



ISSN (Print) : 2320 – 3765
ISSN (Online): 2278 – 8875

International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Website: www.ijareeie.com

Vol. 8, Issue 2, February 2019

Augmenting the Numerical Skills among Children through offline Physical Management System

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ABSTRACT: This paper is used to improve the physical and mental ability of child in different manner. This proposed paper makes the television can be used for multipurpose. A normal television can be used for entertaining purpose. Continuous watching of TV leads to addiction towards cartoons, lack of thinking and physical ability. To overcome the above problems, this proposed project is helpful in which the setup will be an inbuilt module within the television done by manufacturer itself. Implementation of this project will be used to reduce the mental stress and it is quite interesting because this process is based on timing. This paper can increase the thinking ability of the child by asking numerical and logical questions and also the physical ability of the child can be ensured by doing cycling. This paper is totally a novel concept attempted to improve both the physical and mental ability of the child. This paper is proposed after analysing the practical difficulties faced by the children those who are continuously watching television for a long period of time. It is believed that the proposed paper would be a better solution for the above said problems.

KEYWORDS: Multipurpose, Mental and Physical ability, Child Management, Television, Mental stress.

I. INTRODUCTION

Normally television is used for entertainment. Though television has been continuously updated in day-to-day life. The update is based on only power consumption, size, weight, screen size, display clarity. But it is used only for entertainment purpose. Now-a-days children see television for long period. So, it makes the children to lack of interest on improving their skills. Continuous watching of TV reaches to addiction towards cartoon channel, lack of thinking and physical ability. The lack of physical ability causes various problems such as dullness, increase in body weight, mental stress etc. A recent survey says that continuous watching of television may leads to decrease in their normal IQ level. So, to overcome the above problems use this technique.

This paper is used to improve physical and mental abilities. Physical activities such as cycling, running are improved. Mental abilities such as problem solving, GK questions are improved. In this technique we provided two modes of switching. In this first mode of switching, television is operated in normal way for a period of time. After a period it will display the different type of questions. Based on questions, Answers should be chosen by using the remote. After completing certain number of question the television it switched ON for some period of time (As required). Then later physical activity is continued so television is turned off automatically. Cycling is used to improve physical ability. So he has to do cycling for certain time period (Timing as required). RF link is used to exchange data between cycle and raspberry pi. When the received time period satisfies the required amount, the television automatically turned on by raspberry pi.

II. EXISTING SYSTEM

The following fig.1, shows the existing system ie., smart television. In existing system like Samsung smart television there is lot of features such as playing online games, using social network, and also using apps. At present, many websites provide various quiz questions to develop the thinking ability of children according to their age categories the question types will differ.

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Fig.1 Existing system

III. CIRCUIT DESCRIPTION AND OPERATION

1. INTERFACING WITH TELEVISION

- The following fig.2, shows the connection between Raspberry pi and Television
- In television, IR sensor is used to receive the data from transmitter
- Inside IR sensor is connected with raspberry pi to get the data
- After the data received, the process will be proceeding based on the mode.



Fig.2 Interfacing with Television

2. INTERFACING WITH RELAY

- The following fig.3, shows the connection between Raspberry pi and Relays
- When external video input is given to the television relays are used
- Normally the relay is connected with external video input
- After a period of time, raspberry pi switched the relay and connect with the video input of raspberry pi and the questions are displayed in the television screen.

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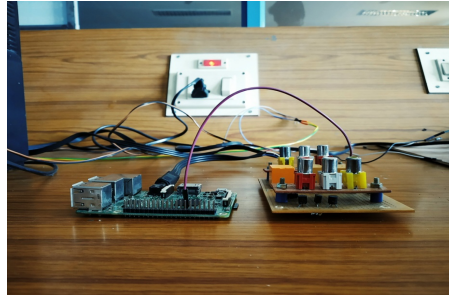


Fig.3 Interfacing with Relay

3.HARDWARE MODEL

It is used to improve physical and mental abilities and physical activities such as cycling, running is improved mental abilities such as problem solving, GK questions are improved. In this technique we provided two modes of switching. In this first mode of switching, television is operated in normal way for a period of time. After a period it will display the different types of questions. Based on the questions, answer should be chosen by using the remote. After completing certain number of questions the television will switch on for some period of time (as required). Then later physical activity is continued, so television is turned off automatically. We prefer cycling to improve physical ability. So he has to do cycling for certain period of time (timing as required). Here we use RF link to exchange data between cycle and Raspberry Pi. When the received time period satisfies the required amount, the television automatically turned on by Raspberry Pi. This process repeated again and again. The overall hardware model is shown in below fig.4

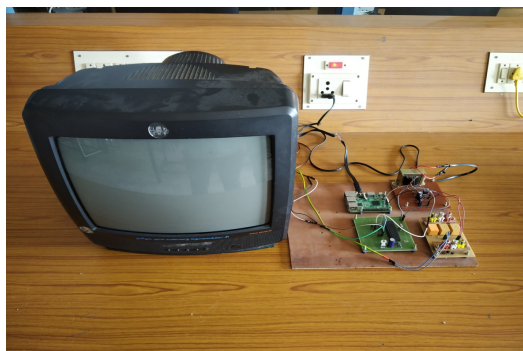


Fig.4 Working Model

4.OPERATION

When the television is switched ON, the normal channels get displayed in the screen or the external video gets displayed. After a period of time, the process gets switched and the questions are displayed. For the displayed question the user or children answer by using remote. The data from the remote is received by the IR sensor inside the television. The received data is processed based on the mode i.e., normal mode and questions displayed mode. In normal mode, the received data is directly transferred but in questions displayed mode, the received data is checked with the displayed option and the options are chosen. This process will take place until the children answer for all the questions for the selected level. The above process is used for improving the mental ability. Then the television gets turned into the normal channel display. Again the television switched into the physical improvement process. For improving physical ability, cycling is provided. Based on the timing of cycling by the children within the particular area the television gets switched into normal television mode. The overall block diagram is shown in below fig.5

