

An Empirical Review of Television as Potentially Beneficial Medium for Children; Exploring Some Realities.

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Introduction

The purpose of this literature review is to identify and review research which supports the view that children's television is a potentially beneficial medium; that in certain circumstances it can be a powerful educational tool; that it can inform and inspire; and that it is culturally relevant to today's children. Many discussions of television's impact on children focus only on its negative influence in relation to violence and advertising, for example, but it is also important to recognise that television can also have a positive impact. As two noted commentators point out:

Television can be of general benefit to children. It can bring them into contact with aspects of life they would not otherwise become aware of. It can provide a valuable tool in the home and at school not simply to keep children occupied but also, if used appropriately, as a constructive way to use their time....Television is not a 'one-eyed monster' lurking impishly in the corner of the living room, kitchen or bedroom waiting to exert an evil influence over young members of the household. It is a channel through which a range of entertainment, drama and learning can be obtained and experienced and increasingly these days it is under the control of the viewer (Gunter and McAleer, 1997: xii-xiii).

However, before starting such a review it should be noted that children's television consumption now takes place in a much more complex media environment. When British academic Maire Messenger Davies wrote her book *Television is Good for Your Kids* in 1989, which challenged the view that television turned its young viewers into 'layabouts' and

‘morons’, most British children only had access to the terrestrial offerings of the BBC, ITV and Channel 4. This landscape has radically changed, and British children now inhabit a ‘media-rich’ environment (Livingstone 2002: 41) of multichannel television, mobile phones, the internet and computer games. According to Ofcom’s latest media literacy audit, 72% of children aged 8-15 now have access to digital TV, 64% have access to the internet at home, half own game consoles, and 65% of 8-15s own mobile phones (including 49% of 8-11 year olds) (Ofcom 2006). However, although they use different media in their everyday life, television is still the most popular medium, occupying a significant proportion of children’s time, up to 13.9 hours a week, with higher viewing for those from ethnic minority (15.2 hours) and low income groups (15.5 hours) (Ofcom, 2006; see also Livingstone, 2002: 60; Rideout, 2003: 12).

Television is still an important medium for children and they use television actively. However, while children regard it primarily as a source of entertainment (see Buckingham, 1996; Livingstone 2002), many parents often see media, particularly for young children, as an important educational tool that can assist children’s intellectual development (see Rideout *et al* 2003: 12). In a recent American study, only 38% of parents believed that television mostly helped children’s learning, but they were relieved to make use of media, because they saw advances in the educational quality of media content (Kaiser Foundation: 2006: 32). In focus groups almost all parents pointed to ‘learning’ as one of the biggest advantages of television, and observed their children learning from television (*ibid.*). Buckingham and Sefton-Green, writing about the *Pokemon* phenomenon, point to the potential pedagogic value of non-educational programmes for children as well (i.e. those not particularly produced for educational aims), that show children how to learn (2004). They argue that *education* should be distinguished from *learning* (*ibid.*: 29). Children can learn skills from popular culture (e.g. *Pokemon*) such as how to behave, what to want and to feel and how to respond (p. 28). This type of learning is distinguished from ‘official’ educational knowledge. Viewed from this perspective the ‘learning’ that takes place via television makes it one of the major players in the socialization process alongside more traditional socializing agents such as the family, school and peer groups (Signorielli & Morgan 2001: 333), reflecting society’s values and culture (Takanishi 1982: 99).

In this review, the educational impact of television is related to a certain official curriculum while the learning impact of television has a broader meaning encompassing the socialisation process and how children develop their understanding of television. In general most of the studies that look at the educational impact of children's programmes originate in the US. They focus predominantly on educational programming (particularly *Sesame Street*) aimed at children aged three to five and the extent to which these programmes promote school readiness and academic skills. As a result, there is very little existing research concerning the potential beneficial impact of children's entertainment programming, and even less research that relates to British experiences and British programmes, where the categories of education and entertainment are often blurred (Close, 2004: 10). Finally, there is very little research on the potential beneficial impact of television, either generally or educationally, on older children.

Understanding how children develop televisual literacy

Before discussing the impact of television on areas such as language development, for example, it is important to understand how children acquire the skills that enable them to understand television. Children do not perceive television in the same way that adults do, and develop televisual skills step by step in line with their cognitive development. Age and linguistic maturity determine how a child will respond to and engage with TV. According to Piaget children experience four stages of cognitive development, which can be applied to television (Piaget, 1969; Lemish, 2007). Children under two experience a 'sensory-motor' stage, where their senses and actions show them that objects on television feel differently to those

experienced in real life (see Lemish, 2007: 39). During a 'pre-operational' stage between 2 and 7 when they are acquiring language, they develop representational thinking skills, which allow them to talk about their experience of television. Between 7 and 12 (the concrete operational stage), children begin to engage in abstract thought which allows them to understand the medium's codes and conventions sufficiently to follow storylines. They develop levels of perception (televisual literacy), which allow them to understand the chunks and segments that constitute a television programme and how they are linked (Signorielli, 1991: 28). From the age of 12 children are assumed to understand television in a similar way to adults (See

Lemish: 2007: 39; also Hodge and Tripp, 1986: 80-81).

