

Teletubbies and Early Childhood Development

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Abstract: When PBS purchased the broadcast rights for the television program, Teletubbies, from the British Broadcasting Corporation, a public debate similar to that which erupted when the program was released in Britain, began. Questions were raised about the educational value of a program that was the first to target children under the age of 12 months. Critics chastised Teletubbies for its use of baby talk and suggested that the education of the viewing audience was not the prime motivation for PBS to purchase the program. This criticism raised the question:

Does Teletubbies fulfill its role as an educational children's program?

By examining early childhood development and the means by which children learn, this question can be answered. Through the use of an interview with a professor of Education as well as the use of previous research studies in the areas of cognitive development, visual perception, language acquisition and research on how these different developmental processes are related, it can be concluded that Teletubbies does help to educate children. The various components of Teletubbies, including the on screen action, presence of real world objects, and format of the program itself, combine to educate children of various ages by aiding in language acquisition and developing cognitive and visual perception skills.

Introduction

Public Broadcasting Service (PBS) has long been a major provider of children's television programming. Shows like Sesame Street, Barney and Mr. Rogers Neighborhood have become staples in early childhood development. In an era when these types of children's programs have become costly to produce and generate very little revenue, PBS has continued to air these programs. For the most part, children's television has been directed at kids over the age of three, when their speech and mental understanding have matured. This target age seems to have changed when Public Broadcasting Service purchased the rights to a new children's program, Teletubbies, in early 1998. Teletubbies, created by the British Broadcasting Corporation, is directed at a younger segment of the television viewing audience, children as young or younger than one year.

Teletubbies is an entirely new and unconventional format. The show, created by Anne Wood and Andrew Davenport, is filmed on six acres of farmland outside Stratford-upon-

Avon, England. Four actors play bright and colorful little creatures, who in actuality are more than six feet tall. These "babies," called Teletubbies, have been given names with a distinctly "baby talk" sound, Tinkywinky, Dipsy, Laa Laa and Po. Each show opens with the image of a baby in the sun, raising over the hills, laughing out loud and bringing the viewer into the Teletubbyland. This bright and bizarre world is filled with music, dancing and frequent repetition of words. During the show the set is crossed by cartoon animals and is dotted with giant trumpets that signal to the Teletubbies when it is time to return to their underground home. By far the most strange and noticeable feature of the Teletubbies are the TV screens placed in the their mid-section. These screens turn on and off, transitioning the show from Teletubbyland to realworld images of two to four-year-olds participating in common activities such as washing their hands or feeding birds ("Nation" 2).

When Teletubbies was first introduced in Britain, a high-profile public debate ensued. Educators, parents, children's television experts and others, criticized the program for a myriad of faults. Questions regarding the educational value as well as the motives for marketing television to the under three population segment were raised in both the United States and Britain. London's Evening Standard chastised the program, saying that it is "regressive for children who are beyond the babbling stage (Current)." The use of babytalk is illustrated in words such as "hello", which is pronounced "eh-oh" and "beautiful flower" which is said "bootiful flaaer." Criticism stemming from this prevalence of baby talk was one of the most frequently expressed. Dorothy Singer of Yale University's Family TV Research and Consultation Center agreed with much of the criticism. "Children need to be exposed to good language. Children this age should be exploring their world, awakening all their senses. You don't get that from watching TV (Current)."

The examination of Teletubbies continued at an international summit on children's television in London. Delegates from America, Australia, South Africa and Scandinavia denounced the program for teaching children "nothing about the world or themselves." Ada Haug, the head of pre-school program at NRK Norway, reflected the summit's view: "A good children's program to me is a mixture of a tool and a toy. I cannot see Teletubbies as a program responding to children's needs. What they are seeing is copies of themselves and their own behavior and non-articulate language, living in a world that the children will never live in. Children are invited into an alien-looking world with some alien-looking creatures talking in baby language. What is there for small children to aspire to grow up to?" (Telegraph 10)

As the popularity of Teletubbies grew in Britain, the debate became filled with accusations from critics and responses from the creators and supporters. As the program reached the American viewing audience, several reports published critical of Public Broadcasting's decision to purchase Teletubbies.

"There is no excuse for targeting children under two," said Victor Strasburger, a professor of pediatrics and a member of American Academy of Pediatrics communications

committee. "They should not be watching television, and to target them with a show is immoral" (Current).

The question of whether children under the age of three should, or should not watch television is difficult to answer. While American public television has purchased Teletubbies saying that its decision was made "based on the merits of the show and how it fits into our schedule," the Norwegian public broadcasting corporation declined to purchase the program (Current). Haug believes Teletubbies is the most market-oriented children's show ever created (New York Times, 20). According to Haug, the absence of a story line in Teletubbies, leaves the show without any educational value. In her estimation, the sole motivation for PBS's purchase of the program must have been as a result of possible merchandising revenues (Current).

