

Comics as
Educational Aid

by

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COMICS AS EDUCATIONAL AID

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Guide

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1.0 INTRODUCTION

Education has been an important priority of the Government of India. However schools, colleges and the educational system as a whole have much to be desired. There have been many attempts to improve the educational system using educational aids like 16 mm projection etc. But these attempts have not come to widespread use in India. This may be attributed to multitude of reasons, the most important being the total number of schools in India.

A time has come in which one will have to give a serious thinking education improvement. New possibilities will have to be thought of, which not only is technically feasible but also is economical.

One such possibility is the Comic strip medium. Comics have the advantage of being economical while, at the same time enjoys the popularity. In this project an attempt has been made to study the possibility of using comics as educational aid. While this seems a novel idea in the beginning one will realise the problems that will arise when implemented. For one, the image of the comics as a cheap entertainment will have to be changed and

EDUCATION

A Look at the Learning Psychology

a clean image will have to emerge. This projects aims at determining the factors that make it popular with everyone and identifying the possible problem that will have to be solved. As a final output a lesson has been attempted in comic strip form using the findings of the earlier studies.

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educational psychologists [1] have identified certain related factors which aids in the learning process of every child. They are:

1. Motivation
2. Curiosity
3. ego and achievement Needs

2.1 MOTIVATION

Motivation of children are of two kinds:

1. Intrinsic Motives
2. Extrinsic Motives

Intrinsic motive is an interest to know more about the subject which leads a student to curiosity, self learning, wider knowledge of the subject, and good retention of what was learnt.

2.0 EDUCATION

A Look at the Learning Psychology

Education today is always associated with classroom learning. A child is inducted into a school at a very early age of 3 years. It is the time in which the child learns through 'exposure learning [1]'. The child must learn by doing and by experiencing the consequences of what it does. The unimaginative style of teaching which starts at the Kindergarten level continues well into the college level.

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Numbers in the parenthesis refer to the References given at the end of the report.

Extrinsic motive, on the other hand, causes 'detour behaviour'. Here the motive is merely to get good marks, pass examinations, win prizes and awards and acclaims. The student finds roundabout devices to obtain this result, by memorising, practicing old exam papers, and in desperation, even cheat. Extrinsic motive causes temporary retention of the subject learnt.

Indian education system today encourages extrinsic motive rather than the intrinsic motive.

2.2 CURIOSITY

Curiosity, which is the need to discover, can trigger a positive motive (intrinsic) or sometimes, can itself be a useful motive. Curiosity is aroused by the unusual, which can be the lesson itself or the motivation provided by the teacher.

2.3 EGO AND ACHIEVEMENT NEEDS

Everyone has a strong urge to see themselves as a person who can accomplish things. When a student is made to feel that his performance on a certain task is a measure of his real worth as a person, he is seen to exert himself tremendously [1].

One must understand that any change or experiment in the educational system must strive to incorporate a balanced motivation, curiosity and ego and achievement needs factors.

It is nearly impossible to create positive interest in learning by this textbook and blackboard teaching method alone. For, participation from the students and more involvement for an educational system to succeed. It is in this respect that 'educational aid' plays an important role in the educational system. Audio-visual aids like slide projector, over-head projector, 16 mm movies, video recorders, and tape recorders have been successfully used as educational aids. Imaginative teaching methods have developed 'educational aids' story books, games, role playing games, field trips, painting etc. [2]. Researchers in America have yielded educational program kits [13], [4] and [5] which have proved to be effective educational aids.

While educational aids in the developed countries have evolved through experience into advanced levels India is yet to find its use of effective educational aids. This may be attributed to certain factors.

3.0 NEED FOR EDUCATIONAL AID

It has been observed that when children complain about schools, they are much more likely to complain that things are boring than that the subjects are too difficult [1].

It is nearly impossible to create positive interest in learning by this textbooks and blackboards teaching method alone. For, participation from the students are also required for an educational system to succeed. It is in this respect that 'educational aid' plays an important role in the educational system.

Audio-visual aids like slide-projector , over-head projector, 16 mm movies, video recorders, and tape recorders have been successfully used as educational aids. Imaginative teaching methods have developed 'educational aids' story books, games, role playing games, field trips, paintings etc.[2]. Researches in Synectics have yielded educational program kits ([3],[4] and [5]) which have proved to be effective educational aids.