According to Davies, while all children are born with 'an innate human capacity to learn', televisual literacy requires some learned and taught skills (1997: 3). She argues that 'children need to understand the world in which they live, including the way that it is represented in different symbolic forms' (1997: 3). These representations will vary depending on a child's home environment (the cultural, political and socio-economic background of the family) and where they live. Literacy, therefore, is about giving children access to representations, which allow them to understand and use the systems that represent reality – including audiovisual representations of reality (ibid.: 4).

Media literacy shifts the focus of study from television effects to what children can do with television and other media. Under Section 11 of the Communications Act 2003, regulatory authority Ofcom has a duty to encourage others to bring about a better public understanding of the nature and characteristics of electronic media content and the processes and systems by which it is delivered. Ofcom defines media literacy as 'the ability to access, understand and create communications in

a variety of contexts' without which people's ability to participate in society is greatly curtailed (Ofcom, 2006:2). Media literacy comprises 1) the ability to use a range of media and be able to understand the information received, 2) the ability to analyse the media contents/information critically, 3) the ability to create video and audio content, and 4) the ability to control and judge what kinds of content should be avoided. Viewed from this perspective children are perceived as 'active' rather than 'passive' media users, capable of developing media literacy skills just as well as the traditional literacy skills of reading and writing (Huston & Wright, 1997)¹.

Children develop different types of media literacy as they grow up. Today children start experiencing television almost from birth even if it is just on in the background, (see Rideout *et al* 2003: 12). As children mature, television viewing increases due to increased comprehensibility. Anderson and Pempek established that children aged 12 to 24 months paid higher levels of attention to *Teletubbies*, a programme specifically designed for them, than to *Sesame Street*, a programme targeted at older children (2005: 510). This act of paying attention was part of the process of developing cognitive skills. They state that It appears that videos and TV programs

that are directed at infants and toddlers can gain high levels of sustained attention ...

In the case of infants and toddlers, if comprehension is minimal, attention to television by very young children may be purely reactive due to frequent elicitations of the orienting reaction by visual and auditory change. On the other hand, programmes that are directed at them may be comprehensible and, thus, reflect higher cognitive processing (Ibid: 509).

Teletubbies is a good example of a programme that attracts high levels of active attention 'with singing, dancing, pointing, imitating behaviours, speaking back to the television and generally reacting enthusiastically with great joy' (Lemish, 2007: 46 citing research that first appeared in *Television*, 1999, 12/2).

Young children start to understand television from an early age. As they mature they learn to draw distinctions between their own world, what is shown on television and whether it is true to life. In a three-year British study of five year olds in a large urban school, Gosling and Richards established that children could talk about what was real in television programmes, and some showed understanding of television's basic technical processes. These studies illustrate the extent to which children

(from infants to preschoolers) gradually develop their televisual literacy.

While younger children acquire basic skills, older children can become critical viewers, using television to construct identities for themselves and distinguishing themselves from other children. In a study of how children's television tastes develop, Davies et al conducted interviews with children and found that the act of classifying programmes served as a means of social self-definition: For example, when a group of Year 2 [6-7 year-old] boys collapsed into laughter at the mention of *Teletubbies*, they were clearly distancing themselves from the younger audience for whom the programme is designed - and from the girls in their class who had appropriated its 'cuter' aspects. Similarly, when a group of Year 2 girls covered their ears every time football was mentioned, they were self-consciously constructing their own girlishness by rejecting the male world of football (2000: 8).

The description above shows how children aged 6-7 have already developed gender identities and are able to categorise programmes through their own distinctive tastes. In a similar vein, Buckingham points out that the ability of older children to exercise critical judgements on

programmes serves particular social purposes connected with their developing media literacy: They enable children to present themselves as sophisticated viewers, who are able to 'see through' the medium, and hence to differentiate themselves from those who (by implication) cannot. Critical discussions of the media therefore provide important opportunities for 'identity work'- for laying claim to more prestigious or powerful social identities (2003: 109).

In summary then, children gradually develop different types of skills through watching television. Over time they learn how to understand television, but may not perceive it as adults do. Understanding what children can and cannot do with television and how they perceive it is therefore essential for examining how it impacts their lives. As children acquire more experience of television, their ability to comprehend its content and translate those meanings into learning increases.

Television and young children's language acquisition

Several studies have shown how young children's language acquisition can benefit from television. However, this seems to be limited primarily to age appropriate

programmes with specific educational purposes for 3-5 year olds (Cross, 2004: 16; Lemish, 2007: 157). In one study it was found that babies and toddlers who watched *Sesame Street* learned vocabulary, concepts (shapes, colours) and could identify letters and numbers, particularly if they were aided by parents (Lemish and Rice, 1986). In a study of infants' and toddlers' television viewing and language outcomes by Linebarger and Walker (2005), it was shown that some pre-school programmes, but not all, can lead to larger vocabularies and higher expressive language (word production) scores among younger children under 30 months.² Some programmes, such as *Blue's Clues*, and *Dora the Explorer*, which include on-screen characters talking to the child, encourage participation, label objects and invite children to respond, were positively related to expressive language production and vocabulary (2005: 639). Programmes such as *Arthur* and *Clifford*, which had a strong narrative, were visually appealing, and contained opportunities to hear words and their definitions, also appeared to support language acquisition. They found for example that:

1. Combined viewing of *Arthur* and *Clifford* was related to 8.60 more vocabulary words at 30 months as

well as an increase in the vocabulary growth rate of 0.61 words per month when compared with non-viewers.