As the television entered the lives of Americans in the 1940's, expectations were high that this new media would become a powerful educational resource. Television, however, did not evolve that way. Instead, programs that were economically successful became the standard in programming. The direction of children's television programming has become a prime example of this focus on profits. To increase its ratings, CBS announced in 1997 that it would replace its Saturday morning cartoons with a news program for adults. NBC dropped its cartoon line-up in 1992 (Newshour). While cartoons certainly do not fall under the category of educational television, this cancellation does illustrate the movement by commercial networks away from children's programming. With fewer and fewer children's programs, it is necessary to scrutinize each show claiming to be educational in order to determine whether it is truly an educational program or if it is simply a veiled attempt to boost profits.

Concern for the status of Children's television programming grew as it became a hot political issue following the Children's Television Act of 1990. The Children's Television Act asserted that television should serve the educational and informational needs of young people. In an attempt to revive quality children's television, the Federal Communication Commission created rules requiring broadcasters to air three hours per week of educational children's programming. These rules came after a compromise was reached between children's television advocates and broadcasters that fulfilled the promise of the Children's Television Act. While broadcasters sought a voluntary policy, FCC Chairman Reed Hundt believes the laws of economics make this unworkable. "Without rules, educational TV will die a slow death," he said. "Broadcasters want to provide educational programming for kids, but because it costs money they can't do it unless their competitors also are dedicating comparable resources to children ("Broadcasting & Cable" 61)." In a time when ABC and NBC have dropped their Saturday morning children's programming, clearly this type of programming is not economically viable when compared with the revenues that other programs will generate. The American Academy of Pediatrics, experts on children's TV, and the New York Times have questioned whether PBS's decision to bring the popular British TV series to the United States has been driven by commercial considerations, namely revenues from toy sales, rather than the best interests of babies and toddlers (Current).

As television has become more of an educator and entertainer of children, it is vital that we examine and screen what is being broadcast and viewed by children. Public Broadcasting has long supported the statement that it provides "quality programs and educational services that inform, inspire and delight (PBS)." PBS's children's television programming lineup has lived up to this statement. Trusted as a resource and seen as a valuable method to educate and entertain children, PBS has a long history dealing with children's programming. With the recent purchase from the British Broadcasting Corporation of Teletubbies and the debate that followed, there has not been a clear consensus either supporting or disproving the educational value of Teletubbies. By examining early childhood development and the process by which children learn, it can be seen that Teletubbies fulfills its role as an educational children's program by aiding in cognitive development and increasing children's visual perception and language skills.

Cognitive Development

The development of children and their cognitive understanding is greatly affected by their perception of reality. As children grow up, their perception of the environment around them improves. Children create a framework of knowledge during development, and as each new piece of knowledge is gained it is also compared against what is already understood to determine what makes sense and essentially, what is real. The more real a certain program is believed to be, the greater the impact this program will have on the viewer. As studied by Bob Hodge and David Tripp, a "major concern of 6- to 12-year-old children is the calibration of television against reality." Further studies have shown that this research is also applicable to children under 6 years of age, indicating children within the Teletubbies targeted viewing audience have difficulty differentiating fiction from reality (Chandler).

The ability to differentiate reality from fiction is not an innate ability, nor is it an ability that is taught in the same manner as reading or writing. "Without being taught to do so children make their own assessments of the reality status of television programs. Based upon their growing knowledge of both the medium and the everyday world, they make increasingly sophisticated judgements about what is 'real' on television using multiple criteria (Chandler)." This understanding of reality is tied to the individual child's development and understanding of the real world. Understanding of the real world grows as children are exposed to the environment around them. In experiments studying very young children's understanding of television, younger children are more likely to assume what they are seeing is actually a tangible object within the television set. With age, however, these children gain the understanding that the television images represent an absent reality. For example, if a television set was to be turned over, older children understand that the image on the screen will not fall over as well, while the younger children would expect the opposite (Chandler).

Children's understanding of what is real versus what is fiction grows throughout their mental development. Beginning around the age of 5, children question whether or not what they are seeing could happen in real life, or if what they are seeing is a phenomenon confined to television. The example of a person flying is used to illustrate this concept.

Older children will ask themselves if humans can fly, then deduce that this phenomenon is only possible through the use of an airplane (Chandler).

Understanding that very young children believe television is a form of reality, an idea that they will question and eventually disprove after increased mental development has occurred, is vital to the educational value of Teletubbies. "If the world children are watching is an appealing one, or one that they can comprehend, then they will be in a 'comfort zone' with that experience, and can easily relate to it and learn from it. Similarly when children are intrigued by the worlds they are seeing, they care about what they are watching and become more involved and stimulated mentally by the program," remarked Professor of Education at the University of Oregon Robert Sylwester. Teletubbies is designed to combine both the aspects of the real world to provide comfort, as well as creative aspects, not present in their everyday surroundings, to excite and stimulate mental development.

