

Research on Influence of Animations on Leftover Children of China—Taking Anhui Region as an Example

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Abstract: Starting from the characters that have appeared frequently in animations in recent years, the researcher has carried out a questionnaire survey among 658 children ages between 8 and 14 (454 leftover children and 204 non-leftover children) in Anhui Province to explore the influence of animations on the growth of leftover children. The results of the research indicate that watching animations is of distinctive effects on the satisfaction of emotional needs of leftover children, the improvement of their living capabilities and the forming and development of their values.

1. Introduction

The issue of leftover children is one of the focuses of efforts in reality for us to care about the growth of the younger generation, break the urban-rural dual structure and promote the harmony and stability of society. The number of leftover children has increased with the “peasant worker rush” to over 61 million today. They are forced to face an “incomplete” growth environment and have a lot of problems in such areas as personal safety, mental health, education, emotional life and difficulty in socializing with others. Hu and Rong points out that in the mediated society, the leftover children mainly watch TV after school^[1]. Therefore, it is of great significance to study the influence of animations on leftover children and make proposals for the education of leftover children and the national development. The total number of leftover kids in Anhui ranks third in China, so Anhui is a typical object for the research.

The current researches on leftover children are mainly focused on such aspects as education, mental health, personal safety, guardianship, emotional life, personality structure, difficulty in socializing, scale and distribution, which have laid down a solid foundation and provided a lot of references for subsequent researches. However, few researches have been made on the influence of animations on leftover children. In this research, taking animations as research materials, the author attempts to study the influence of animations on leftover children by comparing the influences of animations on leftover children and non-leftover children. The author carries out a questionnaire survey among respondents from Anhui Province, with an aim to provide empirical references for the specific influence of animations on leftover children, provide suggestions for the design and production of animations and related organizations as well as provide references for the specific path of the healthy development of leftover children.

2. Literature Review

By entering the key word “leftover children” into CNKI to retrieve the papers published between 1993 and 2015, a total of 12,050 papers are found. Their contents are mainly concentrated on such aspects of leftover children as education, mental health, personal safety, guardianship and emotional life. Tan made a detailed comment on the literature of leftover children in rural areas, made an objective analysis of the various typical researches and pointed out that the problems of leftover children occur because of the absence of parental love. The interweaving of various adverse

structures and the shortage of available resources are also extremely severe^[2].

Yang and Zhu by studying 6,611 papers published between 1993 and 2012, pointed out that in the future we should strengthen inter-disciplinary cooperation and innovated the methods to form research paradigms^[3]. Zhang and Xia argue that violence reality is presented in animations because there are too many and frequent contents of violence and a seriously excessive disturbance of violence^[4]. Chen and Cheng argue that with the advent of the new media era, digital reading has become an important way for children to read and propose stimulating their interest in reading through the channel of digital reading^[5]. Du and Cong argue that clips of violence and violence contents in animations have an effect on the implicit aggressiveness of primary school students. Watching animations influence the implicit aggressiveness of primary school students^[6]. At present, there are few researches on the influence of animations on leftover children. Li explores the influence on the concept of honor and disgrace of children starting from the negative impacts of animations and proposes that the censoring department of animation production, parents and other guardians on behalf of parents should pull together, but his research lacks of specific data and detailed argumentation^[7].

3. Research Design

3.1. Questionnaire Design

The surveying tool used by the author is a questionnaire designed by the author, which mainly comprises four parts. The first part is basic information, including name, gender, Grade, age, registered permanent residence, job conditions of parents. The second part is basic information about their contact with animations such as the length of contact, the animation characters and what aspects of the characters they like. The third part is about the frequencies of some conditions that appear in watching animations, setting 16 questions in total such as “While watching animations, you become joyful or worried with the experience and encounter of the character(s) you like”, “You dare not stay alone when you think of some scene in the animations”, “While watching animations, you can get yourself relaxed”. The fourth part is subjective questions, setting 5 questions in total, such as “Which animation is your favorite? Which character do you like best? Why?” “Which character in the animations you think is like yourself?”.