2. Combined viewing of *Blue's Clues* and *Dora the Explorer* resulted in 13.30 more vocabulary words at 30 months as well as an increase in the rate of growth in vocabulary words of 1.35 words per month compared with non-viewers.

As with vocabulary, the relationship between certain programmes and expressive language production (the frequency of child communicative behaviours such as gestures, vocalizations, single and multiple word utterances during a six minute period) were different for different programmes (2005: 637).

Combined viewing of *Arthur* and *Clifford* and of *Blue's Clues* and *Dora the Explorer* resulted in more single and multiple word utterances at 30 months when compared with non viewers (2005: 637).

In an overview of the literature, Naigles and Mayeux (2001) found that in certain circumstances children can learn words and their meanings from educational programmes specifically designed for them. At the most basic level children under two frequently or occasionally call

attention to objects on screen, they ask questions and can be very attentive to an engaging programme: 'laughing at appropriate points and repeating parts of the ongoing dialogue' (2001: 136). Singer and Singer (1981) found a modest relationship between the amount of educational television viewed by pre-school children and their use of commands and exclamations in spontaneous speech (in Naigles and Mayeux, 2001: 139). Although there is not much evidence to suggest that educational programmes help children to learn grammar, there is evidence to suggest that they can learn something about the meaning of words from educational programmes (lexical development – word diversity), which are designed with word learning in mind (ibid: 141).

In a longitudinal study of children and *Sesame Street*, the parents of children aged 3 or 5 years of age kept diaries of their children's viewing over a 2.5 year span so that the degree of children's vocabulary growth could be assessed (Rice *et al* 1990). This study revealed that the younger children (aged 3) who watched more *Sesame Street* between the age of 3 and 5 had greater vocabulary growth than those who watched fewer hours. Children aged 3 scored higher on school readiness, reading,

number skills and vocabulary, if they were regular watchers. However, viewing at five did not predict vocabulary scores at seven, suggesting an 'early window' of opportunity where the effects of educational television are strongest.

In a further study, Singer and Singer (1998) investigated the extent to which pre-schoolers can learn unfamiliar nouns from *Barney and Friends*. Those children who watched 10 pre-selected episodes of the show over 2-3 weeks in a day care setting showed gains in their vocabulary to produce correct definitions compared to those children who did not watch the same *Barney* episodes. The gains were even larger if children participated in 30-minute lessons about the episodes after viewing (1998: 330-31), suggesting that the learning experience from television is enhanced through adult involvement (see also Close, 2004: 15). The finding that age-appropriate educational television for 3 to 5 year olds encourages the comprehension (receptive vocabulary) of spoken words was also established by St Peters et al (1989).

In another longitudinal study by Wright et al (2001) on the impact of educational television on the school readiness and vocabulary of 240 children aged 2 and 4

years from low-income families over a three year time span, it was established that children who watched *Sesame Street* between the ages of two and three gained in pre-academic skills. Children who watched educational television frequently when they were two and three years old performed better on the language tests (PPVT, Bracken school Readiness Scale, Woodcock-Johnson word subtest and applied problems subtest) at aged three than did those who were not frequent viewers (Wright *et al* 2001: 1356). This contrasted with children aged three who watched more general-audience programmes and who by ages four and five showed lower skills in school readiness and vocabulary tests (*Ibid*: 1357). Viewing at 4 yrs did not significantly affect scores later, which reinforces the notion of an 'early window of opportunity'.

Based on an overview of predominantly US research, the benefits of television for language development in pre-school children in certain circumstances are further confirmed in a literature review for the National Literacy Trust in Britain. The review draws the conclusion that

Given the right conditions, children between the ages of two and five may experience benefits from good-

quality educational television. For this group of children there is evidence that attention and comprehension, receptive vocabulary, some expressive language, letter-sound knowledge, and knowledge of narrative and storytelling all benefit from high-quality and age-appropriate educational programming (Close, 2004: 4)

But in keeping with the earlier American review, the literature has not established whether children develop grammar, phonological awareness and knowledge of literacy from viewing this type of programming. Some educational programmes appear to be beneficial and helpful in developing children's linguistic skills, but this depends on the quality of programmes and whether they are age appropriate (see Linebarger & Walker 2005: 642).

In the UK, some of the findings relating to language development seem to be confirmed by parental observations. A British study of young children's use of popular culture, media and new technologies found that parents of children under six were very positive about the educational benefits of high quality children's television for pre-schoolers with

79% of respondents agreeing or strongly agreeing that television helped their child's language development (Marsh *et al* 2005: 33). Parents confirmed that their children were 'actively engaged with television content for some of their viewing time, with singing, dancing, copying characters' actions, shouting out answers and role-playing stories constituting some of the more popular activities (Marsh, 2005: 27) . In relation to language development and television, parents confirmed that their children learned the following in line with the curriculum for the foundation stage in England:

- to use words, gestures, simple questions/statements;
- to listen to nursery rhymes, stories and songs, joining in with repeated refrains;
- to enjoy listening to and using spoken language
- to sustain attentive listening, and respond
- to extend vocabulary, exploring meaning and sounds of new words
- to use language to recreate experiences
- to use talk to clarify thinking, ideas, feelings and events
- to link sounds to letters

- to begin to be aware of the way stories are structured

The studies outlined above show that under certain conditions television can offer opportunities for language learning among young children, but more research is required on specific effects and causal relationships.