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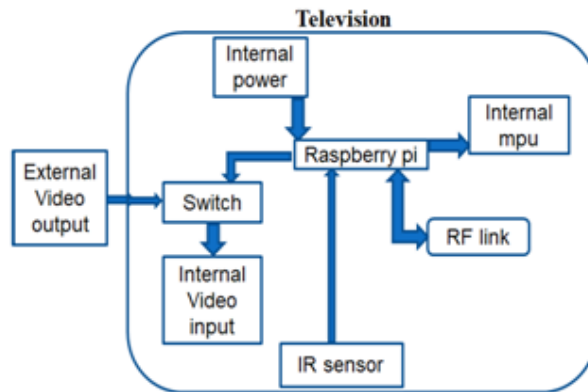


Fig.5 Block Diagram of Physical Management system

IV. RESULT AND DISCUSSION

1.TKINTER RESULT

Once the error free coding is established, then the program gets executed by using Tinker window, the mode selection and questions are displayed in the television screen. The mode selection result is shown in the below fig.6

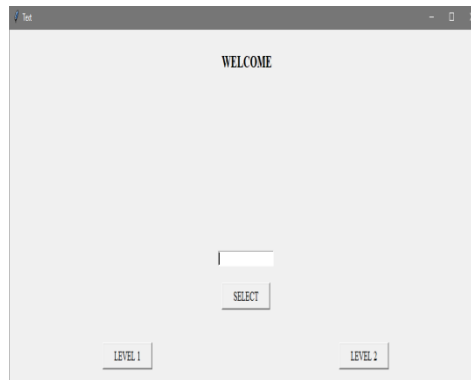


Fig.6Tkinter Result



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2.FINAL PROTOTYPE

The following fig.7, shows the final prototype of proposed project.



Fig.7 FINAL OUTPUT

Thus, the results are illustrated that all the modules are operating correctly without any data loss and each sub-module in all modules are performing their function. The IR sensor in the television senses the data from remote and sends it to raspberry pi. Based on the mode the raspberry sends the data to television controller. The final output was displayed in the television screen.

V. CONCLUSION

This paper is used to improve the physical and mental ability of a child. In this technique we provide two modes of switching. In the first mode of switching, television is operated in normal way for a period of time. After a period it will display different types of questions. After completing the questions, physical activity is continued. So television is turned off automatically. The RF link is used to exchange data between cycle and Raspberry pi. Thus it replaces the existing system in time basics. Thus it reduces the addiction towards the watching television and improves the physical and mental ability by different manner. This idea will be a better solution when compared to the present system. It has better scope in future when adding other features according to the user.

REFERENCES

- [1] Cloutier, Michael, Chad Paradis, and Vincent Weaver. "A Raspberry Pi Cluster Instrumented for Fine-Grained Power Measurement." *Electronics* 5, no. 4 (September 23, 2016).
- [2] Cox, Simon J., James T. Cox, Richard P. Boardman, Steven J. Johnston, Mark Scott, and Neil S. O'Brien. "Iridis-pi: a low-cost, compact demonstration cluster." *Cluster Computing* 17, no. 2 (June 22, 2013)
- [3] Dongarra, Jack, Michael Heroux, and Piotr Luszczek. "HPCG Benchmark." *Innovative Computing Laboratory and Sandia National Laboratories*. Accessed December 15, 2016. <http://www.hpcg-benchmark.org/>.
- [4] Iain Sutherland, Konstantinos Xynos, Hew read Andy jones, "A Forensic Overview Of The LG Smart Tv".
- [5] Jasmin Guth , Uwe Breitenbacher, Michael Falkentha , "A Detailed Analysis Of IoT Platform".
- [6] A.Bogdanchikov, M.Zhaparov, and R.Suliyev, "Python To Learn Programming".
- [7] Prirish, Sachdevn and Shrurik, Kntchii , " A Review Paper On Raspberry Pi".
- [8] Md. M., Fida H., Rafi, Abu F., and M., A. Rashid, M. Fareq. Development of a Noninvasive Continuous Blood Pressure Measurement and Monitoring System. Department of Biomedical Engineering Khulna University of Engineering & Technology. Khulna, Bangladesh. 2012".
- [9] Basem Abu Zneid, Mohammed Al-zidi, Tareq Al-kharazi, "Non-invasive Blood Pressure Remote Monitoring Instrument Based Microcontroller", IEEE Region 10 Symposium, 2014 IEEE, Kaula Lumpur, Malaysia.



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- [10] Amit Narote, Abhishek Dsilva, Selma Misquitta and Palak Khandelwal (2015), Smart home automation using arm11, International Journal of Current Engineering and Technology, vol. 5, pp. 472-476.
- [11] Gayatri Kulkarni, Priyanka Gode, Jadi Pratap Reddy and Madhura Deshmukh (2015), Android based smart home system, International Journal of Current Engineering and Technology, vol. 5, pp. 1022-1025.
- [12] P.Vigneswari, V.Indhu, R.R.Narmatha, A.Sathinisha and J.M.Subashini(2015), Automated security system using surveillance, International Journal of Current Engineering and Technology, vol. 5, pp. 882-884.