motivation and interest were also promoted because they shared the viewing experiences with family members. All of the participants responded on their questionnaires that watching the shows together added to their enjoyment and/or understanding. When the students understood a topic or had background knowledge relating to a new topic, they shared this new information more readily. The students who had these experiences seemed more interested in the topics than those who had not had a prior viewing
experience. They were more motivated to share their views and interpretations. When discussing how familiarity promotes the motivation to read, Fountas and Pinnell (2009) state, “If it contains information on a topic that we already know something about, then we feel competent and empowered-ready to be intrigued by learning more” (p. 479). I think those students who had the viewing experiences felt this same sense of empowerment; they gained some background knowledge that motivated them to share their knowledge on the discussion topic.

I was able to observe multiple situations where students were making home to school connections. I would interpret this as the students found the home viewing opportunities important enough to share with their classmates. The experiences the students had at home were often shared with their classmates or individual lab partners. Connections between home and school were made quite often regarding viewing opportunities on the topic of earthquakes and weather. These topics presented depicted extreme events, such as the most violent earthquakes and damaging storms. The viewing experience was able to dramatize these events and give the students visual representations, which made them more memorable. The students enjoyed sharing these experiences with others, particularly with others who had the same viewing experience. The students shared with each other the familial situations they experienced and remarked on the reactions of their families. One student was pleased that the program they watched scared his sister, which gave him a memory to share and link to the experience. This made the viewing memorable for him. He could connect his home viewing experience with others’ reactions and have conversations regarding the home viewing experience as well as the academic topic. Omstein and Levine (2000) refer to Illich’s concept
of deschooling as the first step in the process of liberating students from drill training by providing opportunities to share and discuss with others like interests and experiences. Illich suggests that liberal education takes place mainly by discussion and dialogue. “The main ingredient in this liberal education is interest” (p. 129). The students shared their interest in the viewing experiences, as well as the conversations that took place with their families and their peers. These conversations regarding like interests and experiences promoted motivation to share dialogue in the classroom as well as with their peers. By increasing the home literacy experiences, the families’ experiences could be used to support the student’s learning in school.

Implications for education

Looking at what motivates the students, while taking into consideration their interests, enabled me to develop these implications for education. Rogers, et al. (1999) research connects students’ success to their ability to make connections to experiences that they already know. Background knowledge helps them to feel safe and more motivated to embrace new concepts. Another component of motivation is having positive emotional attachments to an experience (Lyons, 2003). When new material is presented to a student, the student’s brain attaches it to an emotion, positive or negative. Without positive experiences the brain will deem the information unimportant and not allow the transfer from short term to long-term memory. Fountas and Pinnell (2009) connect shared dialogue as a component of both family literacy experiences and motivation. Meaningful talk makes an experience more enjoyable, therefore motivates the child to become more involved in discussions at home and in the classroom. It is through talk that the student feels his opinions are valued and that his
participation is important and integral to his learning. Walker (2009) suggests that using technology to promote media literacy experiences is pertinent in today’s culture. Teachers need to investigate what interests the students and use it to our advantage. If a student enjoys a media experience they are more apt to engage in that type of learning experience. Lastly, Vygostky’s theory of social constructivism promotes the interactions that happen when a child shares a family literacy experience and then connects these experiences in a peer setting. These experiences provide them with the enjoyment of a social environment and afford them the opportunity to investigate these new experiences with others.

**Background knowledge**

These viewing experiences expanded the students’ background knowledge by affording them an opportunity to experience the topics discussed in the classroom in a genre with which they were familiar. Familiarity seemed to help the students feel more comfortable and willing to discuss his experiences and integrate new concepts into their knowledge base. Learning a new concept that they could relate to, specifically an experience that they enjoyed helped them to visualize the experience and made connections to new learning.

