CHAPTER 2

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The Essential Animation Reference

The animation "boom" extends, not surprisingly, well beyond the industry. "Many young people are attracted to the [animation] industry because they believe it is a way to earn a living as an artist," said animator/teacher, Leslie Bishko.

The time is ripe to assess the impact of computer animation on child and adolescent development. Most children now have access to home computers and are using them for everything from playing games to doing schoolwork to chatting with friends via e-mail to surfing the Web. With the increased role of home computers and TV in children’s lives has come increased concern about how children may be affected. Time spent on home computers and TV may displace other activities that have more developmental value, and the merit of the computer animation -based activities has also been questioned.

Today, parents buy home computers and subscribe to Internet access to provide educational opportunities for their children and to prepare them for the “information age.” Although they are increasingly concerned about the influence of the Web on their children and are disappointed with some of the online activities their children engage in—such as games and browsing the Internet to download lyrics of popular songs and animation pictures—parents generally view computers favorably, and even consider children without home computers to be at a disadvantage. Although research on the effects of children’s use of animation program is still sketchy and ambiguous, some initial indications of positive and negative effects are beginning to emerge.
The following reviews are available research about the effects of computer based programs on children’s activities and development.

**ESOURO CID**, Montserrat. Universidad Autonoma de Barcelona, Barcelona, Spain, 1996, made a study on “Can a computer programme improve your intellectual efficiency”?

This presentation describes the creation and functioning of a computer programme compound of 50 exercises divided in 10 difficulty levels of 5 items, developed to improve the intellectual efficiency.

It is explained by graphs how the programme informs about the goodness of the response and, if the answer is wrong, how it shows the correct one and justifies it. The programme chooses the exercises randomly for every difficulty level.

When an error occurs, another exercise from the same difficulty level is presented and to reach a higher level of difficulty the user must succeed in, at least, two items.

The programme must be executed in different sessions. After the first session it shows the undone items and the mistaken ones. The poster also describes the results of an investigation applying this programme and shows that the intellectual efficiency can be improved with computers programmes.

**BORREGO DE DIOS**, Concepción; Facultad de Ciencias de la Educación, Universidad de Sevilla, Sevilla, Spain, 1994, presented a paper on “School and television as means for social living education”.

The Spanish Education Reform has opened the debate about the role the school plays in Moral Education and different proposals have arisen to include cross-curricular or specific treatment of this field in the school curriculum.
From scientific Psychology a series of proposals coming from different theoretic and methodological viewpoints (social abilities, pro-social behaviour, self-concept, moral reasoning, etc) are trying to give an answer to the need for managing these questions in the school context in different ways (specific programs, tutorial activities of fields of experiences for living in society integrated in the school curriculum) Concerned about transferring psychological research to educational practice, these attempts risk decreasing their possibilities if they do not consider the broader culture outside of school where children usually develop. Mass Media, and particularly television, play a huge role in this extra-school culture through a narrative audio-visual language highly specialized and mediated by the commercial interests of cultural industry.

Given the specialization of the Educational System in the transmission of knowledge and abilities, the change of attitudes and moral values from the formal curriculum seriously competes with the audiovisual culture which invisible but very efficiently enters in school.

In this communication it make a comparison between models of persons and society behind some educational projects designed to stimulate social, personal and moral development and those which underlie some of the more popular series of TV cartoons.

GONZÁLEZ, Valentín E.; Department of Education, University of Gteborg, Sweden, 1993, has presented a study on “Children's understanding of figurative expressions, developmental and individual differences”.

A study involving 160 Swedish children aged 7 to 14 years has been conducted to ascertain qualitative differences in their understanding of figurative expressions. Twelve proverbs and idioms involving semantic clashes, e.g. 'Sow the wind and reap the whirlwind', where administered in an
open-ended questionnaire format. Subjects were asked to write as many congruent and different meanings to each expression as they could imagine. The obtained constructions were categorised according to their literal, lexical, figurative and original figurative content, and an index was assigned to each subject indicating his/her ability to offer examples of one or more of those categories.

