IMPACT AND UTILIZATION OF PROJECTORS IN HIGHER EDUCATION WITH LOW ENERGY CONSUMPTION AND LAST LONG BATTIES IN WSN ENVIRONMENT

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***Abstract*-- It has been observed that in Higher Education there is no proper utilization of modern techniques and utilization of ICT. There are several types of modern technology used in class room to delivered lectures so, that students can understand the concepts of theoretical as well as practical approach by using modern techniques like CRT Monitors, LCD TV, LED TV, LED 3D TV, LCD projectors, DLP projectors, Laptop, Desktop, Palmtop, Tablet, PC, mobile phone , through Internet connectivity etc. most of the LED devices uses low energy by using latest technology in education system, students can see and listen the subject topic with special effect. Students come out from pouring lecture techniques like as chalk and duster only. Chalk and duster was the traditional or oldest techniques of teaching. This techniques was no so effective that students can feel the environment, which studied by him/her. By using modern techniques students can feel, listen and see the studied topic with actual examples and working functionality of that topic. This technology provides audio visual effect on the mind of students. By using Mobile projectors, mobile uses very less amount of energy in the form of batteries used in the mobile phone or cell phone. Teaching methodology will become interesting in each subject and teacher will also take the interest to teach the students in a very effective manner.**

Keywords: Opaque Projector, Digital projector, DLP Pico Projectors, Cell Phone Projectors, DLP Notebook Companion Projectors

I. INTRODUCTION

There are many types of devices uses for Internet connectivity in the cities as well as in higher education class rooms. Internet connectivity can be access in PC , Laptop, Mobile Phone , palm top, tablet etc. Information can be send and receive through Wi Fi , Wireless, wired connectivity, Broadband etc. Video Conferencing technology is more helpful for students and faculty both of them. Through video conferencing you will connect in worldwide to share the information and delivered lecture in whole world without traveling and save time as well money both of them. And solve the problem the problem of students through experts of that subjects. Wired connectivity is typical in rural area and maintenance is also very high. Wireless network work so effective manner in remote or rural area. To fulfill such requirement of rural as well as cities higher education institute Video Conferencing is more powerful technology, through video conferencing one expert can teach solve the problem of students at different geographical locations in worldwide in several numbers of class rooms.

II. PROJECTOR

Device for transferring photographic and other images in an enlarged form onto a viewing screen. All types of projectors employ a light source and a lens system. A simple still-photo or slide projector for exhibiting transparencies has two sets of lenses, one between the light source and the transparency, to concentrate the light, and one in front of the transparency, to focus the picture on the screen and enlarge the image. Another type of still projector has the light source positioned in front of the picture so that the image is formed by light reflected from the picture; this produces a dimmer image but is necessary for the exhibition of opaque pictures-i.e., printed photographs and illustrations from books and magazines.

In today's modern world, it offers a broad selection of projectors. Whatever your need for using one, you would have to do a lot of research about the different types of projectors. Here are just a few different types of projectors and a brief description and features provided [1].

A. Slide/ Opaque Projector

This is also known as Over head projectors. This type of projectors uses transparency slides, Slide projectors were commonly used as a form of entertainment in the 1950s and 1960s [1].

Slide projectors are still used even though there has been more advanced technology over the years. The slide projectors are usable and convenient devices that use photographic slides to display images on a screen or wall [1].

The new slide projectors have small built in screens or walls enabling instant and portable viewing. You can view any kind of presentation anywhere and you have a choice of slide projectors e.g. carousel projectors, dual slide projectors and single projectors.

Now the slide projector has been replaced digital cameras, video/DVD players, televisions etc. There is a slow decline in purchasing a slide projector as the manufacturers have stopped producing them.

Figure 1. (a) Overhead Projector (b) DP-60 Projector

B. Digital Projector

A digital projector is a computer display system that displays enlarged image on a movie screen. The digital projector can be used in a program that helps to view 3d, interactive PowerPoint presentations, and mp3 movies from a computer/laptop [1].

These projectors are commonly used in lecture theatres i.e. universities, conference centers etc. for doing presentations.

Figure 2. LCD Projector

1) *LCD:*LCD projectors are lightweight and portable; they provide very good quality images, you may want to think about getting an LCD projector depending on your usage. Digital LCD projectors are normally used for places such as the cinema, exhibitions, or advertising etc.

The LCD projectors are the modern versions of overhead and slide projectors. But are smaller and project images to nearly any flat surface. This is the most widely used projector with the ability to transmit high definition pictures with high pixel density.

2) *DLP Pico Projectors :* DLP technology is reasonably priced for the home, business and schools. They are good, lightweight projectors which you can just plug in and start using straight away [2].

DLP technology is reasonably priced for the home, business and schools. They are good, lightweight projectors which you can just plug in and start using straight away.