3.2. Implementation of the Research

Adopting a paper questionnaire, the members of the research team handed out and collected the questionnaires in person. The students were asked to fill the questionnaire face to face, which could objectively reflect the influence of animation characters on leftover children. The objective and subjective questions supplement each other. A more detailed analysis and understanding was made on the conditions that could not be judged in the objective questions. After the questionnaires were collected, the data was entered into a computer and a person was assigned to check the data.

3.3. Object of Research

The schools that participated in the questionnaire survey include Gaozhen Village Central Primary School of Huhu Town of Huoqiu County, the No. 29 Middle School of Hefei, the Lu'an Road Primary School of Hefei, Nanyi Fengshan Primary School of Gongqiao Town, Hexian County, Ma'anshan City, Qingshan Street Primary School of Chenyaohu Town, Congyang County, Anqing City, the Primary School Affiliated to Anhui Normal University in Wuhu City. 658 kids ages between 8 and 14 of the six schools were covered, including 454 leftover kids accounting for 69.0%, and 204 non-leftover kids accounting for 31.0%. 308 were boys, accounting for 46.8% and 350 were girls, accounting for 53.2%, including 2 at the age of 8, 28 at the age of 9, 100 at the age of 10, 149 at the age of 11, 170 at the age of 12, 120 at the age of 13 and 89 at the age of 14. Since the objects of the questionnaire survey are leftover and non-leftover children, the influence of animation characters on leftover children through comparison of data. To guarantee the effectiveness of the questionnaire survey, the respondents were all involved on a random and voluntary basis.

4. Results of Data

680 questionnaires have been issued this time, 100% of which have been collected, 22 were invalid, 96.8% were valid, with a test reliability coefficient of 0.92. Since the reliability coefficient is higher than 0.8, the reliability of the research has reached the standard. The results of data are as follows.

4.1. Current Status of Leftover Children’s Watching Animations

4.1.1. Channels for Leftover Children to Watch Animations

The data analysis reveals that the main channel for leftover and non-leftover children to watch animations is TV, accounting for 82.8%, followed by computer (11.4%), mobilephone (2.4%), DVD player, books and periodicals and others, seen in Table 1. The comparison indicates that leftover children watch animations with TV and mobilephone more than non-leftover children by 4.2% and 1.5% respectively, and watch animations with computer, books and periodicals less than non-left-over children by 4.8% and 1.6% respectively. This is related with their living environment, family conditions and parental intervention. It’s noteworthy that parents going out to work, for the convenience to keep in contact with their children, have bought a mobilephone for their kids left behind in hometown, some being smartphone. In addition, the mobile communication network has enhanced the speed and achieved a full coverage, it has provided a platform for leftover children to watch animations with a mobilephone.

Table 1 Channels for Watching Animations

Types of Children	Channels for Watching Animations					
	TV	Computer	DVD Player	Books/Periodicals	Mobilephone	Others
Leftover (%)	382 (84.1)	45 (10.0)	8 (1.8)	2 (0.4)	13 (2.9)	4 (0.8)
Non-leftover (%)	163 (79.9)	30 (14.8)	3 (1.4)	4 (2.0)	3 (1.4)	1 (0.5)
Total (%)	545 (82.8)	75 (11.4)	11 (1.7)	6 (0.9)	16 (2.4)	5 (0.7)

4.1.2. Length of Time for Leftover Children to Watch Animations

The table 2 indicates that every week 63.2% of leftover children watch animations for less than 3 hours, 36.8% watch for over 3 hours. The interviews reveal that the reasons are as follows. First, the conflict of time. Animations are mainly aired between 5 and 7 pm. During this time section, leftover children usually help do the housework such as cleaning and cooking. Second, in rural areas the signal of TV is mainly received from ordinary antenna and radio and television coverage project, so they can only watch a limited number of channels and less channels of animations. Third, there is only a TV set in their home. Most often they watch programs favored by adults with their family. A comparison with non-leftover children indicates that around 60% of both leftover and non-leftover children watch animations for less than 3 hours every week. However, in the two coefficients of 3-4 hours and 5-6 hours, leftover children are higher than non-leftover children by 6.3% and 3.5% respectively. And in the coefficient of above 6 hours, leftover children are lower than non-leftover children by 4.3%.