Positive and long-term effects of educational television (reading, writing, school-readiness)

The previous section examined very specific skills related to linguistic development. This section examines educational television's long-term effects on academic achievement. There is strong evidence that age-appropriate educational television has positive effects on children's development. Much of the work carried out in this area relates to *Sesame Street*, a programme, originated in 1969 by the Children's Television Workshop (CTW), a non-profit subsidiary of National Educational Television in the US. This brought producers and writers together with child psychologists and educators to create an entertaining programme that was also guided by detailed research and curricular goals from the start (Morrow,

2006: 5). *Sesame Street* was designed to prepare children for school by encouraging knowledge and skills that improved vocabulary, numeracy, the use of language and understanding of the world around them (see Gunter and McAleer, 1997: 57). Each show had to demonstrate that it could hold the attention of its young audience (*ibid.*), and formative and summative research was used to improve the effectiveness of the programme's curricular goals (Morrow, 2006: 77).

Quite early on *Sesame Street* was found to have beneficial effects (Ball and Bogatz, 1970; Bogatz and Ball, 1971). Among 3-5 year olds who were heavier viewers of the programme, an increase in skills relating to the alphabet, numbers, body parts, shapes, relational terms and sorting and classification was noted, regardless of age, sex or socio-economic status, and native language. In a follow-up study in the second year of a subset of children who had started school (Bogatz and Ball 1971), it was found that children who had watched the programme frequently were better prepared for school than non or low viewing children. Improvements in cognitive skills relating to literacy and maths were also evident in research into international co-productions of *Sesame Street* in Mexico, Turkey, Portugal, and

Russia (cit. in Fisch, 2005: 10). Later studies have confirmed the data about educational achievements (letter recognition, story telling) and school readiness from *Sesame Street*, particularly among low income families (Zill, 2001).

A quarter of a century later the long-term effects of the show also became evident, with stronger educational performance by school students who watched the show as small children (Anderson et al, 2001). In a re-contact study, it was established that 570 high school students who had watched *Sesame Street* as young children achieved higher grades in English, Mathematics, and Science in junior high or high school, particularly among boys. They read more often, had higher academic self-esteem, and valued academic performance more highly (Anderson et al, 2001; Huston, et al, 2001). This suggests that those who watch educational programming enter school with learning skills that make them more interested and motivated learners, which sets them up for academic success (Anderson et al, 2001). More recently Nickelodeon's *Blue's Clues* has also been successful in meeting educational goals for its 3 to 5 year old audience, who outperformed non-viewers in non-verbal skills and problem-solving ability. Their carers rated them as better at solving

problems and more pro-social compared to non viewers as well (Anderson et al, 2000). Programmes like *Blue's Clues* and *Dora the Explorer* in particular invite children to actively solve problems and communicate while they watch.

Other studies have also shown that a wide variety of US educational programmes for children on PBS can enhance older children's skills and knowledge in language and literacy (*Between the Lions*; *The Electric Company*), mathematics and problem solving (*Square One TV*, *Cyberchase*) science and technology (*3-2-1 Contact*, *Bill Nye the Science Guy*) and current affairs (see Fisch: 2005: 11-12). British researchers have also established that pre-teens and teenagers can learn from science broadcasts, which may enhance their ability to recall scientific facts and their comprehension (cit. in Gunter and McAleer, 1997: 58-59)

The value of comparing early viewing of *Sesame Street* with school performance later is that not all children were exposed to the programme when it first started in 1969, therefore allowing more effective comparisons between viewers and non-viewers. In a recent study by the University of Chicago, Gentzkow and Shapiro suggest that children who watch

television perform marginally better at school (2006). In order to test their hypothesis, the researchers examined whether the introduction of television in the 1940s resulted in a decrease in educational achievement. They looked at the educational achievements of students aged 11, 14 or 17 in 1965, who were pre-schoolers in television's early years. They found that pre-schoolers who watched television performed marginally better in reading and general knowledge at school – with non-whites, those where English was a second language and those with poorly educated mothers gaining the most. In a study of *Barney & Friends* by Jerome and Dorothy Singer (1998), the effectiveness of this television series for preschool children was evaluated. Children in a US day care centre aged 2 to 7 watched the same episodes over two weeks and were interviewed. The findings showed that

- 1) Nearly two thirds of the children could report accurately what they had seen,
- 2) About 55% of the children also managed to mention some characters,
- 3) Sometimes children demonstrated evidence of new words in their vocabularies relating to a specific episode.

Episodes were chosen which reflected certain variables: cognitive, physical health, emotional, and social attitudinal features³ (Ibid: 313). In the first study, 121 white middle class children were divided into four groups. The first group viewed the series over two weeks, with each episode followed by a lesson connected to the programme's message. The second group watched without follow up lessons. The third group did not watch the programme but received a lesson, and the fourth group neither watched the programme nor received a lesson. The strongest gains were by those children whose viewing was combined with a follow-up lesson, followed by those who just watched the video and those who just received the lesson. Singer and Singer concluded:

It is evident that our pooled estimate of the didactic value of each episode in the area of cognitive skills (e.g. vocabulary, counting, numbers, shapes) is a striking predictor of what 3 and 4 year olds will retain and verbalize from an episode just viewed ... The evidence was very clear from this study. We found periods of concentrated group attention throughout more than 60%

of the time in the half hour episodes. Rating by observers indicated many signs of open enjoyment, smiling, and laughing about 70% of the time as the children watched the episodes ... Singing along with some of the songs was common for a great many children during the musical episodes (1998: 326-7).

