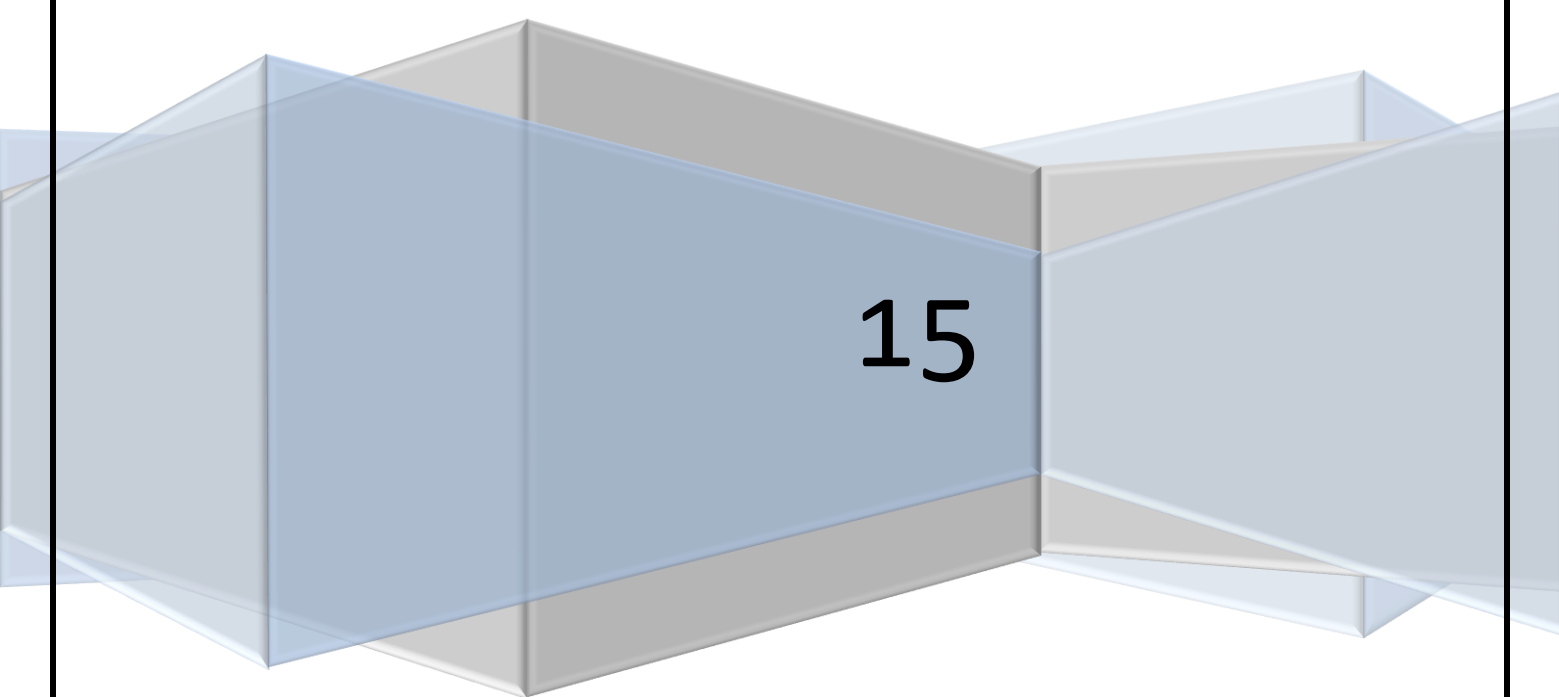


**The Jubilee School**

# **Selfie Note**

**First Lego League Championship**

Royals



**15**

## **Dedication**

This project is dedicated to everyone who believes in the power of education, to everyone who works to improve the education system and to the builders of the future- the students. It is also dedicated to our teacher and mentor Hazem Hamdan who without his encouragement and insight we would not have made it this far.