The visual presentations, whether they were factual or science fiction, gave them a memory they could draw from when discussing the topic in the classroom. They could describe what they saw and compare their interpretations of the viewing experience with what they were learning. They were able to layer these real world visual representations with the information found in their textbooks (Seglem & Witte, 2009). Some students struggle with making the connection between words and images. Providing them with visuals helped them to make this leap to construct meaning. Several of the students asked questions and
discussed contradictions in what they were learning in the classroom to what they actually witnessed at home during the science viewing experience. These contributions to the classroom discussions support the connections they made between home viewing opportunities and classroom instruction.

Many parents do not know how to help their children with their homework or how to guide them in reflection regarding their schoolwork (Canter, 2001). Home and work responsibilities often take precedence over their children’s school responsibilities. It can be frustrating and inconvenient for a parent to come home and find out that her or his child has an assignment due that requires parental support. Providing parents with a schedule of multiple viewing experiences on a weekly basis may have given them the notice they needed to be successful in supporting their children in their science literacy viewing experiences. Several students stated that they understood the experience better when they saw it through the adult’s eyes. The adults brought in their past experiences associated with the new learning experience using events that the child found familiar. The sharing of the parents’ knowledge helped to promote familial connections and expanded the classroom curriculum to the home environment (Owocki & Goodman, 2002). Adults helped the students to better understand the curriculum through the sharing of their personal experiences.

This suggests that knowledge is not gained by receiving information in prescribed doses from an adult, but rather learned through memorable, scaffolded activities. The child’s interests are piqued as they interact with the parent and can initiate the questions and resulting conversation. This new knowledge has not been
imposed by an adult, but rather jointly constructed through discussion of a common experience.

**Emotion**

The emotional attachment students made while sharing an experience with loved ones is so different from emotional attachments formed in the classroom environment, particularly in a classroom filled with children with learning and classroom management issues. In the classroom there is often some kind of drama between students. Even under the best classroom management situations, there may be students experiencing social, family, or school community problems. This often translated into someone in the class being disruptive or impertinent. The students aren’t always able to experience a warm, comfortable environment in which to learn. Sharing these viewing experiences at home gave them an opportunity for learning in an atmosphere free from the school-related social and academic demands (Lyons, 2003). At home, the students could talk freely in an environment that they were familiar with, and share the experience with a family member who they know and were comfortable with their responses and interactions. The students had the home advantage. They could share their views and misunderstandings without fear of social recourse.

Establishing this emotional attachment to the experience is shown to enable the brain’s ability to store the new information more readily (Lyons, 2003). The students could move the information from short-term to long-term memory because the emotional attachment made the experience important to them. When the students
developed an emotional attachment they could remember the experience and were more likely to share the experience with their peers. Having a positive emotional experience helped the students to remember details about what they had watched enabling them to share in the classroom discussion. Thus, the students seemed to take more interest in the topic presented in the classroom because they had enjoyed the viewing experience and were able to retain new information learned from the experience.

Motivation comes from both extrinsic and intrinsic sources (Lyons, 2003). Learners will be more receptive to new experiences if they associate these experiences with a positive emotional experience and deem it important to their lives. Studies of brain function show that there are mechanisms in the brain that associate positive emotional experiences with positive learning experiences (Rogers, et al., 1999). The students who participated in the study were more engaged than previously observed. In the after-viewing questionnaire, all of the students responded that sharing the viewing literacy experience enhanced their understanding and/or enjoyment of the experience. They shared experiences they had with their families and seemed motivated to apply their new knowledge because it gave them personal pleasure. The sharing of positive literacy experiences helped support learning through dialogue with adults and peers.

Shared Dialogue

Providing these families with viewing experiences they could share supported family literacy involvement as well as increasing the child’s motivation to participate in discussion in the classroom. In the families’ questionnaires about sharing viewing
experiences, most of them detailed how they shared viewing experiences with their children. As stated earlier, the accuracy of these statements cannot be measured. By involving them in this project, they were able to participate in the types of experiences that are proposed to be a basic principle of family literacy, that is, “belief that literacy is acquired through shared dialogue, where learners are actively contributing to their own learning” (Caspe, 2003, p. 3).