Finally, a co-relational analysis relating age, gender, and the ability to produce alternative meanings was performed. A pattern emerged indicating that younger children tend to understand figurative expressions literally, while older ones are able to produce several alternative interpretations. The transition between those stages occurs around 9-10 years of age. Girls, in their turn, are able to perform at the last level earlier than boys.

The results are similar to those obtained in a parallel study using multiple-choice items for the same expressions. Nevertheless, the quality of the data is better in that it shows interesting differences in the meaning-making strategies used by each subject.

SAHIN, N.; Middle East Technical University, Ankara, Turkey, DURAK, A.; Bilkent University, Ankara, Turkey and DUR-KILIÇ, N.; Middle East Technical University, Ankara, Turkey have made joint study on “Preschoolers' learning of clock displays from television”

In the Turkish co-production of the preschool education series Sesame Street, segments were prepared to teach the reading of analog clock displays to older children in the target audience. The learning of clock displays is a relatively late-developing skill and involves some complicated mental transformations. The goal in the clock displays was to expose children to the initial stages in this chain of acquisitions necessary to achieve mastery over time-telling. Before the broadcast, 9 separate TV segments (5 animations, 4
studio pieces), and a total of 17 minute-long video material was recorded. The segments were ordered beginning from the simplest explanations; the clock, its "hands" and their movements, to treating the whole hours, half hours, and quarter hours. A total of 158 children between 5-7 years-of-age were pre-tested, watched the segments and were given an immediate post-test. The findings revealed significant gains after a single session of viewing, especially in the knowledge of whole hours, half hours and basic information about the clock.

A Report to the Markle Foundation by Ellen Wartella, Barbara O’Keefe, and Ronda Scantlin, May 2000, presented a topic on “Children and Interactive Media: A Compendium of Current Research and Directions for the Future”.

A number of people contributed to the culmination of this report. Many experts participated in a conference convened to discuss the literature and research in the area of children and interactive media.

In this review, the goal is to highlight the foundation literature, as well as the most recent publications in the area of children and new technologies. It has included a comprehensive listing of citations to complement the literature review in the form of an annotated bibliography.

In particular, it has noticed that the literature on the role of interactive media in children’s learning (and thus interactive media’s impact on cognitive development) is rooted in a literature on media socialization that is quite distinct from the uses and effects model, which dominates the literature on the impact of media on children’s social development and behavior.

Libby Hanna, Ph.D, made a study on, The Role of Usability Research in Designing Children’s Computer Products.
Usability research with children has often been considered either too difficult to carry out with unruly subjects, or not necessary for an audience that is satisfied with gratuitous animations and funny noises. In addition, traditional measures of usability such as productivity indices and speed and efficiency of task completion are not generally appropriate to use for children’s products. However, this research at Microsoft indicates that the usability of a product is closely related to children’s enjoyment of it. Therefore it has worked hard to develop sound methodologies for usability testing with children. This paper describe the methods that used during various stages of product development, design guidelines that have resulted from our research and useful practices for working with product teams and upper management that have learned along the way.

Microsoft usability engineers have been working on children’s products for many years, but it was only recently that usability was formally incorporated as a standard practice during product design. It might be useful to begin this chapter by examining the evolution of children’s usability research at Microsoft. At the outset, the Microsoft Kids product teams felt strongly that children’s engagement was more important than, or at least equally important to, usability. In fact, some product teams were abandoning usability work during the development cycle because it appeared too difficult to evaluate product ideas for "fun." When usability engineers attempted to operationally define engagement for research purposes, it was clear that a stable and consistent definition was not available.

Finally, it suggests ways to work with product teams as a usability engineer. All the expertise in the world will not guarantee success if the usability engineer does not know how to communicate effectively with his or her team. It is our sincere hope that other children’s usability engineers will benefit from the lessons learned by the Microsoft Kids usability team.
M. F. Murphy presented a paper on “Implementing the Personal Software Process (PSP) with Undergraduate Students”.