## **Declaration**

We hold a copy of this research / project that we can produce if the original is lost or damaged. We declare that no part of this research / project has been copied from any other student's or another's work except where such collaboration has been authorized by the supervisor.

Royals Robotics team authorizes the Jubilee School to supply copies of my Research / Project to libraries or establishments or individuals upon request, according to Jubilee School regulations.

## **Acknowledgement**

A big thank you goes to all of our mentors at the robotics department this year; our beloved teacher Hazem Hamdan, Mr. Abdulkhaleq Shboul. Also, to Hussam Abukhorj and Hamzeh Fakhri for their great help.

We would also like to thank my school for their constant encouragement and for providing the school premises to use at all times.

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## **Selfie Note**

**By the team Royals**

**Under the supervision of Hazem Hamdan**

### **Abstract**

A device made to implement blended learning through mixing classroom education with technology to get the best of both ways and suit all types of learners. Whenever the teacher pushes the button on the eraser before erasing the board; Selfie Note directly takes a photo of the board and sends this photo to all mobiles in the classroom through direct Wi-Fi via an application installed on them. Selfie note doesn't only capture the board but also records the teacher's voice using the same mobile phone. The files will be -sent at intervals. What makes Selfie Note special is its low cost- the whole device costs around 10 dollars. After presenting the idea to the school director and teachers the device was found to be a useful and innovative idea by all of them.

## **Introduction:**

Education is the key for everything. It is the stairway to success in life. Nowadays with the evolution of technology there is no field that is clear from technology; our lives are getting digitalized.

After brainstorming to find ideas on how we can improve the quality of education it was decided it is best if we find the faults of the current systems and work on solution for one.

After coming up with the problem which involves classrooms education we thought it was better to mix the traditional with the new to get the best of both worlds.

The traditional, obviously, consists of the teacher and students in between 4 walls taking a lesson whilst the new was online education.

The project provided a platform using technology while maintaining the best of classroom education which is face to face communication.

## **Purpose:**

To build a device installed in classrooms that facilitates the process of learning for both teachers and students by providing a photographed and



## **Problem Identification and Justification:**

Current classroom teaching ways are proving to be unexclusive of the different types of learning.

There are three main types of learning styles: auditory, visual, and kinesthetic. Visual Learners makes up approximately 65 percent of the population. They learn visually responding well to visual cues such as pictures, notes and diagrams. While auditory learners makes up approximately 30 percent of the population and they tend to retain information after hearing it. Lastly, Kinesthetic Learners pick things up through touch or imitation and make up approximately 5 percent of the population.

Taking notes during class disrupts the process of learning for some people. It is beneficial to jot down the important points and arguments but literal writing of every point said during class makes students overlook the big image. This –later on- leads to inefficient studying unless different resources like books, encyclopedias were used while studying which in turn wastes time greatly.