While educational aids in the developed countries have evolved through experience into advanced levels India is yet to find use of effective educational aids. This maybe attributed to certain factors:

1. Lack of organised effort and institutions in bringing out such aids.
2. Lack of equipment in schools, which maybe attributed to the lack of finance.
3. The sheer number of the equipments required for Indian schools.
4. Low level of motivation in Teachers.

Therefore one needs to find educational aids which not only can reach far and wide across the country, but will also be affordable by the students.

It may however be noted that, though the economy has been the main problem of implementing educational aids, middle class and higher class people spend a considerable amount of money on 'child education and entertainment'. It is generally felt by those people that there is a dearth of educational reading/entertainment materials, educational toys and programmes to compliment the curriculum.

4.0 COMICS AS EDUCATIONAL AID

Comics, which had its beginning in the 1870s and matured into full fledged publication during the 'American depression' of the 1930s, is a fascination and a past-time for children. The same children who find it difficult to concentrate on a text-book can be engrossed in comic strips for hours together. This prolonged 'attention span' enjoyed by comics can only be equaled by television.

Comic strips which are published today have more entertainment value rather than moral or educational value. While attempts have been made by Walt Disney and Classic Comics, in producing educational comics, they have not come to widespread use.

With the positive potentials offered by comics coupled with the low cost associated with it, it would be worthwhile to explore the possibility of introducing comics as educational aid.

The scope offered by comics as educational material are:

1. Ability to bring associative connections in terms of visuals and contents.

2. Ability to offer greater attention span for children.

3. Low cost

But, before comics can be made as educational aid, one must carefully study and analyse the comics in order to, identify the exact area in which it can help. Moreover, caution has to be exercised in introducing comics as an educational aid, due to the image built by the comic publications as 'cheap entertainment material' and hence the possible aversion and rejection from the teachers and the parents. However, a properly structured comics which follows an educational pattern is bound to bring out the positive interest in children.

5.2 CLASSIFICATION

It has been observed that not all people read all the type of comics. Children prefer to read certain type of comic strips while adults may prefer to read other types. An interviewee finding was that a person gradually starts understanding the various types of comics. As he grows up, till finally, as an adult, he understands most of them.

5.0 COMICS - AN ANALYSIS

Before making any attempt to develop a comic strip or a comic book as educational aid, one has to understand the existing comics, their structure and content. With a view to make a comic strip based on a lesson, the comics that are published were analysed, in three phases:

1. Familiarisation
2. Classification
3. Analysis

5.1 FAMILIARISATION

The familiarisation phase consisted of collecting comic strips published in Indian newspapers and magazines and comic books published in India, were collected. A few of the comics published in other countries were, also collected. Familiarisation helped one in classification phase which followed.

5.2 CLASSIFICATION

It has been observed that not all people read all the type of comics. Children prefer to read certain type of comic strips while adults may prefer to read other types. An interesting finding was that a person gradually starts understanding the various type of comics, as he grows up, till finally, as an adult, he understands most of them.

In otherwords, there is a set of age range in which a person starts understanding the complexities/puns/jokes in the comic. This observation was the outcome of an 'experiment' conducted on people, and is a basis on which the classifications were made.

The comics collected during the Familiarisation phase were shown to the First year students residing in hostel 2 of IIT Bombay. They were asked to identify the comics that they read regularly. Of those comics, each one was asked to classify each comic by the age (or the year) at which he started reading particular comic. The result of the study was a classification made according to the 'transition age of the target readers, they are:

1. Comics for Readers Above 5 years.
2. Comics for readers above 10 years
3. Comics for readers above 12 years
4. Comics for readers above 18 years