DLP technology is famous for innovations in projection. The DLP Pico chipset is the latest example of how DLP is leading the way in projection technology. This amazing tiny projection technology is being used in a whole new line of ultra portable DLP Pico Projectors [2].

Imagine a portable projector that fits in the palm of your hand or is part of our cell phone. A projector that can fit in your pocket so you can project anything, anytime, anywhere while producing a picture that will blow your mind![2]

DLP Pico Projectors are available now making your portable projection possibilities endless.

a) DLP Pico Projectors Features

- Ultra portable and compact
- Easily connected to nearly any device's video out port -Smart phone, iPod, portable gaming, digital camera, laptop and more
- Long lasting solid state LED illumination
- Amazing picture quality
- DLP Pico chipset

b) DLP Pico Cell Phone Projectors

It's a cell phone as well as a projector. How many times have you wanted to share pictures, images, audio, video, web pages or emails on your phone to someone else? Chances are it has probably been more times than you can remember. With a DLP Pico projector built into your cell phone, sharing images or video has taken on a whole new meaning. Image taking with your cell phone camera and then sharing them instantly on any surface with a big projected image? [3]

Figure 3. DLP Pico Cell Phone Projectors

c) *Cell Phone/Mobile Projector features*[3]:

- Cell Phone/Mobile Projector image display from 5" to 50"
- It has built-in digital camera
- It has LED illumination
- It has high resolution color touch screen
- It has intuitive flick navigation for presentations and slideshows
- It has built-in audio speakers
- It has Complete mobile office and entertainment solution
- t has sleek lightweight and compact design

d) **Creating technology innovations for the 21st Century Classroom**

In a competitive world, you want the best technology tools in the classroom; technology that will offer superior advantages for your teachers and students. DLP projector technology has been offering this advantage for years and continues to raise the bar through innovations that expand instructional reach for teachers and lower the total cost of ownership (TCO) for schools at the same time. With Filter-free designs that require less maintenance and offer lower operating costs, DLP projectors help your school save money. Plus, unlike other technologies, DLP projectors are virtually immune to color decay (a yellowing of the image after extended periods of usage), so you will have a reliable system even after years and years of use [2].

Today's technologically savvy students need to be engaged in a dynamic and immersive way. DLP projectors deliver interactivity and multi-dimensional curriculum to the classroom with unparallel image quality. The result: higher student involvement and higher test scores [2].

With a projector as the hub of the classroom, you can maximize the impact of lessons in subjects like:

3D Ready DLP Projectors for the Classroom

Figure 4. Discover the advantages of teaching in 3D

- Use 3D lessons such as a frog dissection to captivate the kids.
- Walk through famous architectural structures in a virtual, 3D environment to feel like you're right there.
- Show the nuances of the amazing human anatomy in 3D detail
- Explore virtual photography to bring geography lessons to life
- Fly through the universe in 3D and inspire new space explorers in your class
- All of this 3D content and more is available TODAY and ready to use with your DLP 3D ready projector [6].
- 3D Change the way you engage students

e) Math

Show how to solve a detailed math equation from a TI graphic calculator that even students in the back row can read [3,6].

f) Science

Use a digital camera to show the details of your latest dissection by projecting the video and images to the entire science class [3,6].

g) English

Have students diagram a compound sentence on an interactive whiteboard for collaborative learning [3,6].

h) History

Travel to far-off places through the internet. And visit historic sites and museums in 3D! [3,6].

i) Effective communication

Imagine the possibilities of a classroom designed around a DLP projector system. The most complex lessons can be brought to life though integration of virtually every teaching tool under the sun with the projector system.

j) New Teaching Tools

A DLP education projector can help improve student performance by encouraging greater classroom participation to increase the retention of the content being displayed. From video game style role-playing and interactive simulations and digital imaging-based presentations, to engaging Internet excursions, students get so much more from the curriculum when it's experienced through the brilliance and clarity of a DLP projector [3,4].

k) DLP Pico Handheld Projectors

New DLP Pico Handheld projectors slip easily into your pocket. When you want to share pictures, videos, watch a movie, play video games or surf the net, just turn on the projector and project.

It's the easy way to give an impromptu slide show. Use the available built-in memory or plug the projector in to your video iPod or other video playback device and watch that movie on a screen that you can actually SEE! This tiny pocket projector system also produces a picture that will blow your mind. In Fig. 5. DLP Pico Projection - leading the way in portable Pico Projector [3,4].