In a second phase, Singer and Singer sought to establish whether the same effects were evident among children from different ethnic groups and lower socioeconomic status. Children in day care settings in five regions of the US were split into different groups in order to establish the effectiveness of *Barney & Friends* for enhancing children's cognitive skills (e.g. vocabulary, counting, numbers or shapes). The groups were divided as follows:

1. Experimental Group A: Viewing of the 10 *Barney & Friends* episodes over a 2 week period, but with viewing followed by a teacher "lesson" or set of exercises augmenting the material included in the episode.
2. Experimental Group B: Viewing of the same 10 *Barney & Friends* within a 2 week period with no

teacher follow-up.

3. A control group that received no special treatment

They also analysed teaching plans⁴ (e.g. vocabulary, what children thought about what they saw and other skills), integrated with the episode (1998: 331). Again they found that the viewing-plus-teaching group made the strongest educational gains in terms of vocabulary, social attitude, and civility, with no consistent significant gains by the group that simply watched the programme. Experimental Group B followed them in areas of vocabulary, social attitude and civility, nature, and awareness of health. The study suggests that a combination of viewing and follow-up teaching is a more efficient way of teaching knowledge and skills to young children, than simply watching the television show without any follow-up. It also suggests that content is important for teaching specific issues, and that well-planned and appropriate-aged educational programmes play an important role in children's academic achievement. A study of the use by teachers of the educational programme *Look and Read* in Britain in the 1980s, also confirms that programmes are most successful in achieving their academic aims if there is relevant follow

up work in class (cit. in Gunter and McAleer, 1997: 180)

Although there are few studies that correlate watching pre-school television with educational achievement in Britain, recent work by Marsh with parents of pre-school children revealed that parents were 'generally very positive about the role of media in their young children's social, emotional, linguistic and cognitive development' (2005: 5). Although the research does not examine the educational effectiveness of pre-school children's favourite programmes (*Tweenies, Balamory, Big Cook, Little Cook, Dora the Explorer, Scooby Doo, Bob the Builder, The Fimbles, Noddy, Come Outside, Teletubbies*), parents were able to give examples of what they think their children have learned linked to the Foundation Stage Curriculum including:

- Mathematical development: willingly attempt to count, recognise numerals 1 to 9, recognise and recreate simple patterns, and begin to use mathematical names for shapes.
- Knowledge and Understanding of the world: find out and identify some features of living things, objects and events and also some

features in the place they live and in the natural world; ask why things happen and how things work; begin to operate simple equipment; begin to differentiate between the past and present; find out about events; gain awareness of the cultures and beliefs of others.

- Physical development: movement with control and coordination (songs and dance actions); show awareness of healthy practices (brushing teeth, and washing hands); recognise the importance of keeping healthy (safety/road issues).
- Creative development: response to sound with body movement (dance and sing); recognise how sounds can be changed, sing simple songs; match movement to music, make constructions, drawing and dances; explore colour, texture, shape and space and form in two or three dimensions (making models); and use their imagination in art, design, music, dance, imaginative role play and stories (Rifat, 2005: 35-36)

The same study surveyed early years practitioners who showed generally positive attitudes toward the role of media and popular culture in young children's

lives (Marsh, 2005, 6, 60). 92% of practitioners surveyed agreed or strongly agreed that children learn from television, 67% disagreed that it is harmful for children's language development, although 83% felt that children watched too much (ibid: 48). Action research where practitioners were encouraged to use popular culture such as *Bob the Builder* or *Finding Nemo* as learning materials, was found to have a significant impact on children's oral development, especially for children who speak English as an additional language (Marsh *et al* 2005: 69). Older children can also benefit from watching television in a classroom setting. As Davies points out, the presence of a teacher watching with them, who is 'able to stimulate and share in the discussion', shows 'how much an interested adult can contribute to children's experience of watching television' (see Messenger Davies, 1989: 126).

A study that looked at how young school children engaged with the phenomenon of *Pokemon* illustrated the ways in which they can participate more effectively in traditional school-based literacy practices if they are given more opportunities to exhibit the knowledge and skills they have acquired from their own interests such as *Pokemon* (Bromley, 2004). Allowed to

engage with *Pokemon* as a group in class, Bromley found that children become very creative in writing their own stories, or a child who had never had social status in the classroom gained confidence by his peer's acceptance and appreciation of his wide knowledge of *Pokemon* (Bromley, 2004: 223). In a climate where children have to follow teacher-led models for literacy and numeracy with little recognition of their interests, Bromley suggests that children should be given more opportunities to exhibit their knowledge and skills (Ibid). If educators had more flexible attitudes towards popular culture, they could use some elements to create 'educational' material, and also enhance children's media literacy as well as traditional forms of literacy (Bromley 2004; Marsh *et al* 2005).

Although very young children can and do learn from educational television, some programmes are more effective than others. Factors which raise this effectiveness include: the use of appealing elements such as humour; the use of age-appropriate topics and language; handling educational content in ways that are clear, direct and explicit; focusing on a small number of ideas in one episode and employing repetition; using action-filled visuals and characters with whom children can

identify; encouraging children to actively engage in the content themselves through viewer participation and motivating children to carry their learning forward (see Fisch, 2005: 13; also Lemish, 2007: 173).