Table 2 Length of Watching Animations Every Week

Types of Children	Average Length of Watching Animations Every Week				
	Below 3 hours	3-4 hours	4-5 hours	5-6 hours	Above 6 hours
Leftover (%)	287 (63.2)	91 (20.0)	31 (6.8)	25 (5.5)	20 (4.5)
Non-leftover (%)	138 (67.6)	28 (13.8)	16 (7.8)	4 (2.0)	18 (8.8)
Total (%)	425 (64.5)	119 (18.1)	47 (7.1)	29 (4.4)	38 (5.9)

4.1.3. Impacts of Weekly Length of Watching Animations to Finishing of Homework

Every week both leftover and non-leftover children spent 3-5 hours on their homework. However, in the coefficient of below 3 hours, leftover children are 11.2% higher than non-leftover children, and in the coefficient of above 6 hours, leftover children are 9.6% lower than non-leftover children. This indicates that in terms of finishing homework, leftover children devoted less time and energy than non-leftover children. In order to survey the impacts of watching animations to daily activities of children, a double variant analysis method is adopted to analyze the weekly length of watching animations and the weekly length of time used for doing homework. The result indicates that they are not directly correlated. The length of watching animations does not affect the length of time for doing homework. The results of related tests of Spearman indicate a distinctive correlation ($p=0.014^*<0.05$). However, the correlation coefficient is only 0.096. So it can be considered that there is not a high correlation between the two. Therefore, an appropriate length of watching animations will not seriously affect other daily activities of the leftover children. Most leftover children have not much time for watching animations, mainly because of factors such as a high life stress, heavy housework, limited financial condition and parental supervision, rather than heavy homework.

Table 3 Length of Time Used for Doing Homework Every Week

Types of Children	Average Length of Time Used for Doing Homework Every Week				
	Below 3 hours	3-4 hours	4-5 hours	5-6 hours	Above 6 hours
Leftover (%)	198 (43.6)	112 (24.7)	61 (13.4)	40 (8.8)	43 (9.5)
Non-leftover (%)	66 (32.4)	54 (26.5)	29 (14.2)	16 (7.8)	39 (19.1)
Total (%)	264 (40.1)	166 (25.2)	90 (13.7)	56 (8.5)	82 (12.5)

The interviews indicate that leftover children have not taken TV as a medium for broadening their horizon and providing information, but a partner for spiritual consolation. Many leftover children have ever fancied that some animation character is their playmate or themselves. This indicates that animations have gradually become a partner of leftover children in their daily life. Watching animations has become an important way for their daily entertainment and recreation. Most of them have a habit of watching animations.

4.2. Cognition of Leftover and Non-leftover Children in Animation Characters

4.2.1. Popularity of Animation Characters among Leftover and Non-leftover Children

Taking the main characters of animations popular among the audience in recent years as the objects of investigation, a test was carried out among leftover and non-leftover children, in which they were asked to choose their favorite animation characters (multiple options). The results of data are shown in Table.4. More than 50% of both leftover and non-leftover children like the main characters of nine animations, including *Pleasant Goat and Big Big Wolf*, *Boonie Bears*, *Tom and Jerry*, *SpongeBob SquarePants*, *Armor Hero*, *Big-ear Tutu*, *SEER*, *GGBond* and *Big Head Son and Little Head Father*. And leftover and non-leftover children are close in the frequencies of favoring these characters, recording no distinctive difference. However, Fairy Ling Meiqi in *Balala the Fairies* is favored by 72.2% of leftover children, 13.9% higher than non-leftover children (58.3%). Nobita and Doraemon in *Doraemon* were liked by 61.2% of leftover children, 11.3% less than non-leftover children (72.5%). Xing Tianming in *The Legend of Qin* was favored by 29.1% of leftover children, 10.1% less than non-leftover children (39.2%).