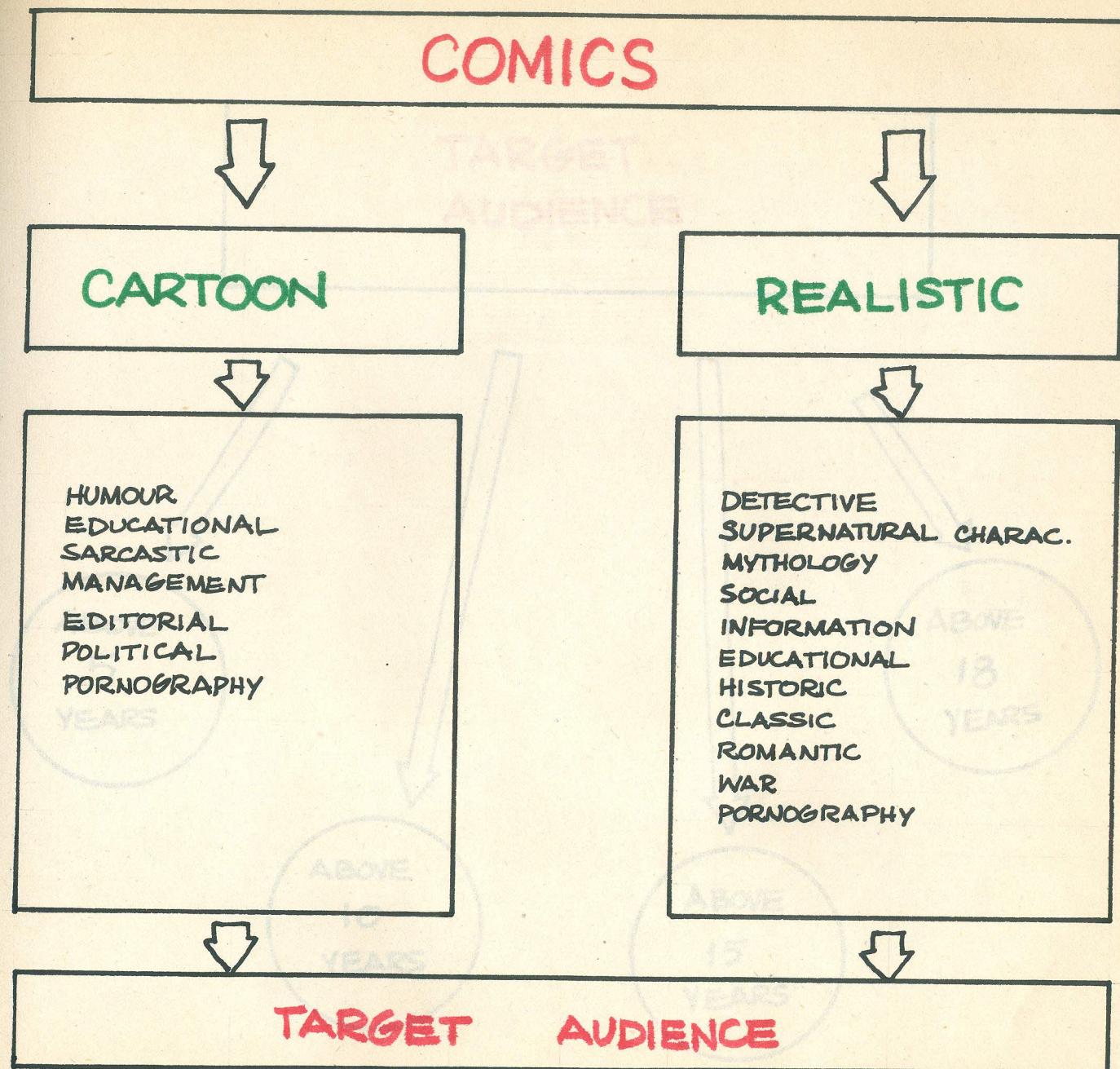


Fig. 1 CLASSIFICATION OF COMICS

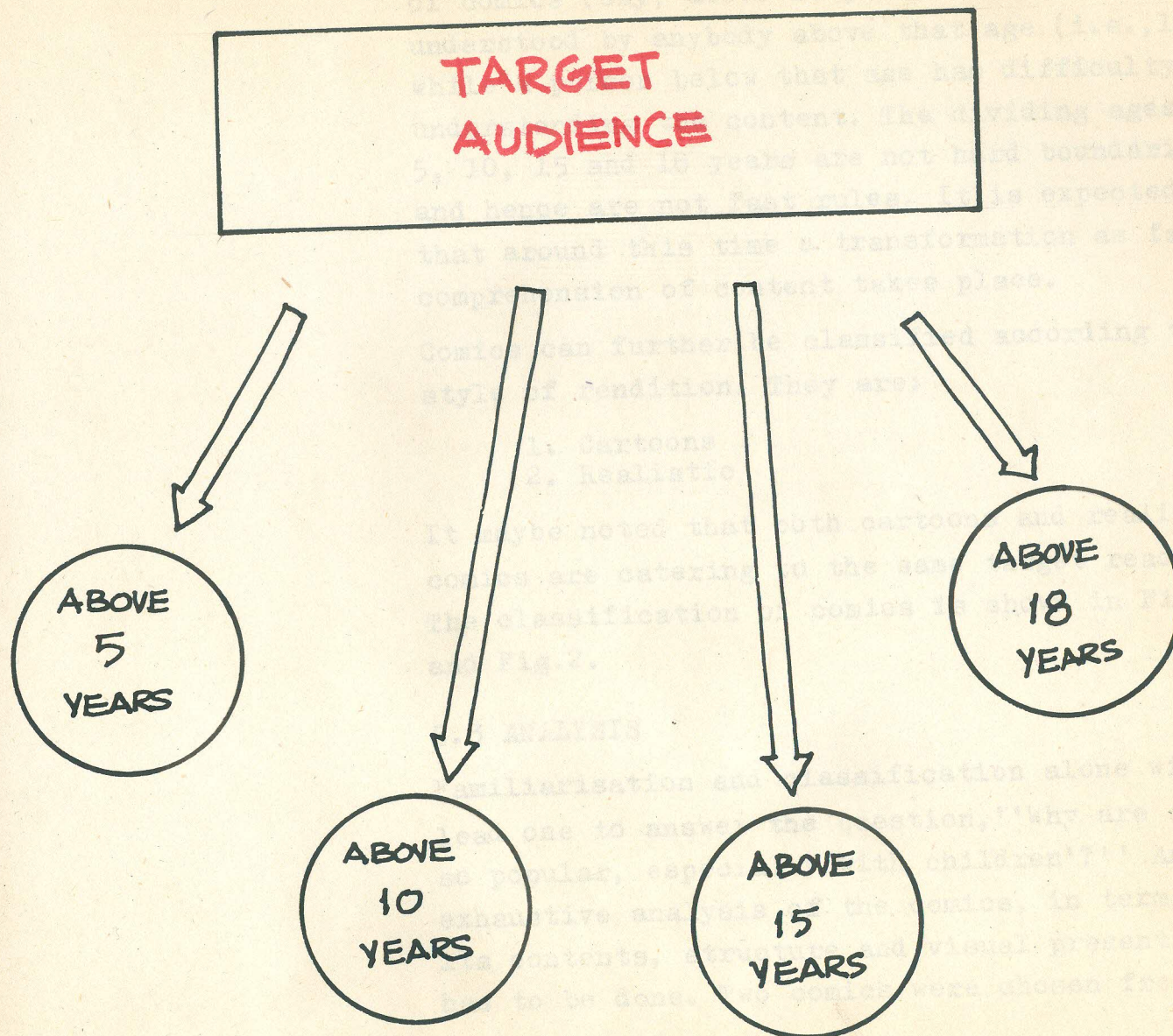


Fig. 2. CLASSIFICATION OF COMICS BASED ON AGE OF READER

This classification means that a particular set of comics (say, above 10 years) can be read and understood by anybody above that age (i.e., 10 years), while a person below that age has difficulty understanding the content. The dividing ages 5, 10, 15 and 18 years are not hard boundaries and hence are not fast rules. It is expected that around this time a transformation as far as comprehension of content takes place.

Comics can further be classified according to the style of rendition. They are:

1. Cartoons
2. Realistic

It may be noted that both cartoons and realistic comics are catering to the same target readers. The classification of comics is shown in Fig.1 and Fig.2.

5.3 ANALYSIS

Familiarisation and classification alone will not lead one to answer the question, 'Why are comics so popular, especially with children?' An exhaustive analysis of the comics, in terms of its contents, structure and visual presentation has to be done. Two comics were chosen from the

'Realistic' category which cater to the 'Target Readers' above 5 years. One is a story from the 'Tarzan' series. The other is an episode from the 'Mahabharata' (published by Amar Chitra Kata). A complete structural and content analysis for each page was done for the following parameters:

1. Relative interest
2. Mood
3. Relative educational content
4. Relative moral value

An analysis was done on a Japanese Children's book also, in order to study the difference between the comics' structure and a children's book structure.