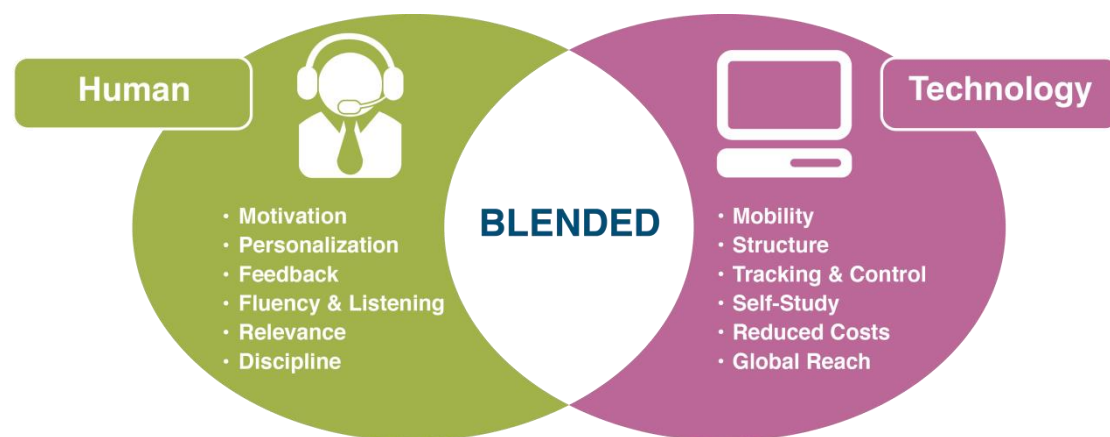
## **Research question:**

Will using Selfie Note improve classroom teaching?

## **Hypothesis:**

Using selfie note will improve classroom teaching and it will be preferable by students.

## Previous Studies:



## Blended learning:

Blended learning, also referred to as hybrid learning is a combination of learning modalities involving face-to-face instruction and Web-based learning delivery, and is carefully designed using a customized instructional strategy that leverages the strengths of each. When implemented effectively, a blended learning program can make better use of instructional resources and facilities, and increase class availability thus speeding up the pathway to graduation for students (Dzuiban et al, 2004).

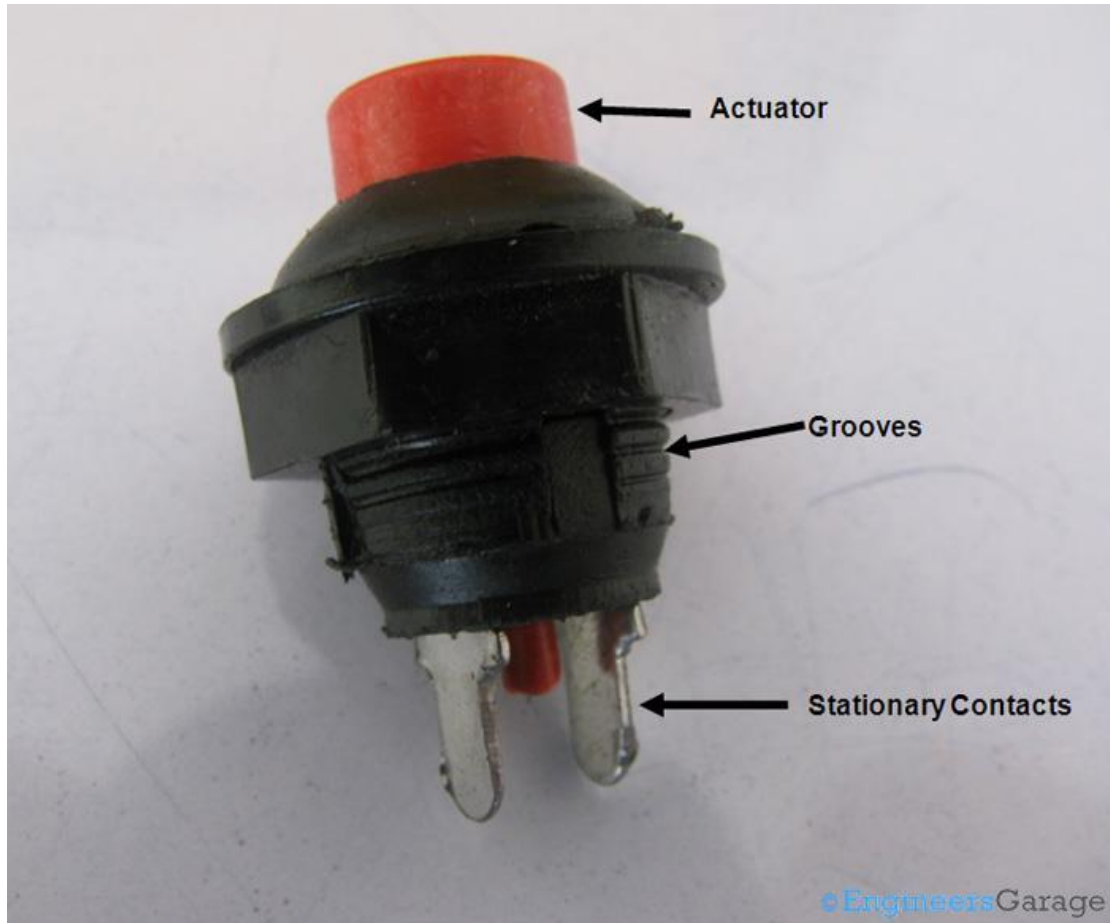
Proportion of Content Delivered Online	Type of Course	Typical Description
0%	Traditional	Course with no online technology used — content is delivered in writing or orally.
1 to 29%	Web Facilitated	Course which uses web-based technology to facilitate what is essentially a face-to-face course. Uses a course management system (CMS) or web pages to post the syllabus and assignments, for example.
30 to 79%	Blended/Hybrid	Course that blends online and face-to-face delivery. Substantial proportion of the content is delivered online, typically uses online discussions, and typically has some face-to-face meetings.
80+%	Online	A course where most or all of the content is delivered online. Typically have no face-to-face meetings.