The dialogue that was shared during the viewing opportunities seemed to add to the enjoyment of the experience and motivation to learn for the participants. During my observations, one student stated on more than one occasion that these discussions added to her understanding and enjoyment of the topic. She remarked that her father helped her to better understand what she had watched. This viewpoint was reiterated by most of the students who talked about their previous viewing experiences. Research by Fountas and Pinnell (2009) suggests that students are more satisfied in a learning experience when they engage in discussion after the experience. By voicing their observations and interpretations, the students feel more successful because they feel their opinions are valued. The students want to participate which increases motivation.

Dialogue within the classroom was enhanced by the contributions of the students who had participated in the study. The students shared information from the viewing experiences and enjoyed the social interaction. This kind of dialogue made the learning more pertinent as it had become a culturally acceptable topic to discuss amongst their peers. Vygotsky’s (1978) theories of learning suggests

...child’s cultural development appears twice; first on the social level and,
later on, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relationships between individuals (p. 57).

The opportunities experienced by the participating families provided opportunities for adults and their child to reflect on literacy practices in their lives. The questionnaires afforded them the opportunity to reflect on the experience not just for its academic value, but for how important they thought it was to share the experience for both understanding and enjoyment (Fountas & Pinnell, 2009). Through reflection, the families seemed to realize the importance of these shared experiences. They communicated why it was important to share the experiences with their student, such as the mother who stated that her son was frightened. It was important that she could share the experience with him so that she could alleviate any fears he had pertaining to what he was watching. Other parents stated that they were able to interpret information for their child. This would suggest that they felt it was an important interaction as they were able to share their knowledge of the subject in a comfortable, familiar setting.

*Media viewing experiences*

Many of the teens in the freshman initiative program do not contribute to dialogue of an academic nature, as they perceive it to be not culturally acceptable. However, when discussing a movie or a television program, they could join in the discussion by talking about a socially acceptable genre such as the media. Multi-media viewing and listening experiences have become a part of the teen culture. Using these types of experiences helped them to
decipher new information in a way that they recognized (Seglem & Witte, 2009). Multimedia experiences are the norm and the students' brains have developed patterns for integrating new information. Viewing and discussing together what they watched in a culturally acceptable format supported their enjoyment and their learning experience.

The students were able to supplement their knowledge of media literacy through the sharing of these experiences with their families and peers. For example, several of the students involved in the study found new information they had acquired from the viewing experience to contradict with what they were learning in the classroom. They were able to discuss with other participants what they had seen and relate how it was different from the facts that they were learning in the classroom. One student brought up a disparity in the presentation of crustal movement and plate tectonics. He had viewed a dramatic production of the fault lines in California that contradicted what would actually happen during a California earthquake. He recognized this and initiated a conversation about the differences in what the science fiction production presented and what happens in the real world. It was an important conversation to have with the other students as through this conversation some of them realized that not all media presentations are factual. They were able to interpret the informal information presented as entertainment and not fact. While there was a lot of scientifically factual information presented in the movie, the one student recognized that many of the scenes were dramatized for effect. The discussion of this controversy brought about a deeper understanding of plate tectonics for the students.

Analyzing media means the students need to able to talk, think critically, and ask the right questions about the experience (Hobbs, 2001). Media is embedded in our culture. The
media tries to change our perceptions, beliefs and attitudes. Teaching students to interpret the media enables them to recognize these patterns of information and how it is meant to persuade their point of view.

Socio-cultural practices

The opportunities that were offered to the participating families were diverse, yet many of the students chose the same viewing experiences. Providing choices to students helps them to establish a feeling of ownership regarding their learning experiences (Routman, 2000). People have a basic need to feel free and independent (Glasser, 1990). Freedom of choice promoted the child’s interest and motivation to share the viewing experience with their families.