The analysis was carried out, again, with the same First year students of Hostel 2, IIT, Bombay.

Each person was given the three stories separately. They were told to read the thoroughly once.

Afterwards, they were told to every page and rate the interest created by that page, on a scale from 1 to 10. They were also asked to rate the educational content and moral value (if any) of that page on a 1 to 10 scale. They were told to give the mood of each page in terms of words like

surprise, hatred, confidence etc. The results were then averaged and structure diagrams were made as shown in Fig.3, Fig.4, and Fig.5.

5.4 RESULTS OF ANALYSIS

The following points were observed after the analysis of the two comics and the children's book:

1. There is a pulsing interest created in each comic story which keeps the reader engrossed throughout.
2. Tensions are created at various points in the story.
3. Varying moods are created in each page which are due to the varying tensions, reliefs, plots and actions etc.
4. Only one theme of moral value is taken (or sometimes none) and is stressed at only a few points in the story.
5. There is hardly any educational content observed in the comics.
6. A well designed children's book can create the varying moods and interests while instilling a 'pulsating' and gradually increasing educational content.



THESE WORDS, LOUD AND CLEAR, GLADDENED THE HEARTS OF THE RISHIS OF SHATASHRINGA AND THE DEVAS ABOVE. OTHER CELESTIAL BEINGS OF DIVERSE ORDERS, TOO, CROWDED THE SKIES IN ADORATION OF THIS SON OF KUNTI.

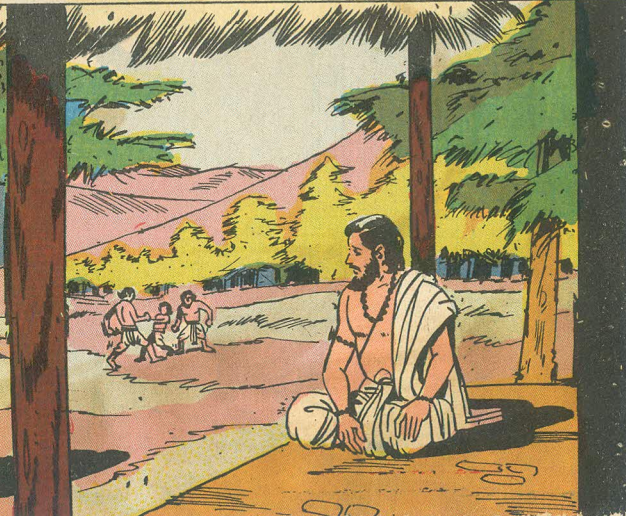
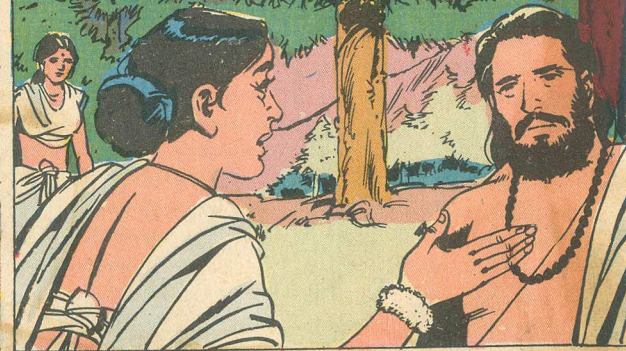


"WHEN PANDU, EAGER FOR MORE CHILDREN,
SPOKE TO KUNTI AGAIN, SHE REPLIED:

*THE WISE HAVE
DECREED AGAINST A
FOURTH CHILD EVEN
IN TIMES OF
CALAMITY.



THOUGH YOU KNOW
WHAT IS ORDAINED IN THE
SHASTRAS, WHY DO YOU IN
YOUR EAGERNESS FOR
OFFSPRING ASK ME
TO DEVIATE?



6.10 REQUIREMENTS OF AN EDUCATIONAL AID COMIC

7. Elaborate and detailed illustrations with imaginative and dynamic style (Fig.6) helps in creating the interest in comics.
8. While the pulsating interest and moods were observed in 'Tarzan' as well as the other comic books created in the West, a very uninteresting trend was observed in the Indian comics (Fig.7). This maybe attributed to the fact that this comic does not follow the structure used in the West.

should not become a part of the textbook or educational material, but must be a supplementary material.