University of central Florida describes mixed-mode or blended learning as a modality that “*combines the effectiveness and socialization opportunities of the classroom with the self-directed and active learning opportunities that the online environment offers*” (Dziuban, et al, 2004).

The difference in my project is that it does not use internet connection; everything is done offline which makes it accessible at all times. Therefore, it is mixing classroom education with technology usage.

### **Push buttons:**

Push button switches are those which can be made to work with the force of a finger or two. Not only vehicles but camera, lifts and several other common and uncommon interactions with machines/gadgets involve push button switches applications.



### **Tools and materials:**

- Remote controlled selfie stick
- Board
- Board eraser
- Stand

## **Procedure:**

Simple and easy to use as a modified selfie stick, the mechanism of work is feasible, whenever the teacher pushes the button on the eraser before erasing the board; Selfie Note directly takes a photo of the board and sends this photo to all mobiles in the classroom through direct wifi with the push of another button using an application installed on them.

Selfie note doesn't only capture the board but also records the teacher's voice using the same mobile phone that is used to take the photos. All these captures and voice notes are transferred to all mobiles through the application associated with the selfie note without the need of any internet connection.

The recordings will be done at intervals; when the button is pushed the recording will be stopped and sent with the photos regarding the audio file. This makes studying a lot easier as different notes will be distributed very clearly and will be accessed simply.

What makes this device special is that it modifies an already common item in the world which costs a low price, enhancing it with a mobile application makes a strong feature.

The selfie stick is easily installed on a board (as shown in the pictures below). The button controlling the process of capturing photos and recording audio notes is actually taken from the remote and fixed on the eraser on the side.

Bluetooth headsets can sync up in two different ways, using a full or part duplex connection. A full-duplex signal means that all connected devices are able to send and receive signals – in this case a two-way conversation – simultaneously, as opposed to a half-duplex signal, like a walkie-talkie, where each side can still talk and listen, just not both at the same time.

## **Objective and aims:**

### **Overall objective:**

Using Selfie Note inside classrooms to ensure better learning

### **Specific aims:**

- Facilitate the learning process inside classrooms.
- The production of a device that is affordable by different communities.
- Make learning easier for both visual and auditory learners.
- Reduce the time needed for studying.
- Make it easier for the teacher to acquaint the students.
- Engage people with technology.

### **Expected budget for Selfie Note:**

Remote controlled Selfie Stick	5.70 dollars
Stand	3 dollar

We are familiar with Smart Boards that are the new thing in the education field that some might argue they can be used similarly to Selfie Note. But, education is for everybody and coming from that motto my device is for everyone regardless of their financial abilities; best education should be offered to every individual.