This paper describes an empirical case-study which used techniques and concepts from the Personal Software Process (PSP), developed by Watts Humphrey (1995), to teach software process improvement to under-graduate, computing students. The PSP claims to provide individual software developers with a structured and systematic way to improve the quality and predictability of the software they write (Humphrey, 1995). The objectives of this case study were twofold: First, to study the impact learning an adapted version of the PSP had on the estimating ability, the programming habits, and the quality of work produced by a group of PSP-trained students. Second, to compare the software development processes of this group with a control group of non-PSP trained students. A number of hypotheses were tested, dealing with four aspects of the PSP, namely: size estimation, time estimation, time management and software quality management. A post-course survey was also administered to the PSP-trained students. The results of the case study are described and discussed in this paper and recommendations are made for the future practice of the PSP.

Adrian O Connor and Fintan Costello made a project study on “The Design, Development and Evaluation of Online In-service Education for Primary School Teachers in Information and Communications Technology (I.C.T.)”.

The aims of this research project were as follows:

- To find out what online in-service education exists for teachers in Information and Communications Technology (I.C.T.) in Ireland and in other countries.
• To discover what the factors are which influence the effectiveness of online in-service education and learning for teachers in I.C.T.

• To investigate the requirements for effective online in-service education for primary school teachers in I.C.T.

• To design and develop a practical and effective World Wide Web Site which would provide and support in-service training for teachers at primary level in I.C.T.

In order to investigate the requirements for effective online in-service education for teachers in I.C.T. a pilot web site was developed. The web site was developed using the factors that influence effective online in-service education from the literature and the results of a postal questionnaire, which was sent to teachers in order to assess their views on online in-service education and to discover what content they would like to see on a web-based in-service site in I.C.T.

The results of the online questionnaire and the principles of effective online professional developments were used to develop a more effective and comprehensive web site for in-service education for primary school teachers in I.C.T.

The research study illustrated that teachers see a role for the Internet in future in-service education in I.C.T., but that time, rewards and accreditation must be provided for teachers who want to use this medium of continuing education. Both the literature and the research findings suggest that there is a role for the Internet in the provision of I.C.T. in-service to primary school teachers. The following recommendations are also made in order to enhance the effectiveness of the online medium in providing I. C. T in-service education to primary school teachers:
Incremental Approach to Online In-service Education should be adopted.

A Teachers Collaboration Network should be established.

A Continuing Programme of In-service Education for teachers should be provided.

Tom Nolan and Mark Humphrys, made a study on “Problems with Internet and Library Usage for Secondary School Children”.

This research consisted of investigating seven hypotheses using the following components:

1. Observation of forty-three secondary school children using the Internet and the library to complete five tasks.

2. An interview was held with all the participants in the study that was audio taped and subsequently transcribed.

3. An on-line form was constructed so that the students could nominate their favourite educational web sites for each class subject.

The participants were given five tasks and had to find the answers using two of the most common forms of information retrieval found in Irish schools, the Internet and the school library. Subsequently they were asked twenty questions about their opinions on aspects of the library and the Internet. Points of interest here included that the majority of participants felt that the Internet is faster, easier to use, and better overall than the library, even though it was proven not to be the case. It was also found that the participants nominated sites by domain name without actually investigating if the domain name had any reference to the subject in question.
The observation, interview and voting data was then analysed to investigate the seven hypotheses. These findings were then reported, discussed and ideas for future study were recommended. Proposed technical and teaching solutions to problems uncovered in this research are also outlined.

The above findings have implications for search engine design, the curriculum of the Irish education system, and for teachers in how they use both the Internet and the library to their full potential.

**Olivia Lernihan** has presented a paper on “*An investigation into the potential of the use of multimedia development WebCT to enhance the understanding of Information Technology for students, within a traditional 3rd level lecturing environment*”.