These choices reflected the interests of the children, if not the adults. The socio-cultural implication is that the students discussed which viewing experiences they had and promoted them within their peer group. It is through this social interaction that the students gained interest and motivation to view the programming. The experiences were shared not just with their families, but they also shared with their cohorts what they watched as well as their interpretation and enjoyment of the opportunity. While no two interpretations will be exactly alike, it is through these shared experiences and the resulting conversations that the teacher can encourage talk that may expand the students’ thinking (Alverman, et al., 2004). Through this interaction, the students may learn to learn from each other by questioning others interpretations as well as verbalizing their own ideas. It is through this interaction that the student may find fallacies in their interpretations as well as accepting new knowledge gained from a peer’s interpretation.
Sharing experiences with family members helped to bridge home with classroom involvement. Most of the participating students brought to the classroom observations pertaining to the classroom topic that they had shared with their family members. At times, the students shared with their partners that they had had a science related experience at home. These conversations were not shared with the class but seemed to support their learning. The students showed a sense of pride that they had done something outside of the classroom with their family that supplemented what they were learning. This is pertinent in that the students in the freshman initiative program are all at risk of failing. They have barriers either socially or academically that inhibit their success (Gonzalez-DeHass & Willems, 2003). This private conversation with their lab partner, while it may not seem consequential, may be a big step for them if they see that these experiences are important to their learning. By sharing the experience, the interaction gave the other student an opportunity to hear the information obtained from the viewing experience.

**Suggestions for future study**

While recording my observations and analyzing the data from the study, several thoughts came to mind regarding possibilities for future study. Student interest, socio-cultural opportunities and increasing parent involvement were among the topics that I would like to explore to a greater extent in the future.

Even though the students were offered multiple viewing opportunities in various genres, most of the students chose television programming to share with their parents. Also, the programs they chose to view were limited to only a few different
options. This may have come from student choice or it may have resulted from a convenient program time. Future considerations could be to include a more focused interview regarding the families' availability for viewing experiences. I would also like to find out more about what their interests are in regard to the topics covered in Earth Science. The Earth Science curriculum covers geology, astronomy, weather, and plate tectonics as major topics. From these topics, I think it would help to attract more participants if the programming was better suited to their availability and interests.

I would also like to be able to offer more viewing opportunities on DVD format. The students' choices here were limited. Many of the students chose to watch a DVD with their parents even though the choices were limited. Some of the more lively conversations I observed going on between students related to a common DVD viewing experience. I believe this is a reflection of the social aspect of constructivist learning. The students enjoyed these conversations about Earth Science, there was no deliberate teaching, but they learned from each other while talking about their experiences. I think that the DVD format was most popular among the students because it did not have a set viewing time and they could watch it at their convenience and not be limited to a certain time or day. There was also the physical sharing of the DVD. There was a hand-off from one student to another who had been waiting and anticipating the return of the DVD. It was like being a part of a club. The social appeal of an informal video club seemed to make a difference in the students' interest in watching the movie.
My observations reiterated the importance of the social aspect of learning. In the future, I would like to expand on this by offering more DVD viewing experiences from the science fiction genre. The discussions the students had about these viewing experiences were engaged and thoughtful. Students questioned the media representations of the scenarios regarding Earth Science topics. An activity that I would like to include would be to either watch one of these movies in the classroom or offer copies for the students to watch at home. They would then be assigned to a group where they could discuss specifically topics chosen by me. They could look for discrepancies in the viewing experience with what they learned in the classroom regarding topics such as plate tectonics or how storms develop and move. I would hypothesize that the students would be more engaged in the topics and build their own learning experience. Since my sample of participants was small in number, I think it would be beneficial to see how this activity promotes student interest and motivation in a larger group setting.