By contrast there have been very few studies which investigate older children's learning from television (Huston et al, 2007: 59). This may be due to older children being less receptive to educational television as they grow older, but it is also driven by the funding available for research into the effects of educational television on preschoolers in America. Educational television may also play less of a role once children enter school. Compared with younger children, older children prefer more complex programmes including drama, and programmes that feature verbal humour and relationships (Ibid), which means that they also become more drawn to adult programming. Likewise there is very little research on children under 3 years, partly because of the difficulties of getting responses from very young children. However, in general it seems that educational television used in the right context can enhance learning.

Television and pro-social

behaviour

While there have been many studies of the academic effects of educational television, there have also been studies that show that viewing of pro-social television programmes can result in positive changes in children's social behaviour including increases in 'altruism, helpfulness, generosity, and other social skills (Gauntlett, 2005: 55). Other skills associated with pro-social behaviour include self-control, delay of gratification, sympathy and empathy for others, learning to persist in a task, and reduction of stereotypes. As Gunter and McAleer point out, 'Television programmes contain many examples of good behaviour, of people acting kindly and with generosity. It is equally logical to assume that these portrayals provide models for children to copy, too' (1997: 117).

However, the research is rather limited and dominated by US educational programmes such as *Sesame Street* and *Mister Rogers' Neighbourhood* aimed at pre-schoolers which are made 'for explicitly and self-consciously 'pro-social' purposes' rather than more general programming that also targets older children (Gauntlett, 2005: 79). Gauntlett points out that few researchers have tried to examine the effects of

‘regular’ programmes, where positive effects are not the main aim (*ibid*). As a consequence thousands of programmes, such as super-hero cartoons or live-action programmes, which are not deliberately ‘pro-social’, but may feature ‘good, moral heroes, or friends and families caring for each other, or any other ruminations about how best to go about life’ have been ignored (*Ibid.*; also Hogan, 2001: 666).

In the case of *Sesame Street*, early studies in the 1970s showed that, in addition to teaching intellectual skills, regular and sustained viewing of the show also promoted friendship and other pro-social behaviour, including more positive attitudes towards children from other races (Bogatz and Ball, 1971). According to Lesser (1974: 225), children who were regular viewers of the show were rated more highly by teachers for their relationships with other children and for their school readiness than children who did not see the show. Studies of *Mr Rogers’ Neighbourhood* over time also showed that children improved pro-social skills such as persisting with tasks, assisting others, and being more cooperative after watching episodes where characters helped others (cit. in Lemish, 2007: 83; also Gunter and McAleer, 1997: 124)). The positive effects were stronger

if accompanied by follow-up activities (see Mares and Woodward, 2001: 194). This pro-social tradition is continued by more recent shows such as *Dora the Explorer*, which introduce children to different cultures.

In one early study of pro-social behaviour from 1975, it was suggested that children who viewed an episode of *Lassie*, where the owner risks his life to save a puppy, were more likely to provide help to others (Sprafkin, Liebert & Poulos, 1975). However, this was deduced from the children’s willingness to stop playing a game when they heard fictional puppies in distress. Children who viewed the pro-social episode pushed the button twice as long as children who did not.

More convincingly, in a recent study of US children in Grades 2 to 6, children were asked to note down the lessons they learned from watching pro-social and educational television on the public network PBS and Nickelodeon (Calvert & Kotler: 2003). Children in this study reported that they learned social-emotional (pro-social) lessons, followed by informational lessons, physical/well-being lessons and cognitive skills lessons from their viewing (*Ibid*: 303-4). Retention of these lessons occurred more often when

children watched educational programmes than entertainment programmes (2003: 325). In a similar vein teenage-targeted drama shows like the Canadian *Degrassi Junior High* have been shown to raise viewers' awareness of relevant issues (drugs, alcohol, relationships) and to reflect on these (Singer and Singer, 1994).

In a 1982 study of the drama *Freestyle* in the US, Johnston and Ettema found significant reductions in gender stereotypes among 7,000 children aged 9 to 12, who watched 26 episodes of the series designed to change sex-role stereotypes. Questionnaires administered before and after viewing found that boys became more accepting of girls participating in roles and sports that were traditionally considered male (mechanics, engineers), and girls became more interested in these. As with pre-school programming (see Singer and Singer, 1998), the effect was more pronounced if it was followed up by classroom discussions with teachers, typically doubling changes in attitudes and beliefs (Johnston and Ettema, 1982; also Mares and Woodward: 2001: 195). Other programmes that have been found to break down stereotypes include *Nash Maalo* (Our Neighbourhood), a project designed to encourage mutual respect and

understanding in multi-ethnic Macedonia (cit in Lemish, 2007: 140). In Britain, research on *Rainbow* conducted with primary school children in the early 1980s showed that an episode where a mother went out to work and the father stayed at home produced a substantial short-term shift away from traditional stereotypes about domestic roles, but less change in beliefs about occupations (Durkin, 1983, cit in Gunter and McAleer, 1997:80).