This dissertation examines the benefits of multimedia development WebCT, for third level full-time students as a support tool, in terms of its pedagogical benefits, its practical implementation and the design criteria used in its development. With the widespread availability of computers and the popularity of the Internet, educators have been quick to recognise the educational potential of using the communication tools of the computer to supplement their existing courses or offering full courses on-line. This has led to the development of countless Computer-Mediated Communication environments such as WebCT, in a very short time thus revitalising teaching methods by allowing for the utilisation of more modern methods of communication.

The syllabus in principles of Information Technology was placed online using WebCT with visual test and images, online quizzes via the Internet. The students in the study completed post-test questionnaires and both groups completed exams during the study. The structure of dissertation is
as follows: introduction, literature review, design and methodology, analysis, conclusion and findings, followed by relevant appendices. Both quantitative and qualitative methods were used to analyse the results of this research. Limitations to the study and possible future research possibilities were also considered.

The overriding conclusion of the research is that the provision of an online management course for third level students did not affect academic performance but may have affected the information sourcing behaviour of the students.

Fionnuala Flanagan, Ireland has made a study on “An Educational Enquiry into the use of Concept Mapping and Multimedia to Enhance the Understanding of Mathematics”.

This dissertation investigates the potential that concept mapping and the multimedia software Flash4.0 has for enhancing students' understanding of Mathematics. It focuses on developing the students problem-solving skills through use of concept mapping. The structuring of their solutions in a logical diagrammatic format through concept mapping will enable them to animate their Mathematical solutions through use of Flash4.0, thus creating a representation of their understanding of the Mathematics problem.

An Action Research study was undertaken. Both groups took part in six sessions, presented over a three-week period, designed to develop, explore and examine the areas mentioned above, providing a more progressive methodology for the teaching of Mathematics. An evaluation of the study was formed based on the evidence gathered from: student journals, this practitioner's diary, video and audio tapes, questionnaires, learning styles tests, concept maps, and animations created in Flash4.0. Both groups were
pre- and post-tested using a Mathematics question and those sections from the Differential Aptitude Tests that were mentioned above.

The results showed that this methodology created an environment that enabled the students to develop positive attitudes towards Mathematics. Concept mapping and the use of multimedia motivated them to become active participants in their own learning process, increased their confidence in the problem-solving cycle, and facilitated the perception of Mathematics through their 'eyes'. The findings show that both the Honours and Ordinary level students improved in Abstract and Mechanical reasoning, and Space relations as a result of this enquiry. However the degree of improvement achieved by the Ordinary level students compared to the Honours students was significant. This methodology enhanced the student's enjoyment, understanding, and appreciation of Mathematics.

LUANN K. STEMLER from Applied Computer Science Department, Illinois State University, Normal, IL 61791 5150, USA, Istemde@rs6000.cmp.ilstu.edu, made a study on “Educational Characteristics of Multimedia”.

The use of multimedia technology has offered an alternative way of delivering instruction. Interactive multimedia learning is a process, rather than a technology, that places new learning potential into the hands of users. Information on the design and use of multimedia characteristics are not available as a coherent body of literature. Educators should have access to appropriate ways to design software packages that will take advantage of multimedia capabilities without losing the focus on the user's needs or the content being presented. The scope of this paper is limited to a review of research on educational multimedia features used for instructional purposes. In this article the effects of (a) screen design (visual elements: color, text, graphics, and animation), (b) learner control and navigation, (c) use of
feedback (d) student interactivity, and (e) video and audio elements on the development of educationally effective multimedia modules are examined.

