

TEACHING NETWORKING WITH AN ARDUINO

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1.Introduction

This poster will summarise what this project entailed. This project was about teaching networking with an Arduino device, during this project lesson materials were made from criteria that was found by research. Once the lesson materials were made the teacher then acquired students and delivered the lesson to the students.

2.Aims and objectives

Aim: The aim of this project is to “teach networking and to build up students’ knowledge on networking.”

Objectives:

- Back ground knowledge had to be built up on teaching and networking.
- Research was carried out to discover factors that affected the classroom, different teaching and learning styles.
- Testing was carried out by questionnaires and quizzes.
- The results from the questionnaire and the quizzes were then analysed.
- As a teacher it was crucial to encourage student engagement between the teacher and students.

3.Research

The research that was discovered was that there were 7 different learning styles, 5 teaching styles, 5 factors that affected the classroom, how IT has become a practical subject and finding lesson criteria.

7 different learning styles: Visual, Aural, Verbal, Logical, Social, Solitary and physical.

3 classroom factors: Social emotional learning, Cultural and Technology

5 different teaching styles: Authority, Delegator, Facilitator, Demonstrator and hybrid

4.Design and Implementation

For the design there were lesson concepts and plans that were made, as well as an Arduino device being coded and put together. For the implementation lesson materials were made from the lesson concept and the material was delivered to the students. The Arduino device was coded to display a device trying to establish a network connection.

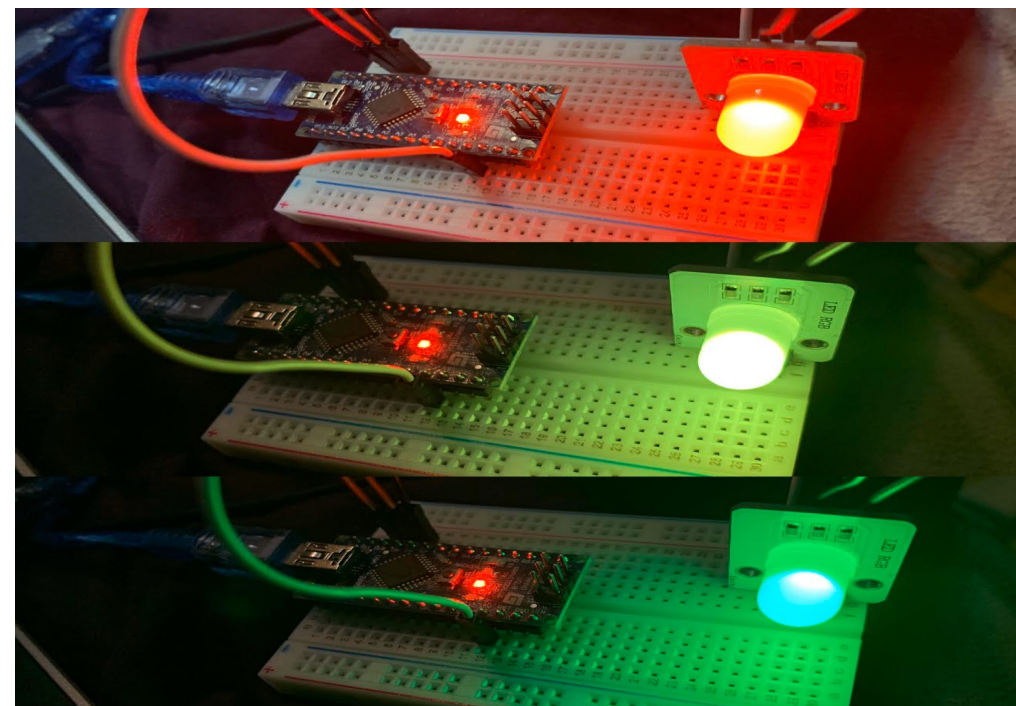


Figure 1 Arduino Device

5.Testing and analysis

The testing involved a questionnaire and a quiz. The questionnaire will be taken after the class and the quiz will be taken before and after. After getting the results from the questionnaire all students said that the lessons were beneficial and as displayed in figure 4 the students found the classes beneficial. The same quiz was handed out before and after the class, in the graphs it shows that there was an increase in the students' score.

Results from before the class

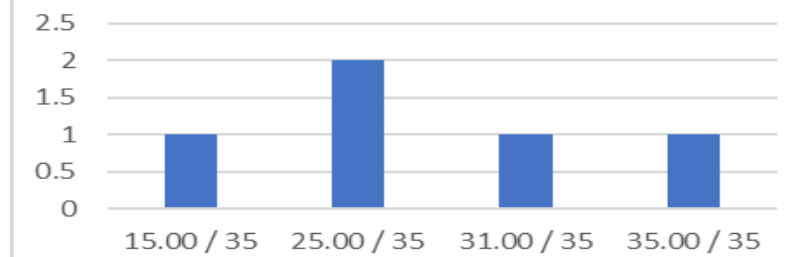


Figure 2 Before class quiz results

Results after the class

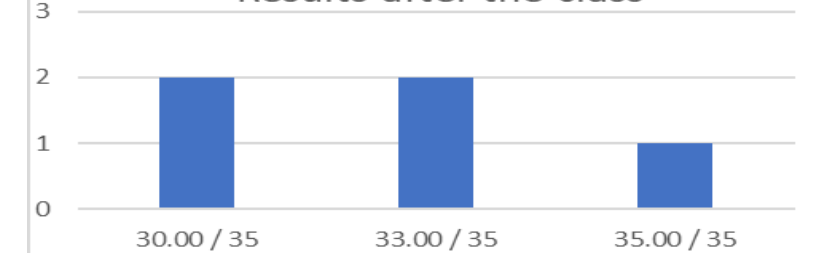


Figure 3 After class results

Has this experience captured your interest in Networking?
5 responses

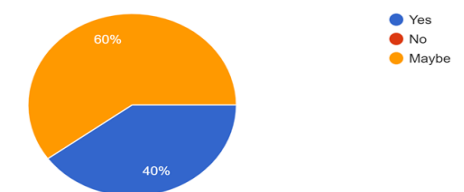


Figure 4 Questionnaire feedback

6.Conclusion

Over the course of the project the aim was met as the teacher was able to teach networking to students and to acquire the students' interest in networking. This was proved by the results from the quiz and questionnaire which are displayed above.

7.References

https://drive.google.com/open?id=1_PPk4Cmr4ZHT7jU_TyYxw4Yhf96XbCdt