2. Educational aid comic must be available in the outside market and must be optional.

3. Hero-worship, observed in most of the 'super-hero' type comics must be avoided.

4. Moral values, if introduced, must be subtle.

Based on the structural analysis and the discussions, the requirements of an 'Educational Aid' comics were identified as:

1. Story based on the lessons in text books.

6.0 REQUIREMENTS OF AN EDUCATIONAL AID COMIC

Apart from the findings of Article 5.0, it was felt that a comic should have certain elements more if it had to satisfy as an educational aid. With this in mind, discussions were held with some parents of school going children. Their ideas and notions were noted down. The Librarian of the Kendriya Vidyalaya, IIT? Bombay was also contacted for her opinion on using comics in education. The findings of the discussions were:

1. Comics, if attempted as educational aid, should not become a part of the textbook or educational material, but must be a supplementary material.
2. Educational aid comic must be available in the outside market and must be optional.
3. Hero-worship, observed in most of the 'super-hero' type comics must be avoided.
4. Moral values, if introduced, must be subtle.

Based on the structural analysis and the discussions, the requirements of an 'Educational Aid' comics were identified as:

1. Story based on the lessons in text books.

2. Careful break up of the story in order to create:
 - . Pulsing interest
 - . Varying moods
3. Careful introduction of the educational contents blended into the story.
4. Subtle introduction of moral values (if need to be introduced)
5. Strong, detailed illustrations

7.2 TEXT BOOK AND LESSONS SELECTED

It was decided to take the following text book and the corresponding lesson:

TEXT BOOK

Environmental studies, a text book for Class III

LESSON

UNIT II - The Story of Man

7.0 EDUCATIONAL COMICS THE EXPERIMENT

In order to test the findings of the analysis, it was decided to create a comic strip based on a lesson taken from a text book. In the process of creating the comic strip, the following steps were adopted:

7.1 IDENTIFICATION OF TARGET AUDIENCE

After careful considerations it was decided that the experimental audience shall be 'children of class III studying in the Kendriya Vidyalayas'. Their age will be around 8 years. Therefore the comic strip should have the ingredients of the above 5 years comics (Article 5.2).

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It was decided to take the following text book and the corresponding lesson:

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LESSON

UNIT II - The Story of Man

7.3 STATEMENTS OF THE LESSON

A thorough study of the lesson brought out the following contents revealed in the lesson:

- . How and where did early man live?
- . What were the surroundings ?
- . What animals lived there during that period ?
- . What plants were there ?
- . What food did they eat ?
- . How did they acquire food ?
- . What type of tools did they have ?
- . Did they have fire ? How did they make them ?
- . What type of clothes did they wear ?
- . What type of society structure was existing ?
- . What type of family structure was there ?

Throughout the lesson the stress was laid on:

1. Man's ability to think and work
2. Society and Co-operation

The comic strip to be created must have a storyline incorporating most of the contents of the lesson.

7.4 BACKGROUND RESEARCH

In order to bring clarity as well as visual details into the comic strip, a background research was done to gather information on :

- . Social life of early man
- . Tools used by early man
- . Animals and plants of that period

The information, pictures and photographs provided the base material on which to develop the comic.

7.5 CREATING THE STORYLINE

The next step was to create a storyline based on the lesson contents and background material. Initially a story was conceived and a tentative structure was developed. The characters were chosen. It was decided to have a Class III student dream about meeting the caveman and visiting his family and tribe. After considering the suggestion offered by the Faculty members during presentations, the story was modified further till the present structure was evolved. A rough storyboard was then drawn.

7.6 ILLUSTRATIONS

It was decided to draw single frame drawings on a A6 papers. It was also decided that the frame size and proportions shall remain the same. The illustrations were first pencilled according to the sequence and scene decided in the storyboard. Then they were inked using waterproof black ink. The speech balloons and explanation boxes were also drawn accordingly.

8.0 CONCLUSION

The comic strip produced has been created solely based on the results of the analysis done in Article 5.3. While being an attempt at creating an Educational Aid comic, the strip produced maynot be the only way of using the comic strip media for education. It is felt that the comic strip created will have to be tested on children and parents to ascertain its acceptance. It is hoped that this project is only the beginning of a series of projects that maybe undertaken in the future, to modify and refine the findings of this project to successfully use comics as educational aid in the near future.

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