As electronic information technologies are being transformed from expensive, exotic gadgets into standard classroom equipment their extraordinary multimedia capabilities are rapidly becoming a routine part of many learning environments. The old text based approach to learning is being superseded by an approach which combines audio and color video in a much more exciting way (Barker & Tucker, 1990). Interactive multimedia is one of the most promising technologies of the time and has the potential to revolutionize the way we work, learn and communicate (Macromedia, 199; Staub & Wetherbe, 1989). Interactive multimedia programs take the idea of learning and doing, not simply watching. With interactive multimedia programs the learning process becomes active, not passive, and it ensures that users are doing, not simply watching. True interactivity implies that the learning process is, in some degree, modified by the actions of the learners, thus changing the roles of both the learner and the teacher (Barker & Tucker, 1990; Slawson, 1993). Interactive multimedia learning is a process, rather than a technology, that places new learning potential into the hands of users.

Brook states that, with all the additional capabilities of the growing number of multimedia applications, the design of these applications has become a nightmare. He listed ugly screens full of multiple fonts, insignificant boxes, irrelevant noises, and confusing webs of possible interactivity among the features of poorly designed multimedia packages. Educators should have access to appropriate ways to design software packages that will take advantage of multimedia capabilities without losing the focus on the user's needs or the content being presented. In the past many articles have limited recommended guidelines to a single multimedia feature
requiring an educator to search many references to obtain a complete understanding for the design and development of entire multimedia packages.

Paul R. Kearney from School of Computing and Information Technology, UNITEC, Auckland, New Zealand, pkearney2@unitec.ac.nz has written an article on "The impact of Computer Games on Children's aggressive behaviour and learning abilities" (Bulletin of Information Technology Research. Vol 1, Issue 1 (June 2003). ISSN 1176-3108).

A search of the Internet for views on whether video games are good or bad for children will result in over three million hits, the majority being negative. One could surmise that only people with negative views on video games would post such comments, the positive views remaining unheard. However, the majority of completed academic research tends to lean towards the view that many of today's games do in fact elicit unwanted behaviour from children, specifically short term aggression.

This paper discusses some of the concerning results from research into action video games, as well as highlighting the cognitive effects of games such as Tetris. The paper concludes by questioning whether the negative effects of one can be attributed to the other, and whether or not children can benefit from playing a first person shooter game such as Doom.

Lloyd P. Rieber from The Educational Technology Program at Texas A&M University, 77843 College Station, TX, has written an article on "Animation in computer-based instruction" (Volume 38, Number 1 / March, 1990)

Although the use of animated visuals is both common and popular among CBI (computer-based instruction) designers, the theoretical and empirical foundations for their use have not been firmly established. Animated visuals represent a subset of instructional visuals; for this reason,
general conclusions from research on static visuals are thought to extend to animated visuals. The extent to which animated visual research represents elaborations or departures from static visual research is questioned, however. The purpose of this paper is to review current empirical evidence of the effectiveness of animated visuals in instruction. Tentative design recommendations resulting from this review are presented. Current applications of computer animations in instruction are discussed and a brief summary of static visuals research is also presented.


The effects of two computer-based instructional strategies—visual display and feedback type—were investigated in the acquisition of electronic troubleshooting skills. Animation was used to simulate the functional behaviors of electronic circuits and to demonstrate the troubleshooting procedures. The first hypothesis tested was that animated visual displays would be more effective than static visual displays if animation was selectively used to support the specific learning requirements of a given task. Results supported this hypothesis by showing that college students in the animated visual display condition needed significantly fewer trials than those in the static visual display condition. The second hypothesis was that the effectiveness of intentionally mediated feedback (knowledge of results or explanatory information) would be minimal if natural feedback—the system’s automatic functional reaction to external inputs—was available and the subject had the basic knowledge needed to understand the system functions. The results supported this hypothesis. Overall, this study implies that instructional strategies, including visual displays and feedback, should be
applied selectively based on the specific learning requirements of a given task.

Nadia Magnenat Thalmann, MIRALab, University of Geneva, presented a paper on "Computer Animation: a Key Issue for Time Visualization". This paper discusses the relationship between Computer Animation and Visualization. It shows how Computer Animation methods may help to understand physical laws by adding motion control to data in order to show their evolution over time. It presents the state-of-the-art in Computer Animation, emphasizes new trends like physics-based animation, behavioral animation and VR-based animation.