Lastly, I would like to promote more parental involvement in the students’ Earth Science literacy experiences. I would like to design a questionnaire that could better determine the parents’ interests and prior knowledge of Earth Science topics. If they were offered experiences within a topic that they found interesting, or had enough prior knowledge to feel comfortable discussing the topic, they may be more apt to contribute to their child’s learning experiences. I would like to offer different science literacy experiences to the parents based on their input. One such event could include a night sky viewing experience that my school district offers twice a year. If
the parent were interested in astronomy, they could join their child in the experience of viewing the night sky through telescopes and learn more about astronomy. I would be interested in seeing how this may influence the students’ enjoyment of the topic and motivation to share new knowledge in a social, classroom environment.

While researching the influence of families sharing viewing experiences on motivation and attention in the classroom, I was able to observe many positive behaviors pertaining to motivation and interest. The students who did participate in the study were more apt to contribute to classroom discussion. These same students were engaged in private conversations with their classmates regarding their home viewing experiences. They brought learning from home into the classroom and topics from the classroom into their home. Discussions with their family members and their classmates seemed to increase their motivation to participate in the classroom and appeared to pique their interest in topics when they were able to draw on some background knowledge. These students seemed more confident and comfortable when talking about new science topics if they had something they could relate to, such as the home viewing experience. All of the students that participated in the study were successful in passing the class requirements, as well as passing the New York State Earth Science Regents exam. It is not clear whether or not there is any correlation between the two; but the increase in their interest and motivation in the classroom could very well be the ingredient that helped make them successful in this program.
References


APPENDIX A

Fall 2009

Dear Parent or Guardian,

I am a graduate student in the department of Education and Human Development at the College at Brockport SUNY. I am conducting a study pertaining to parents’ and students’ perspectives regarding family literacy experiences and observing any influence it may have on your child’s motivation and interest in the classroom.

If you give your consent to participate in the study, your child may be observed as part of my note taking. The focus of the observations will be to consider your child’s motivation and interest in the subject after family literacy experiences have been shared. Your participation will include two brief questionnaires to be completed by parent and child before and after viewing a science program of your child’s choice.

The data will be collected over the course of five weeks. None of the survey information will be assessed or graded by the classroom teacher as part of the science curriculum.

The enclosed Guardian Consent form includes information about your child’s rights as a study participant. If you are willing to participate in this family literacy study, please indicate by signing the attached statement.

Thank you for your consideration.

Sincerely,

Jill Albertson  
Graduate Student,  
Brockport  
College at Brockport SUNY  
Department of Education and Human Development  
jalbertson@albionk12.org  
(585) 589-2040 ext: 8424

Dr. Sue Novinger  
Thesis Advisor at SUNY  
College at Brockport SUNY  
Department of Education and Human Development  
snovinge@brockport.edu  
(585) 395-5935
INFORMED CONSENT

The purpose of this study is to explore parents’ and students’ perspectives regarding experiences with family media literacy experiences in science. This study is a requirement for my master’s degree. The researcher, Jill Albertson, will make available to families opportunities to view together three video, television or Internet programs reflecting topics being taught in the classroom. The researcher will provide either a DVD, schedules of programming, or Internet sites at no cost to you. The programs range from 30 minutes to 1 hour in length. The first questionnaire will ask parents and students several questions relating to family literacy experiences. The questionnaire to be completed after viewing the science program will address the experience as well as the parent’s and student’s perspectives related to the experiences. Lastly, the researcher will take notes during class regarding the student’s motivation and interest in the subject. If you and your student agree to participate in the study, you will need to complete two questionnaires together. In order to participate in this study, your informed consent is required. You and your student are being asked to make a decision whether or not to participate. If you want to participate in the study, and agree with the statements below, please sign your name in the space provided at the end. You may change your mind at any time and leave the study without penalty, even after the study has begun. Your student may decline participation even if you provide your consent.