There are few studies of the pro-social effects of children's television in Britain. In a recent report on young children's use of popular culture, media and new technologies, parents identified various pro-social behaviours in their children including 'social interaction, consideration of others, how to deal with situations' (Marsh et al, 2005, 36). In this study parents were able to identify examples of pro-social behaviour learned from television, which linked to statements from the foundation stage curriculum:

- maintaining attention, and learning to sit still
- being sensitive to the needs and views of others (e.g. manners, sharing)
- developing respect for different cultures including their own

- to value and contribute to their own well-being and self-control
- to understand agreed values and codes of behaviour, how to behave
- to have an awareness of behavioural expectations
- to understand what is right and what is wrong
- to dress independently and manage their own personal hygiene
- to understand that people have different needs, views, cultures and beliefs that need to be treated with respect (Marsh et al: 2004, 35)

Although the survey illustrates the various pro-social skills that parents believe their children acquire from television, it does not refer to specific effects from specific programmes. Moreover, pro-social effects also occur from programmes which are not educational. For example, *Animal Hospital/ER* types of programmes can teach children the ethics of care, especially when children see suffering animals (Hill 2005). In a similar vein, children who watched anti-social behavior in the BBC children's school dram *Grange Hill* learnt pro-social behaviour. According to Davies:

.... if you see bullying and protection rackets on *Grange Hill* (particularly

when you see the culprits being punished or ostracised) you may not be so keen to follow their example, because bullying other children is not such a pleasurable activity as having a good time with your mates at some activity or other (Davies 1989: 160).

Of course, the ability of television to bring about pro-social behaviour is also affected by a world which contains many more complex social influences on children. According to Fisch, the effects of pro-social television often appear less strong than the academic effects of educational television (2005: 18). This may be because attitudes and emotions are more difficult to define and measure than academic achievements, that some series are more effective than others or that children are more resistant to changes in their social behaviour than to their academic knowledge (Ibid.). Moreover, 'it is important to remember that the pro-social messages presented in an educational programme are likely to be mediated by lessons learned from family and peers, as well as children's own life experiences' (Ibid.: 12). That is, television can assist in the development of pro-social behaviour, but the cultural environment where a child lives influences a child's interpretation of a message. For younger children in

particular pro-social concepts of fairness, equality and taking other people's views into account take time to develop, and are influenced more by family and community than television (see Davies, 1989: 161). Television can have socially desirable effects, but there is a need for more research to find out how this works and what type of content works best.

Why do Children watch TV and how do they watch?

The previous sections have looked at what children, pre-dominantly pre-school children, can learn from television in terms of academic achievement and pro-social skills, but many British studies use a more child-centred approach which examines why and how children use the media, and relate it to the development of their media literacy. Reasons for watching usually revolve around passing time; for learning; for companionship; for relaxation, escape and arousal (Gunter and McAleer, 1997: 19). Studies in Britain have shown that children watch television when they get bored, and that they expect excitement and pleasure from television rather than education (c.f. Livingstone 2002, Buckingham 1996). According to Hill, 'For children, television is "good" when it is engaging, action packed, funny, and

above all, entertaining' (2004: 183). The reasons why children watch television are complex and, like adults, relate to their need to find information, to pass time, to be entertained and to find comfort, with some research suggesting that it can be a way of dealing with hostile social environments (Master, Ford, Arend, cit in Gunter and McAleer, 1997: 28). An ITC (Independent Television Commission) report on children and cartoons underlines the pleasure children get from watching television:

After school, television is seen as something which helps children to relax and unwind. It keeps them entertained without their having to make much of an effort. It is entertainment for children on weekend mornings, keeping them company while mum and dad are still in bed. Cartoons have a particular role within children's (5-9 years) television viewing. They are short, easy to dip in and out of, fun, funny (they make children laugh), and exciting (the thrill of 'scary good') ... Children find cartoons both stimulating (action, colour and music), and relaxing (they require little effort to watch). They have a

simple content which is easy to follow (Chambers *et al* 1998: 39).

Younger children also use their experience of television in play, imitating *Power Rangers* or playing *Dragon Ball Z* games. In this way television content is used to construct make-believe worlds through imagined play (see Lemish, 2007: 63). Television in this sense acts as an important outlet to express feelings and fantasies.

According to Huntemann and Morgan the media play an important role in the process of identity development, through the establishment of role models, and this shapes what children think about the world and how they perceive themselves in it (2001: 309). Children can develop a sense of themselves through the media, which offers a way of forging relationships with family members and peers (Marsh, 2005: 12).

As they get older this applies particularly to drama. They can learn about secondary school, for example, from realistic soaps like *Grange Hill* (Davies 2001). Dramatic characterisations and plots can show children how to deal with other people, solve personal problems, make friends and

get on in life (see Gunter & McAleer, 1997: 20).

In this respect drama can be a major source of social learning where they learn about themselves and about life. However, according to Buckingham, children's involvement with drama is complex:

Children's responses to melodrama and soap opera also involve a complex combination of 'distress and delight', in which the masochistic experience of pain and suffering is balanced by a utopian desire for the joy and pleasure that might have been. Furthermore, as in the case of horror, these emotional reactions depend upon complex forms of cognitive or intellectual judgment, in which children's developing knowledge of the genre, and of the medium itself, plays a crucial role. And, here again, the social context of viewing and of talk about viewing significantly determines the ways in which children make meaning and pleasure from what they watch (1996: 140).