I.J. Palmer & R.L. Grimsdale, made a study on "REALISM: Reusable Elements for Animation using Local Integrated Simulation Models" and it was published by Computer Animation ’94, IEEE Computer Society Press, Los Alamitos, CA, 1994. The REALISM animation system encapsulates behavourial control mechanisms within the objects in a scene, offering a single interface to both modelling and animation. Libraries of actors allow creative skills to be focused on scene development and not on individual object control.

The progress of an animation sequence is defined by a controlling script. Individual object behaviour is defined by rules and constraints, themselves dynamic entities that can modify their own behaviour during the animation. Each element controls its own destiny which is guided, but both dictated, by the script.

I.J. Palmer made a study on "Object-oriented computer animation: virtual perfection or Mickey Mouse software". Computer animation is a rapidly expanding field, both in the number of application areas and the amount of research effort being expended. The desire for more complex and
realistic animations produces requirements for more complex software and
more powerful hardware to produce these animations. Much of the current
research effort is aimed at producing autonomous entities that control and
define their own behaviour in a simulated world. This increase in the level of
abstraction leads to even more strain being placed on current software models.
The application of object-oriented techniques to animation has long been seen
as an answer to many of the complexity issues raised by intricate modelling,
but there are issues that current paradigms do effectively support.

Y. Okada (Japan) made a study on “Real-time Motion Generation of
Articulated Figures using Puppet/Marionette Metaphor for Interactive
Animation Systems”. For computer animation creation, character-motion
design is very laborious work. So the author has proposed new motion
generation method using a puppet metaphor. This method uses the set of a
data-glove and a magnetic motion sensor as a real-time input device. The user
creates the motion of an articulated figure by his/her hand action like playing
a puppet. However, the number of a hand's joints is not enough to fully
control an articulated figure. Any other metaphor or constraints are necessary
to more effectively generate the motion of an articulated figure. Actually in
the real world, a human action is performed in the gravity field and usually on
a floor or the ground. Similarly a marionette action is also performed based on
the physics of the gravity and the ground contact constraint and the marionette
action has enough reality as one of entertainments. In this way, to introduce
the physical constraint of the gravity and the ground contact is one of
solutions that make it easier to generate the motion of an articulated figure. In
this paper, the authors propose such motion generation method using a
marionette metaphor besides a puppet metaphor.

Professor Wyvill, director of the graphics and animation group at the
University of Calgary, made a research on "Computer Animation - Past,
**Present, and Future**. He described the elements of animation, including geometry, implicit and parametric surface definitions, and how objects can be modelled with outlines, or skeletons, as they are called. His early work examined recursive structures, where a mathematically-generated pattern repeats to create a larger shape. Sea horse shapes were shown, and this led on to the mention of fractals, where the same idea results in more complex objects. At Calgary, Professor Wyvill's work therefore smoothly made the transition, in understanding, from 2D to 3D shapes.

He defined computer animation as a combination of three disciplines: modelling, motion control, and rendering. Some of his work included sequences for the film Alien, for example. Up to the mid-1980s, computer graphics was concerned primarily with rendering. Parametric patches were the start of suitable modelling methods, but these were rather tedious and suitable only for representing car bodies and aeroplanes.

Prof. Chun-Fa Chang, National Tsing Hua University, Hsinchu, Taiwan, presented a study on “Streaming Mesh - for Internet Graphics”. Streaming Mesh is a new multiresolution 3D model format with a QoS-like (Quality of Service) controlling for Internet Graphics. While transmitting the streaming mesh with our system, the server first delivers a simplified mesh model with the data size according to the current network bandwidth. If the user at the client side needs to use a more detail model, the server then sends some necessary patches to the client, so that the client program could show the detail model progressively. Please visit its web site for more details.