"Teletubbies breaks new ground with an innovative format and unique characters that give very young viewers the chance to see the world from their own unique perspective and interest. The series is crafted with the understanding that little children watch television in a radically different way than older children and grown-ups watch. Teletubbies makes liberal use of repetition, large movement, bright colors, and deliberate pace to nurture and reinforce the development of children's listening and thinking skills," said Teletubbies creator Anne Woods (PBS). Due to the fact that the show is seen from the viewpoint of a child, the frequent images of young children as well as the use of "baby talk" help children establish their understanding of reality. The setting as well as the use of technological devices such as televisions in the Teletubbies stomachs further links these characters in the minds of the children as the show is a microcosm of what the child sees everyday in their version of the real world. Ninety-nine percent of American households have televisions. The television has become a fixture of the "real world" and thus necessities in the Teletubby world as well (PBS). "Teletubbies combines the notion of this magical window with a ticklish tummy to create a child-friendly interaction with television," said Woods (PBS).

Visual Perception

Children as young as six months begin noticing and paying attention to the television. At this age young children can not follow complex stories, nor can they understand character development, they watch primarily in an "exploratory mode." "They (infants) look for action rather than dialogue or conversation. They look for motion, color, music, sound and unusual voices," reported one study on media literacy among toddlers (Media Literacy 90).

Children as young as six months are still in the process of acquiring language skills and possess only limited visual perception skills. Movement, bright colors and sounds can be seen and heard, but not understood by very young children. Young children do not have control over the muscles that control the motion of their eyes or focus images within their eyes, thus young children are only aware of the difference between light from dark

images and can only see objects directly in front of them (World Book 7). From birth to the age of 18 months, stimulation that children receive through their five senses help to refine their vision and develop their ability to speak. Teletubbies aids the sensory development through the utilization of sounds, the frequent use of bright colors, seen namely in the Teletubbies costume design and through the use of language. While some critics have chastised the show for its use of baby-like language, Woods has rigorously defended it. "Children learn language at different rates, at different times and from a variety of sources. There is a large body of evidence that says exposure to peer language is comforting and beneficial to a young child. As in most developing skills, balance is important and exposure to "adult" language is equally valuable. As a matter of fact, 80-85% of the language in each episode of "Teletubbies" is adult, whereas 15% is the 'play language' (PBS)."

Language Acquisition

Visual perception and the acquisition of language are closely related. Beginning around the age of two months, studies have provided evidence of children's initial visual awareness. Visual perception becomes learning only when images can be recognized. For recognition to occur, the visual image must match that of an image already stored in the visual memory (Scanning Pattern 77). This initial recognition and visual memorization forms the foundation for the development and memorization of linguistic abilities.

The ability to communicate using spoken language is an astounding ability that sets apart the human species. This extraordinary process begins at birth, and by the age of four months children are able to produce their first nonphysiologically induced sounds in the form of cooing and chuckling. At 12 to 18 months a small vocabulary has been established. At this age children are able to follow some commands and understand simple words like the meaning of "no." Following this stage an important transition occurs in the child's abilities. "As the child reaches 18 to 21 months, their vocabulary has grown from approximately 20 words to 200 words, they point to objects that can be named, form simple questions and create two word sentences," notes Paula Menyuk, a researcher on language acquisition (Acquisition and Development 7). This simple understanding that from the age of 12 to 18 months children are developing their vocabulary as well as learning the appearance of objects, is why researchers such as Gloria DeGaetano feel it is paramount for parents to verbally interact with their children. By talking to children and questioning them as well as reading aloud to them, the portion of the brain that acquires language is stimulated. "(While listening to language) the brain is very busy-sorting, categorizing, guessing, analyzing and synthesizing, exploring and assessing a wide range of information, character traits and emotions...in fact (the) brain is getting a good workout, although (the child) never notices the mental sweat," said DeGaetano (Reading TV). The positive benefits of parents speaking with their children are not simply the short-term benefits of increased language skills and vocabulary. In the long term, children who have had verbal stimulation from their parents generally are more creative, self-confident and are more successful in school (Reading TV). Additionally, parents help young children to understand difficult concepts and when

watching television together, parents can help to establish values within a child by reaffirming concepts of importance (Sylwester).