## **Future Plans:**

1. Modify the application to be used in online courses by enabling it to send photos and voice notes through internet; it will be easier to students from all over the world to understand those online courses by having captures of the board and voice notes sent to them immediately.
2. Enable the application to transfer data using various methods, giving the user the choice of using what suits him better.
3. Adjust the selfie note to be easier to use and install on the board and develop it to capture boards of all sizes.
4. Develop the application be able to send data to all mobile systems not just android system.
5. Modify user interface so that the student can organize photos and voice notes based on subjects and what he needs the most.
6. Customize a device that will be used to capture photos and record audios for the application to get rid of problems such as:
  - i) The photo battery dying
  - ii) The interruption of the process by receiving phone calls for instance
  - ii) Phone locking

## The questionnaire:

To get real results on how much would people would accept this device and whether it is applicable or not we conducted a questionnaire. 101 copies of this questionnaire were answered by high school students between the ages 14 to 17.

**Dear students,**

**We, Royals, are making a device called Selfie Note to improve the quality of learning.**

**It would be appreciates if you could help us by answering the following questions:**

- How old are you?

-----

- Do you find it difficult to understand and copy simultaneously during class?

Yes                  No                  Sometimes                  Most times

- Would you understand better if you only listened in class?

Yes                  No                  Sometimes                  Most times

- Is online education a part of your studying?

Yes                  No

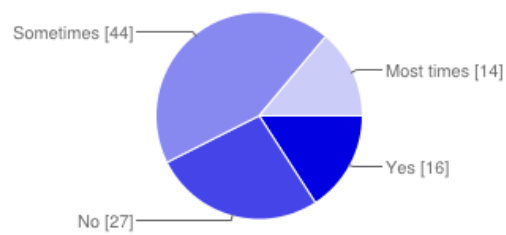
Would you support the implementation of a device that will provide snapshots of the board that has the teacher's notes and records voice notes well?

**I**  
Yes                  No



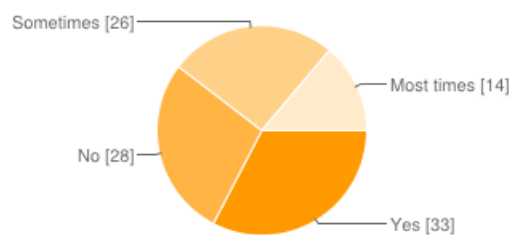
And the results were as follows:

**Do you find it difficult to understand and copy simultaneously during class?**



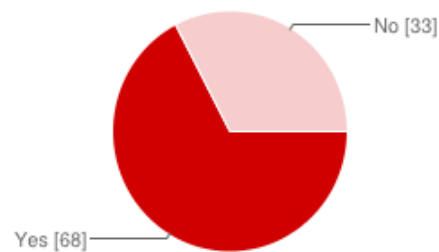
Yes	16	16%
No	27	27%
Sometimes	44	44%
Most times	14	14%

**Would you understand better if you only listened in class?**



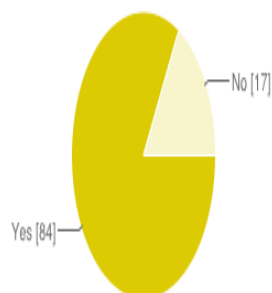
Yes	33	33%
No	28	28%
Sometimes	26	26%
Most times	14	14%

**Is Online Education a part of your studying?**



Yes	68	67%
No	33	33%

**Would you support the implementation of a device that will provide snapshots of the board that has the teacher's notes and records voice notes well?**



Yes	84	83%
No	17	17%

## **Sharing:**

We realize the importance and the effect of proper sharing on the success of the project so the following was conducted:

- I) Several interviews with our school director, teachers and students.
- II) Instagram and Facebook accounts to reach the community fully.
- III) The questionnaire.
- IV) A bake sale where a summary of the championship and our device was distributed.
- V) Videos shared on social websites.

**Reference:**

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<http://www.engineersgarage.com/insight/how-push-button-switch-works>  
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