

# What Font Size? - An Original Study

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Running title: Addison's disease and its impact on oral health- A review

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## Aim

To study the visibility of projected alphabets in two font sizes in the basic science lecture hall

## Objective

To check the visibility of projected alphabet in the basic science lecture hall

## Background

When teaching is done with power point presentation, it is essential that the projection should be seen clearly from the back of the class. Factors which influence the visibility of alphabets will be font size, color of the font and the background color. In this study visibility of two common font sizes are compared. The study was conducted with 100 student volunteers. Two power point slides with written data in Calibri font in black color against a white background were projected. The font size was 36 in one slide and 28 in the other. Each student assessed visibility as good, medium, poor from each row. From the data, visibility was assessed.

## Reason

To find the ideal font size for projection in the basic science lecture hall

**Keywords: Very clearly seen, clearly seen, can see, projected alphabet.**

## Introduction

When teaching is done with power point presentation, it is essential that the projections should be seen clearly from the back of the class [1]. There have been many studies on factors affecting legibility. Factors of importance are contrast of letters, height-width ratio, stroke width, spacing between letters, and vertical spacing between lines [2-5].

The analysis of researchers in the field of readability shows insufficient scrutiny of issues related to finding the best representation of the spatial characteristics of textual information [6-8]. Thus, the research of perception of the spatial characteristics of the type page area on the example of lead [9-11].

Mills (1933) used a shutter exposure to test color combination and recommended, first, black on yellow and, second, black on white or white on black, thus indicating the importance of letter contrast [12-15]. Lauer (1932) summarizing work of his laboratory at Iowa state university, recommended a light yellow as best for all seasons, a letter width-to-height greater than 33%, a stroke 20% of average letter width is difficult to use, however, because of the varying widths of different letters of the alphabet [16]. Latter studies show some variations [17,18].

Materials and Method

The purpose of this study is to know the visibility of projected alphabet in the science lecture hall with the help of 100 students.

A total of 100 students were involved in this study. Two slides with font size 36 and 28 written in Calibri font in black color against a white background were projected. In this study students who use glasses regularly participated with their glasses. Each of 100 students were made to sit in each row. So likewise, 10 rows were occupied by the participants and where asked to see whether they can see the alphabets projected on the screen in the lecture hall by shifting to all 10 rows. To calculate that how many of them can see clearly from first row and by shifting till tenth row a printed paper copy which contains a question on two types of font sizes which is projected on the screen. The two font sizes that is projected on the screen is size 28 and size 36 and each participants were asked to mark for the questions like whether they can see the projected alphabets on the screen in the lecture hall very clearly or whether they can see the alphabets in the blurred form which is projected on the screen in the lecture hall or whether the participants cannot see the projected alphabets on the screen in the lecture hall. Each participant were asked to mark separately for both the font sizes.

Result

Table 1 shows the result when font size is 28

ROWS ->	1	2	3	4	5	6	7	8	9	10
STUDENTS WHO CAN SEE CLEARLY	100	100	86	78	73	63	50	35	22	17
STUDENTS WHO CAN SEE	0	0	14	22	24	29	33	39	41	32
STUDENTS WHO CANNOT SEE CLEARLY	0	0	0	0	3	8	17	26	37	51