Prof. Jieqing Feng, Zhejiang University, Hangzhou, Zhejiang, China, presented his study on “Virtual Sculptor - a Modeling System with Force-Feedback Supports”. Digital sculpting is a new trend for creating 3D models. In this project, he provides a virtual reality environment with force-feedback
supports for digital sculpting with adaptive resolution and feature-preserving that handles dynamic behavior in real-time performance.

Kaveri Subrahmanyam, Ph.D., California State University, Los Angeles, Robert E. Kraut, Ph.D., Carnegie Mellon University, Los Angeles, Patricia M. Greenfield, Ph.D., University of California, Los Angeles and Elisheva F. Gross, Ph.D., University of California, Los Angeles made a study on “The Impact of Home Computer Use on Children’s Activities and Development”.

The increasing amount of time children are spending on computers at home and school has raised questions about how the use of computer technology may make a difference in their lives—from helping with homework to causing depression to encouraging violent behavior. This article provides an overview of the limited research on the effects of home computer use on children’s physical, cognitive, and social development.

In a study analysis on Indian Animation Industry by Aarti Razdan brings out the biggest challenges that the Indian Animation Industry is facing. They are mainly awareness, skill and manpower development, infrastructure and financial support, which would require industry and government to partner. India has already received several 2D, 3D and Flash TV series work. It foresee India emerging as a major player in the feature film animation in the near future.

A study conducted by NASSCOM (National Association of Software and Service Companies) indicates that India appears well positioned to play an important role in the global animation production market. It also suggests that much more needs to be done from the point of animation industry leaders and the government. India has the capabilities to make it big in the global animation production market. Even though activity in this segment is
currently low key, action is expected to hot up over the next few years as more and more Indian software development companies take to the market and set up facilities dedicated to animation production services.

According to the report published by “The Hindu” daily on 7th Nov 2004, Bangalore edition, “India emerging as global hub for Animation”, describes India is increasingly presenting itself as a favourable destination for post-production and 3D content development activity. Animation in India had its genesis in the advertising industry. A report released by Andersen Consulting states that the Indian multimedia and graphics industry is expected to reach $15 billion by 2008. The study further says that over the next three years, the animation industry (domestic and exports) would reach $2 billion. The NASSCOM further estimates that India could use three lakh professionals in content development and animation by the year 2008.

According to the report published by “The Hindu” daily on 27th Jan 2006, Coimbatore edition, “Animation sector looking up”, said that the animation scenario in Kerala is looking up, with international companies such as Hallmark, Marvel and Warner Bros choosing animation studios in the State to outsource their work. Toonz Animation India, the only international animation production company of repute based in Kerala at present, for-sees business with U.K’s Animation Plc, Dragonlance, Finley and Marvel, all three of the US and few other companies from abroad. Vismayas Max creative director Abhilash says Kerala has the technical manpower to meet the 2D and 3D animation requirements.

According to the report published by “Sunday Shalom” weekly News Paper on 14th July 2009, published from Calicut, Kerala, “Do not turn Remote Control to Cartoon Channel” (Translation), describes the dangers that prevail while the children are entertained by the cartoon programs.
Initial research suggests, for example, that access to computers increases the total amount of time children spend in front of a television or computer screen at the expense of other activities, thereby putting them at risk for obesity. At the same time, cognitive research suggests that playing computer games can be an important building block to computer literacy because it enhances children’s ability to read and visualize images in three-dimensional space and track multiple images simultaneously.

The limited evidence available also indicates that home computer use is linked to slightly better academic performance. The research findings are more mixed, however, regarding the effects on children’s social development. Although little evidence indicates that the moderate use of computers to play games has a negative impact on children’s friendships and family relationships, recent survey data show that increased use of the Internet may be linked to increases in loneliness and depression. Of most concern are the findings that playing violent computer games may increase aggressiveness and desensitize a child to suffering, and that the use of computers may blur a child’s ability to distinguish real life from simulation. The authors conclude that more systematic research is needed in these areas to help parents and policymakers maximize the positive effects and to minimize the negative effects of home computers in children’s lives.