In watching television, older children also develop critical thinking, about what they like and don't like, becoming more sophisticated viewers in the process

(Buckingham 1996 :132; Hill, 2004). According to Buckingham this process of engaging in critical viewing practices is part of the process in which they construct their own identities:

...children inevitably become aware of critical perspectives on the media as part of their everyday experience. Judgements about whether television is or is not 'realistic', for example, are part of the stock in trade of most viewers' discussions of their favourite programmes. To some extent, this can be seen as a function of children's general cognitive development ... critical discussions of the media therefore provide important opportunities for 'identity work'- for laying claim to more prestigious or powerful social identities (2003: 109).

In the case of school children, television programmes which are not specifically produced for 'educational' purposes can teach them about society and its values. In evaluating programmes they are developing their own identities and critical thinking skills.

How do parents regard their children's viewing?

It has already been pointed out that parents of children under six from all socioeconomic backgrounds often see media including television as an important educational tool that can assist their children's educational development in areas such as maths and literacy (Rideout et al: 2003, 12; Marsh et al: 2005). While teachers have some misgivings about the use of television, parents are more positive about its role in their children's social, emotional, linguistic and cognitive development and witness some beneficial aspects (see Marsh et al 2005; Rideout et al 2003). The success of educational toys associated with popular programmes such as *Teletubbies*, *Thomas Tank the Engine*, *Bob the Builder*, and *Noddy* are also indications that parents perceive educational benefits from associated books and magazines (see Buckingham and Scanlon 2003: 76-79). They also recognise that these programmes are significant for children's identity construction. According to one parent:

I think they [media icons] are quite important to her, she's not got any particular favourite but she likes to, you know when she goes to play

school she knows what all the other children are talking about you know, she has a 'Spot' and 'Thomas' lunch box, a 'Bob the Builder' lunch box, and I think because she's seen and been exposed to it, it helps her with sort of interpersonal skills of both sexes. I think it's, like, if she wasn't exposed to it she wouldn't maybe have anything to talk about or any relationship with these children, because she wouldn't know what they were talking about (cit. in Marsh et al, 2005: 46).

The socio-economic backgrounds of parents may influence their attitudes towards their children's viewing habits. Livingstone (2002), for example, points out that middle-class children have more options to fill in their 'unstructured time' with other leisure activities (e.g. piano lessons) other than television. On the other hand, there is an assumption that lower class families may use television as a baby sitter because it is a safe and relatively inexpensive way of occupying young children in communities with high levels of crime and poverty (see Jordan 2005: 534). However, in general parents in both British and American studies have witnessed beneficial aspects from their children's engagement with television.

Conclusion

This paper has looked at the potential beneficial impact of children's television on children's lives. Debate usually centres on television's negative effects but, as expounded across a range of different studies, it is clear that television can enhance academic skills such as school readiness and vocabulary, as well as pro-social behaviours and critical thinking practices. Television is neither good nor bad for children, but its impact is complex in the way it affects children's knowledge, beliefs and values. Although children rarely seek out 'educational' content, they can derive both pleasure and learning from programmes which combine both elements. In this sense, 'edutainment' programmes (*Teletubbies*) which blur learning and entertainment are ideal for both children and parents (Buckingham and Scanlon 2003).

Related to such issues, recognition of television's benefits can help to inform the production of new programming, 'bringing the voice of children into the production process', ensuring that programming is tailored to their needs, interests and abilities (Fisch: 2005: 13). This child-centred approach is already reflected in the

commissioning policies of the BBC, for example, which recognise that children need to have access to programming that is 'empowering, fun, and innovative, allowing children to relax and unwind in an environment which is relevant to their lives' (BBC 2006). At the same time, the BBC looks for factual programming that should aim to 'feed both the intellect and the imagination ... allowing them to express something of themselves and to help them understand their place in the world' (Ibid).

Although this review has focused on the potential beneficial aspects of television

for children, it has not looked at the beneficial aspects of extended media such as children's experiences of interactive TV, websites and associated toys and games. Increasing media use across different platforms cannot be ignored and is already reflected in a range of studies (Sefton-Green 2002; Livingstone 2002; Rideout *et al* 2003; Tobin 2004, Calvert *et al* 2005, Buckingham 2006, Rideout *et al* 2006, Ofcom 2006). Examining the impact of television in isolation may not be sufficient in future, and changes in the way that media are consumed across multiple platforms needs to be considered and examined as well.

¹ For example, if a child cannot read or spell, she/he may not be able to understand the onscreen instructions for interactive TV programmes.

² Watching *Teletubbies* though was related to fewer vocabulary words and smaller expressive language scores. Watching *Sesame Street* was related only to smaller expressive language scores. Viewing *Barney & Friends* was related to fewer vocabulary words and more expressive language.

³ 'If provided to a child by a caregiver, would increase the likelihood that the child would (a) look forward to school as a positive experience, (b) experience a sense of personal security and trust that might reinforce abilities to confront the school experience, (c) demonstrate cognitive preparation for the effort of learning reading, writing, and arithmetic skills, and (d) manifest the emotional enthusiasm, curiosity, self-restraint, emotional awareness, and cooperative social attitudes necessary in a classroom learning setting' (Singer & Singer 1998: 313- 4).

⁴ 'The form of each lesson plan consisted of (a) a synopsis of the *Barney and Friends* episode, (b) objectives derived from the main themes of the episode, (c) new words to learn, (d) materials needed for each activity during the lesson, (e) questions and discussion ideas for the children about what they had seen, (f) descriptions of some specific activities (e.g. counting various objects, making musical instruments), and (g) books that could be read to the children after the *Barney* viewing' (1998: 331).

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