Table 4 Popularity of animation characters among leftover and non-leftover children

Characters	Pleasant Goat and Big Wolf	Tom and Jerry	Fairy Ling Meiqi	Sai Xiaoxi	Ah Li	Xing Tian	SpongeBob
Leftover (%)	76.90	65.60	72.20	66.30	33.50	60.10	75.10
Non-leftover (%)	75.00	63.20	58.30	61.80	33.80	56.90	73.00
Characters	Bear No. 1 and No. 2	Tutu	Nobita and Doraemon	GGbond and Feifei Princess	Big Son Little Father	Head and Head	Xing Tianming
Leftover (%)	78.80	72.50	61.20	76.40	73.80	29.10	
Non-leftover (%)	80.00	68.60	72.50	74.00	71.60	39.20	

4.2.2. Attention of Leftover and Non-leftover Children to Elements of Characters

By calculating the questionnaire findings on the elements of animation characters among leftover and non-leftover children, the results are shown as Table 5. No distinctive difference is observed in their attention to personality, appearance, color and behavior. The sequence of their attention to these four elements is: personality, appearance, behavior, color. Therefore, the children ages between 8 and 14 pay highest attention to the personality of animation characters while watching animations.

Table 5 Aspects of Animation Characters Liked by Children

Types of Children	The aspect of animation characters favored by them				
	Personality	Appearance	Color	Behavior	Others
Leftover (%)	170 (37.4)	112 (24.7)	33 (7.4)	88 (19.3)	51 (11.2)
Non-leftover (%)	80 (39.2)	49 (23.9)	13 (6.3)	40 (19.9)	22 (10.7)

4.3. Influence of Animation Characters on Emotional Behavior and Learning of Leftover Children

4.3.1. Influence of Watching Animations on Leftover Children

The Table 6 indicates, the first question: $Z=-2.098$, $P<0.05$. The frequency of the condition “While watching animations, you become joyful or worried with the experience and encounter of the character(s) you like” among leftover children is obviously higher than non-leftover children. The third question: $Z=-3.0003$, $P<0.01$, the frequency of the condition “While watching animations, you can get yourself relaxed” among leftover children is obviously higher than non-leftover children. The fourth question: $Z=-2.176$, $P<0.05$, the frequency of the condition “By watching the character of some animation, you feel yourself to become stronger, braver and more optimistic” among leftover children is obviously higher than non-leftover children. The tenth question: $Z=-2.473$, $P<0.05$, the frequency of the condition “Loving an animation because of admiring the ability of a character in the animation” among leftover children is obviously higher than non-leftover children. The eleventh question: $Z=-3.094$, $P<0.01$, the frequency of the condition “By watching an animation, you have mastered some skill in actual life” among leftover children is obviously higher than non-leftover children. The twelfth question: $Z=-2.724$, $P<0.01$, the frequency of the condition “You can clearly tell the good characters from bad ones” among leftover children is obviously higher than non-leftover children.

The above indicates that after watching animations, leftover children are easier than non-leftover

children to be influenced by animations and become glad, worried or relaxed, or make themselves stronger, braver and more optimistic because of some characters in the animations. Meanwhile, they are more likely to love the animations because of the outstanding ability of the characters and even apply the skills learned from the animations in their actual life. In telling good characters from bad ones of animations, leftover children are also obviously higher than non-leftover children. Other questions have not shown any distinctive difference, indicating that leftover and non-leftover children are close in these areas and show no distinctive difference.

Table 6 Man-Whitney U Test Results of Score Got by Leftover and Non-leftover Children in Each Question

Question No.	Z	P
1	-2.098	0.036*
3	-3.0003	0.003**
4	-2.176	0.030*
10	-2.473	0.013*
11	-3.094	0.002**
12	-2.724	0.006**

*p < 0.05, **p < 0.01, ***p < 0.001.