Parental interaction with children is a vital aspect evident in each episode of Teletubbies. While many of today's most popular children's programs are designed to be a "babysitter," mesmerizing children in front of the screen for the duration of the program, Teletubbies is not meant to be viewed this way. Each show is designed with periods of quiet sections during segments such as video clips of the real world, depicting children participating in activities such as feeding animals and other activities that young children can relate to. These particular quiet periods are designed to allow parents to ask basic questions of their children, such as "What do you call that?" or "What color is that?" (Acquisition and Development 7). This simple questioning process enhances tremendously the learning experience for children. By questioning the child, the child can establish visual recognition of the object, thus building their vocabulary and language capabilities through hearing as well as speaking the language. In addition to parental interaction, there exists language within the show that has been designed by the program's creators to utilize techniques of questioning and answering, similar to those used by parents so that children with little language capabilities can learn through the repetitive language within each episode (PBS).

The question still remains, what affects, if any, does the use of "baby talk" have on language acquisition? One study seems to point out that hearing advanced language in the form of baby talk is a normal occurrence for young children. When adults speak to children, they naturally raise the pitch of their voice in a manner that constitutes baby talk. "The features of this style have been well reported by others but, briefly, we can say they raised the fundamental frequency of their voices, used simple short sentences with concrete nouns, diminutive, and terms of endearment, expanded the children's utterances, and in general performed the linguistic operations that constitute baby-talk style" (Cognitive Development 160). The understanding that this type of language, frequently heard from parents, is the basis of which children form their linguistic capabilities, leads to the assumption that exposure to this type of language within in Teletubbies is in fact as beneficial as a parent talking to their child. Both the tone and language structure that parents use towards their children becomes more highly developed, changing as their child ages and their language capabilities improve (Cognitive Development 161).

Teletubbies includes a combination of advanced as well as introductory language. "It would be foolish to create television programs directed at young children if they couldn't understand them," said Sylwester. "If a child can understand normal speech then they grow from what is heard and if a child's neural system does function well enough then all they hear is gibberish, and must rely on the television images and interaction with others as a source for learning." In order to cater to the educational needs of both the very young and developing brains as well as those children who's brains are more developed, Teletubbies includes this combination of early language skills, in the form of "baby talk," as well as more advanced language, which accounts for approximately eighty-percent of the speech content within the program. Children's programs that attracts such a diverse viewing audience must ensure that they include those factors vital to the targeted age

group, and through the controversial inclusion of "baby talk," Teletubbies has made certain that very young children can understand and become stimulated by the program.

Conclusion

"As a child's brain begins to develop, the connections within the brain are not robust. Initially we see children responding very slowly in the development of language and physical abilities, but television is a very rapid medium, it helps to speed up the processing abilities of the brain enormously. Those children who can understand and comprehend what is being presented in the television program grow from it, and for those who are not yet developed enough, television helps to speed up their processing abilities. Through the imitation of parents watching television and a child watching television themselves, children try to make sense out of what they are seeing and learn from it," said Sylwester.

Children develop at different rates and by understanding this we can see that the different educational components required to further develop each stage are evident in Teletubbies. Teletubbies is unique in many ways. One of the characteristics that sets this program apart is the target audience. Teletubbies is the first show that has targeted children under the age of one. A child under the age of one is certainly different developmentally than a child at 18 months, thus the show can not simply focus on one area of education, it must provide for a broad range of educational needs. These developmental needs include development of visual perception as well as vocabulary and language abilities.

What allows Teletubbies to serve as an educational program is a result of the fact that each developmental step is interrelated. As a child develops, their sensory-motor processes are the first to develop. This development allows children to view objects with increased definition, unveiling a world of more than simply light and dark images. This complex development leads to increased cognitive awareness as children begin to learn about the world around them. While learning about the real world, images are stored in the memory and as the words for these objects are learned, language is acquired (Acquisition and Development 9).

Teletubbies aids the development of these three stages. The program works to improve visual perception skills with the frequent use of bright colors and movement. As children's eyes are trained, their brains are able to learn rapidly and children seek knowledge and attempt to increase their mental understanding. At this stage in development, when vision has been refined, children benefit from the real world images present in Teletubbies. Children increase their cognitive understanding as they learn how things are related within Teletubbies and the real world. At this young age children have an enormous capacity to learn. Everything that is stored in the child's memory builds the basis for future learning. Finally, the cognitive development yields the ability to acquire language. During the ages of 12 to 18 months, the exposure a child has to the language allows them to build vocabulary and to create simple sentences. The audio breaks in Teletubbies that allow parents to verbally interact with their child, in combination with

the repetitive language used during the program, give children the opportunity to hear and practice language skills. Additionally, the inclusion of basic and advanced language enables Teletubbies to involve younger children, under 12 months, while also challenging older children to further their language skills.

While a one-size-fits-all model for educating children through television does not exist, Teletubbies represents one of the best attempts to date. The multiple educational components that are evident within Teletubbies, in combination with the targeted viewing audience, creates a program that is both educational and entertaining for children.

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