I understand that:

1. My participation as well as my child’s is voluntary. We have the right to refuse to answer any questions.
2. Our names will not be recorded. If any publication results from this research, We would not be identified by name.
3. Our participation involves completing two questionnaires concerning our perspectives regarding family literacy experiences at home. It also involves watching three science literacy programs from the venue of our choice (DVD, Internet, or television program) and discussing the experience afterward.
4. My child will be observed in the classroom and any new behaviors relating to the science literacy experience will be noted.
5. Time is a minor risk as we will be required to view a video, Internet, or television programming related to a science topic.
6. All data will be kept in a locked filing cabinet by the investigator. All data and consent forms will be shredded upon completion of the study.

I am 18 years of age or older. I have read and understand the above statements. All my questions about my participation in this study have been answered to my satisfaction. I agree to participate in the study realizing I may withdraw without penalty at any time during the process.
If you have any questions, you may contact:

**Primary Researcher:**
Jill Albertson  
Graduate Student  
Department of Education and Human Development  
College at Brockport SUNY  
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(585) 589-2040 ext: 8424  
SUNY  
snovinge@brockport.edu

**Thesis Advisor:**
Dr. Sue Novinger  
Thesis Advisor  
Department of Education and Human Development  
College at Brockport  
(585) 395-5935

By signing, I am giving consent for both my child and myself to participate in this study,

Signature of Parent: ___________________________ Date: ___________________________
Child’s Name: ___________________________
APPENDIX B

Questionnaire #1

Before Viewing

1) What kind of television programming do you watch together? Such as:
   a) Entertainment- Comedy, drama, ie: The Comedy Channel, Sitcoms, etc.
      Please list:

   b) Educational- The History Channel, National Geographic, The Animal Channel, the news, etc.
      Please list:

2) Who do you usually share these experiences with (family, friends)?

3) Does your viewing include television, internet, or movies?

4) What kind of conversations or interactions do you have before, during and/or after watching the program?

5) Do these conversations before, during or after watching help you to understand or enjoy the experience? Why or why not?
APPENDIX C

Questionnaire #2

After Viewing

1) What kind of science programming did you watch (DVD, television, or internet):

2) What was the subject?

3) Who shared this experience? Were there any others such as friends or siblings in the room?

4) Did you talk about the program or topic before, during, or after watching the program?

   a) What did you talk about?

   b) How did it help you to enjoy or understand the program better?
# APPENDIX D

Table 1: Sample of Weekly television viewing schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
<th>Sunday</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:00</td>
<td>02/22/09</td>
<td>02/23/09</td>
<td>02/24/09</td>
<td>02/25/09</td>
<td>Weather Channel: Storm Stories</td>
<td>Weather Channel: Storm Stories</td>
<td>Weather Channel: Storm Stories</td>
</tr>
</tbody>
</table>
# APPENDIX E

## Synopsis of Responses Before Viewing

### Table #2

#### Questionnaire #1

<table>
<thead>
<tr>
<th>Family</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 a</td>
<td>Comedy, reality, music, action, adventure</td>
<td>Drama, Comedy, Reality</td>
<td>Movies Comedies</td>
<td>Comedy, drama Sports, sit-coms</td>
<td>Comedy, Reality,</td>
<td>Movies Comedies</td>
</tr>
<tr>
<td>Q1 b</td>
<td>History, NG, animal, Discovery,</td>
<td>News, Discovery, history NG, animal</td>
<td>NG, animals,</td>
<td>History channel News</td>
<td>Discovery</td>
<td>Animal Planet</td>
</tr>
<tr>
<td>Q2</td>
<td>Family, friends</td>
<td>Family friends</td>
<td>Family, friends</td>
<td>Family, friends</td>
<td>Family</td>
<td>Family, Friends</td>
</tr>
<tr>
<td>Q3</td>
<td>TV, Internet, movies</td>
<td>TV, movies</td>
<td>TV, movies</td>
<td>Mostly TV, movies</td>
<td>TV, movies</td>
<td>TV</td>
</tr>
<tr>
<td>Q4</td>
<td>Predicting, interpreting</td>
<td>Predicting, Shared if they Enjoyed it</td>
<td>Discuss theme or characters</td>
<td>Talk about Favorite parts</td>
<td>Discussing What’s going On</td>
<td>Favorite Parts, predicting</td>
</tr>
<tr>
<td>Q5</td>
<td>Yes, understand and Enjoy more</td>
<td>Yes, understanding</td>
<td>Yes, to relate to real life situations</td>
<td>Sometimes, Only if interested</td>
<td>Yes, Helps to understand</td>
<td>Yes, we enjoy talking about it</td>
</tr>
</tbody>
</table>
## Synopsis of Responses After Viewing
### Table #2.1