4.3.2. Specific Impacts of the Length of Watching Animations to Children

Mann-Whitney U test was carried out among the children who watch animations below three hours and above three hours every day. The results only show a distinctive difference in the tenth question: $Z=-2.267$, $P<0.05$. The frequency of the condition “Loving an animation because of admiring the ability of a character in the animation” among the children who watch animations for below three hours every day is obviously higher than the children who watch animations for more than three hours every day, and they show no distinctive difference in the other items.

4.3.3. Impacts of Animations to Leftover Children of Different Genders

Mann-Whitney U test was carried out on leftover children based on gender. The results are shown in Table 7, which indicate, the first question: $Z=-2.992$, $P<0.01$, the frequency of the condition of “While watching animations, you become joyful or worried with the experience and encounter of the character(s) you like” among leftover boys is obviously higher than leftover girls. The second question: $Z=-0.162$, $P<0.05$, the frequency of the condition “You dare not stay alone when you think of some scene in the animations” among leftover boys is obviously higher than leftover girls. The 15th question: $Z=-3.623$, $P<0.001$, the frequency of the condition “You play animation games” among leftover girls is obviously higher than leftover boys and shows a distinctively strong correlation, which is a phenomenon that is worthy of attention. They show no distinctive difference in the other items, which indicate that the emotions of leftover boys are easier to be influenced by animations, showing the moods of joy, worry and even horror because of the plots in the animations. In terms of playing animation games, girls show a distinctive difference.

Table 7 Mann-Whitney U Test Results of Score Got by Leftover Children of Different Genders in Each Question

Question No.	Z	P
1	-2.992	0.003**
2	-0.162	0.031*
15	-3.623	0.000***

*p < 0.05, **p < 0.01, ***p < 0.001.

The above data indicate that leftover and non-leftover children show distinctive differences in many aspects after watching animations, particularly showing medium correlation in terms of emotions after watching animations, the impacts of behaviors of animation characters to their daily life, and telling good characters from bad ones. This indicates that animations have direct influence on the emotions, behaviors and judgment of leftover children. Leftover boys are easier to become joyful or worried influenced by animation characters, while girls are more likely to play animation games influenced by animations than boys. Therefore, animation designers should design cleverly and create more optimistic characters, present common senses of life, scientific and cultural knowledge cleverly in a specific event of the characters in the animations. They should avoid vague and ambiguous judgment of animation characters. Meanwhile, the airing organizations of animations should pick animations suitable for leftover children. Gaming production companies should broaden their mind and make bold innovation and develop some intelligence benefiting games based on the currently popular animations.

5. Conclusion

- (1) The leftover children watch animations not for acquiring new knowledge or broadening their horizon. Animations do not function to spread information and educate the leftover children as we have expected. Objectively speaking, for the children surveyed by us, the most important function of watching animations lies in its emotional consolation. While watching animations, leftover children wish to find love which is absent in their life, namely, the parent-child love and the friendship between playmates and have their emotion need satisfied while their parents are away.
- (2) Every leftover child has his or her favorite animation characters and can tell why they like the characters. Nowadays the various animation characters have become good partners of leftover children in their daily life. Leftover children with different personalities usually prefer the characters that share the same disposition or have the disposition they yearn for. The daily behavior of animation characters will have a silent influence on them. Most leftover children have ever fancied themselves to be the leading character in the animations, and even imitate the behaviors of the leading character. The results of a test on their favorite animation characters indicate that personality, appearance and behaviors are the main elements.
- (3) The influence of animation characters on the emotions and behaviors of leftover children show a distinctive correlation. Compared with non-leftover children, leftover children are easier to be joyful, worried or relaxed influenced by the characters, and make themselves stronger, braver and more optimistic because of some characters in the animations. They are more likely to apply the skills learned from the animations in their actual life. Meanwhile, leftover boys are easier to undergo emotional fluctuations than leftover girls in watching the encounter of the animation characters. In terms of playing animation games, leftover girls show a more distinctive strong correlation than leftover boys.
- (4) Compared with non-leftover children, most leftover children watch animations on TV. Limited by financial condition, they have a poorer access to new TV transmission technology, so they can watch a limited number of animation channels and even zero animation channels. Therefore, they have no rich resource platforms to watch excellent animations and latest animations.

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