



# Effect of Classroom Temperature Increase on Students



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## Introduction

The effect of increased classroom temperature during day time in student learning can be investigated. Conducive classroom environment plays a great role in students learning. Having a comfortable physical space where students are able to sit comfortably, see and understand what their teacher is saying, as well as socialise with their fellow classmates is one of their major components of a conducive classroom learning environment. Researches indicates that the normal temperature range for student learning is between 68- 75 degree Fahrenheit during summer months. Whether it's too hot or too cold, uncomfortable temperature will cause a distraction to students learning, and also affect numerous other mental and physical activities and the brain is disturbed.

Classroom environmental quality in most government/ community secondary schools where students spend large part of their working hours is often inadequate. This may have far – reaching consequences for the learning process. Thermo discomfort caused by elevated temperature in the classrooms seems to reduce students' ability to learn effectively especially in hot regions like Dar es Salaam. During summer time classroom temperature shoots up above the required temperature in this region to the level process of learning becomes disturbed. It was observed that with increased classroom temperature when it reaches 11:30 Am to 4:00 pm, majority of students begin to sleep during instruction time, not able to concentrate to what the teacher is saying any more. Installation of fans/ ventilators when building this schools are overlooked. They see it as not an important ingredient during construction of the government schools' classrooms. This is because education stakeholders are not well informed that increased classroom temperature among other factors can also affect student learning effectively. This project will concertize education stakeholders to install this important instruments necessary for improving learning in schools especially in hot regions.

## Method

### SCOPE OF THE PROJECT

This Project focused on the effect of classroom temperature increase in student learning during the day time in secondary Schools. Because of time, as students, we took only one secondary school to be dealt with; Kondo Secondary school taken as a representativeness and generalizability of the whole situation at Nation level.

### PROJECT Procedures/ Methodology

Interview method was used in this project. Closed and open- ended questions was asked through questionnaires. Interview by closed - ended questions use Likert scale to check which statements participants perceive as strongly agree, agree, disagree or strongly disagree.

A bar chart analysis (using a mode of the frequency) as appropriate measure was used to measure the most frequent responses.

### SAMPLE AND SAMPLE SIZE

This project involved one school; Kondo Secondary School. The school has about 1500 total number of students. From a total sample of 160 students, 40 students were taken from each class, 20 boys and 20 girls (form 1, 2, 3, and 4) picked randomly.

## Results

### Interview Questions (Open – ended)

1. Is increased classroom temperature affect your academic performance? Yes/No
2. Which temperature range do you think affect your learning? High/low/moderate.
3. How does the increased classroom temperature affect your learning?
4. What things you cannot do with increased classroom temperature during the day?
5. How do you manage/cope with increased classroom temperature?

Those who were interviewed using question one said yes, that increased classroom temperature affect their academic performance. They gave reason in the noon time when it reaches at 12.00 PM they lose concentration in listening to the teacher.

Respondents of question two said high temperature affect their learning. Researches has shown that increased temperature of the surrounding makes brain prioritize regulating body temperature while concentration of other things be impaired.

Also some students who were interviewed said increased classroom temperature affect there learning as they sleep in the class during teacher's instructions, they get tired easily unable to do their class work effectively, some other students cannot write notes because they become tired early at noon time.

## Conclusion

The things which students couldn't do during increased classroom temperature responded include not being attentive in the class, can't do the assignment effectively.

Some other students said they can't cope with increased classroom temperature, instead it makes them leave the school before time or sleeping in the class because of tiredness

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Experiences	Responses	N=160	%
	Frequency		
I can cope with increased classroom temperature	30		18.8%
I can't concentrate in the class during noon time	85		53.1%
Accelerate hunger	50		31%
Frequent going out to get ventilation	60		38%
Sleeping during instruction	91		56.9%
Frequent going out to tap water (thirsty)	60		38%

Challenges	Responses	N=160	%
	Frequency		
Big class size increases classroom temperature	79		49.3%
Reduce my learning time	60		37.5%
Attention to the teacher decreases	88		55%
I can't do my assignments at school	50		31.2%

The Impacts of Increased Classroom Temperature to students Learning during the day time

Impacts	Responses	N=160	%
	Frequencies		
Decreased academic performance	86		54%
Reduced learning time	40		25%
Reduced school attendance (absenteeism)	30		19%
I leave the school before time (truancy)	60		38%
Headache at noon time	20		12.5%