Figure 5. DLP Pico Projection - leading the way in portable Pico Projector technology. The ultimate in mobile projection!

l) Connect easily to almost anything

- Smartphone / PDA
- Portable gaming device
- Video / Digital camera
- iPod / iPod touch / iPhone
- Computer / Laptop

m) Features of DLP Pico Projection

- Mobile has image display from 6" to 60"
- Mobile has Long lasting LED illumination (up to 20,000 hrs)
- Mobile has Contrast ratio of 1000:1
- Mobile has Built-in memory
- Mobile has Up to 2 hr battery life
- Mobile has Built-in audio speakers
- Mobile has Sleek lightweight and compact design
- Mobile has Low noise(no fan)
- Mobile has DLP Pico Chipset

No more lugging around projectors with your notebook computer. The DLP Pico projector is the ultimate travel companion. It's bright enough to give a presentation to a small group of people. The first impression it will give to your audience will set the stage for a successful meeting with a captive audience [3,4].

DLP Pico Projection Technology is the cutting edge of imaging innovations. It has taken projectors to a whole new level of usefulness. With a DLP Pico projector, the uses are endless. Watch a movie on the plane from the back seat in front of you. Play video games on the ceiling. Share videos pictures with friends at the party. If you can dream it, a portable DLP Pico projector can probably do it [3,4].

n) DLP Notebook Companion Projectors

If you are a business professional on the go, you don't want anything to weigh you down. But, you still need the tools to help you make an impression. The new Notebook Companion Projectors powered by DLP Pico projector technology are the answer to helping you share ideas, present information or sit back and watch a movie on the wall – without the weight and heft of a traditional projector [4].

The new DLP Notebook Companion Projectors offer extreme portability, yet pack a powerful punch. These projectors are so small that they fit in the palm of your and can way less that 1 pound. These tiny powerhouses use leading edge projection technology led by the innovative DLP Pico chipset [4].

Figure 6. DLP Notebook Companion Projectors

o) DLP Notebook Companion Projectors Key Features

- It has ultra portable and fits in the palm of your hand
- Some models weigh less than 1 pound
- It has long projection life with LED light source – up to 20,000 hours
- It has lifelike images and vibrant colors with DLP technology
- It has 858 x 600 SVGA native resolution
- It has contrast ratios up to 2000:1
- It has easy connectivity
- It has DLP Pico chipset

Projectors are the must have tool to help you communicate for business. But who says that you can't take one everywhere you go? With an ultra portable DLP Notebook Companion Projector, you can have the power to project information anytime, anywhere. And, while the size may surprise you, the picture quality, featuring solid-state LED illumination, will grab anyone's attention. With contrast ratios of up to 2000:1 and SVGA resolution the DLP Notebook Companion Projector produces a sharp, clear and vibrant picture. And it's bright enough to produce a suitable image for a small workgroup or team presentation[4].

Figure 7. DLP Notebook Companion Projectors

p) DLP Multimedia Pocket Projectors

DLP Multimedia Pocket Projectors are ultra portable home entertainment and uses for the class rooms [5].

DLP Multimedia Pocket Projectors Features include:

- DLP Multimedia Pocket Projectors has image display from 6" to 60"
- DLP Multimedia Pocket Projectors has long lasting LED illumination (up to 30,000 hrs)
- DLP Multimedia Pocket Projectors has contrast ratio of 1000:1
- DLP Multimedia Pocket Projectors has built-in memory
- DLP Multimedia Pocket Projectors has up to 2 hr battery life
- DLP Multimedia Pocket Projectors has built-in audio speakers
- DLP Multimedia Pocket Projectors has sleek lightweight and compact design
- DLP Multimedia Pocket Projectors has low noise level

- DLP Multimedia Pocket Projectors has low power consumption with LED lamp
- DLP Multimedia Pocket Projectors has DLP Pico Chipset

Figure 8. DLP Multimedia Pocket Projectors

New DLP Pico Multimedia Pocket projectors are the ultimate in ultra portable home entertainment. Imagine a mini projector that fits in the palm of your hand and easily connects to home entertainment and multimedia devices. These powerful LED illuminated projectors have built in speakers so all you need is the devise and you can be enjoying portable projection on practically any surface [5].

III. CONCLUTION

This paper describes wireless sensor networks as energy consumption by different types of projectors and its solutions using wireless sensor networks in higher education and using different types of wireless network devices, LED Projectors, Mobile Projectors with very low energy, it can be used more than two hours continuously. Other types of projectors like as over head projectors uses large amount of energy compare to Digital projectors and Mobile projectors and LED devices or LED projectors. Now a day's such type of mobile projectors are LED based uses very less amount of energy. They have small battery and capacity up to more than 2 hours. Class room has so effective and interactive teaching environment audio, video or 3D impact provided by the mobile projectors or DLP projectors DLP Notebook Companion Projectors LED light source – up to 20,000 hours. DLP Pico Projection/Mobile has image display from 6" to 60" , Mobile has Long lasting LED illumination (up to 20,000 hrs) and Mobile has Up to 2 hr battery life.

DLP Multimedia Pocket Projectors has image display from 6" to 60" DLP Multimedia Pocket Projectors has long lasting LED illumination (up to 30,000 hrs)

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