### Questionnaire # 2

<table>
<thead>
<tr>
<th>Family</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>DVD</td>
<td>DVD</td>
<td>TV</td>
<td>DVD</td>
<td>TV</td>
<td>DVD</td>
</tr>
<tr>
<td>Q2</td>
<td>2012</td>
<td>2012 end of the world</td>
<td>Mt Baker Avalanche Washington State</td>
<td>Solar Cycles</td>
<td>Storm Stories</td>
<td>Inconvenient Truth</td>
</tr>
<tr>
<td>Q3</td>
<td>Parents</td>
<td>Family</td>
<td>Mother/son</td>
<td>Dad</td>
<td>Mom</td>
<td>Parents</td>
</tr>
<tr>
<td>Q4a</td>
<td>Yes – events Of movie</td>
<td>Yes, son was scared</td>
<td>During after Weather-related experiences -scenarios on TV</td>
<td>During and After -agreed on message it was sending</td>
<td>During-Amazed at Storms we Saw</td>
<td>Before, during</td>
</tr>
<tr>
<td>Q4b</td>
<td>I could Understand what is going on better</td>
<td>I could Understand Better</td>
<td>Not a great show, but talking about made it more enjoyable</td>
<td>Dad explained Some things to me I didn’t understand</td>
<td>Yes</td>
<td>-Explained What it was About -talked about what was going on.</td>
</tr>
</tbody>
</table>
## Synopsis of Responses After Viewing
### Second viewing experience

<table>
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<th>Table #2.2</th>
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<tbody>
<tr>
<td><strong>Family</strong></td>
</tr>
<tr>
<td>Q1</td>
</tr>
<tr>
<td>Q2</td>
</tr>
<tr>
<td>Q3</td>
</tr>
<tr>
<td>Q4a</td>
</tr>
<tr>
<td>Q4b</td>
</tr>
</tbody>
</table>

74
## Synopsis of Responses After Viewing
### Third viewing experience

**Table #2.3**

<table>
<thead>
<tr>
<th>Q1</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TV</td>
<td>DVD</td>
<td>TV</td>
<td>DVD</td>
<td>TV</td>
<td></td>
</tr>
<tr>
<td>Q2</td>
<td>Storm Stories</td>
<td>Solar Cycles</td>
<td>Full Force Nature</td>
<td>2012</td>
<td>Storm Stories</td>
<td></td>
</tr>
<tr>
<td>Q3</td>
<td>Family</td>
<td>Mom</td>
<td>Mother/son</td>
<td>Dad</td>
<td>Mom</td>
<td></td>
</tr>
<tr>
<td>Q4a</td>
<td>During After What was Going on</td>
<td>During After Wondered What caused Solar flares Could it be Why we have Global warming</td>
<td>During-Talked about How hurricanes Work</td>
<td>During and After Dad didn’t Think it was Very realistic</td>
<td></td>
<td>During We talked About how We like to Watch storms But glad we Don’t get them That bad</td>
</tr>
<tr>
<td>Q4b</td>
<td>It was fun To see my Sister scared</td>
<td>It was okay, I didn’t Really like it Though</td>
<td>I knew a little About hurricanes.</td>
<td>We talked About how Some of These things Could happen</td>
<td>We laughed About how Scary some Storms are</td>
<td></td>
</tr>
</tbody>
</table>