Chart 1 shows the result when font size is 28

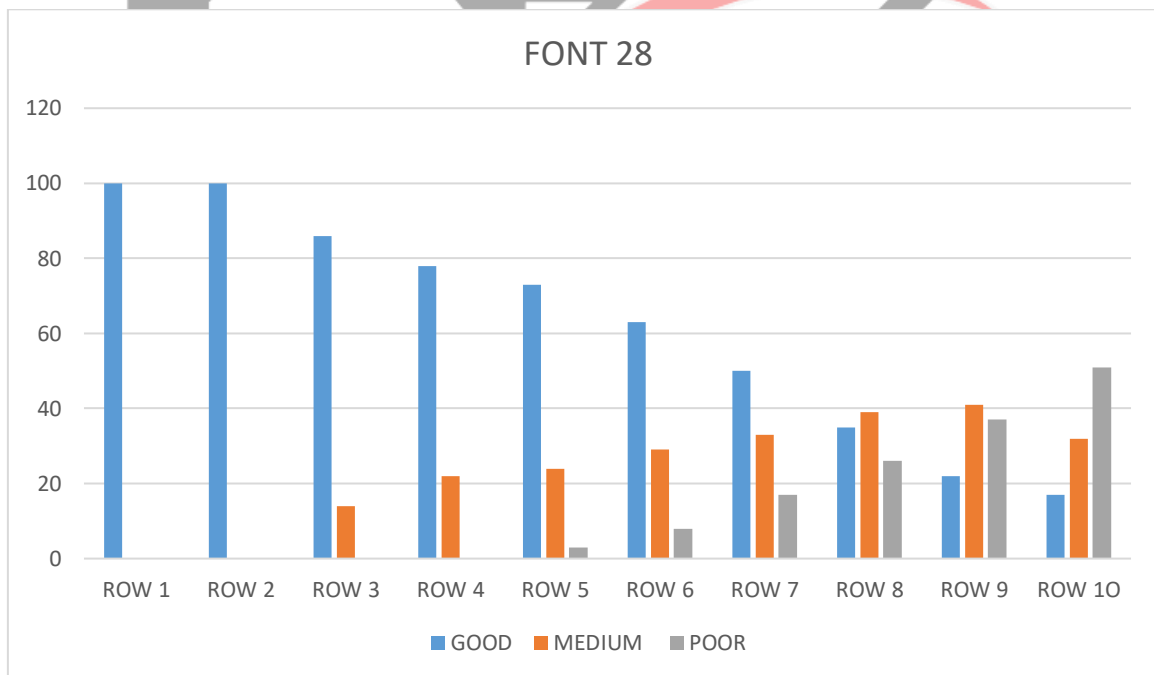
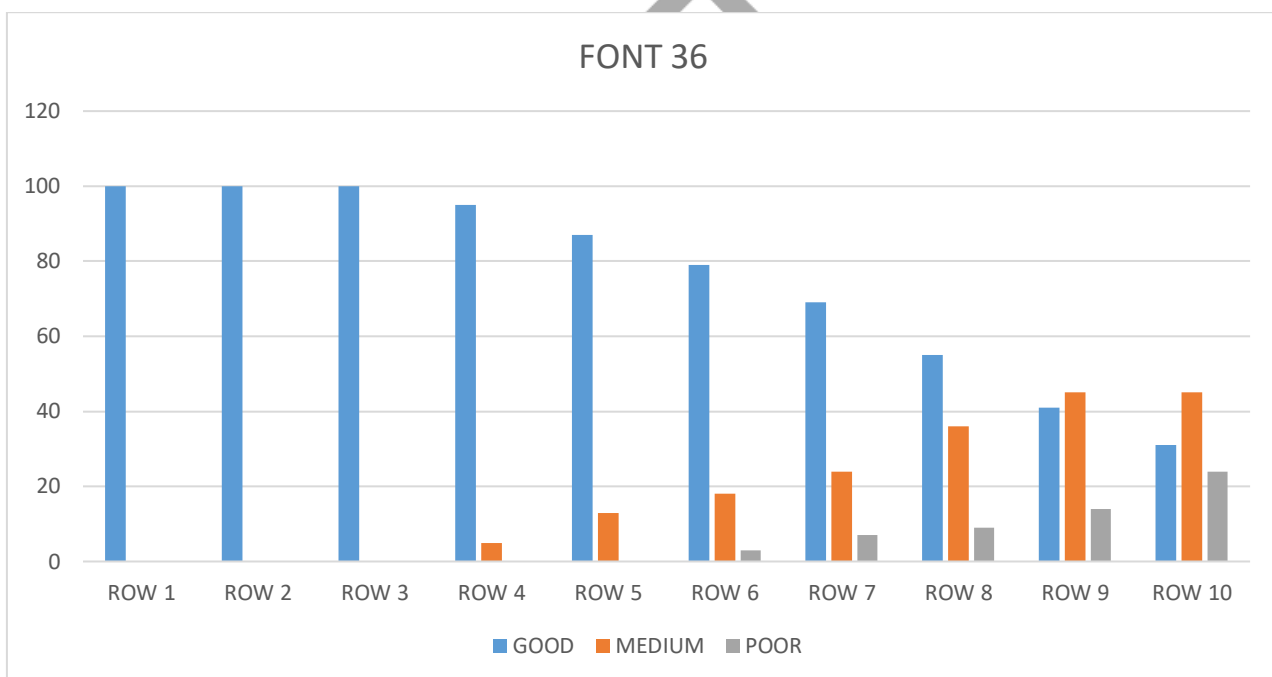


Table 2 shows the result when font size is 36

ROWS ->	1	2	3	4	5	6	7	8	9	10
STUDENTS WHO CAN SEE VERY CLEARLY	100	100	100	95	87	79	69	55	41	31
STUDENTS WHO CAN SEE	0	0	0	5	13	18	24	36	45	45
STUDENTS WHO CANNOT SEE	0	0	0	0	0	3	7	9	14	24

Chart 2 shows the result when font size is 36



Discussion

In the study what font size, when slide with the alphabets of font 28 is projected in the screen on the lecture hall, the participants were asked to mark whether they can see the image very clearly or blurred or they cannot see the alphabet which is projected in the screen in the lecture hall.

From row 1, the participants who can see the alphabets very clearly on the screen in the lecture hall is 100%. This shows that all the participants in the lecture hall can see the alphabets with size 28 font from the first row.

From row 2, the participants who can see the alphabets very clearly on the screen in the lecture hall is 100%. This shows that all the participants in the lecture hall can see the alphabets with size 28 font from the second row.

From row 3, the participants who can see the alphabets very clearly on the screen in the lecture hall is 86%, the participants who see the alphabet in the blurred form is 14%, this shows that at least all the participant see the alphabet either clearly or blurred.

From row 4, the participants who can see the alphabets very clearly on the screen in the lecture hall is 78%, the participants who see the alphabet in the blurred form is 22%, this shows that at least all the participant see the alphabet either clearly or blurred.

From row 5, the participants who can see the alphabets very clearly on the screen in the lecture hall is 73%, the participants who see the alphabet in the blurred form is 24%, the participants who cannot see the alphabet which is projected on the screen is 3%.

From row 6, the participants who can see the alphabets very clearly on the screen in the lecture hall is 63%, the participants who see the alphabet in the blurred form is 29%, the participants who cannot see the alphabet which is projected on the screen is 8%.

From row 7, the participants who can see the alphabets very clearly on the screen in the lecture hall is 50%, the participants who see the alphabet in the blurred form is 33%, the participants who cannot see the alphabet which is projected on the screen is 17%.

From row 8, the participants who can see the alphabets very clearly on the screen in the lecture hall is 35%, the participants who see the alphabet in the blurred form is 39%, the participants who cannot see the alphabet which is projected on the screen is 26%.

From row 9, the participants who can see the alphabets very clearly on the screen in the lecture hall is 22%, the participants who see the alphabet in the blurred form is 41%, the participants who cannot see the alphabet which is projected on the screen is 37%.

From row 10, the participants who can see the alphabets very clearly on the screen in the lecture hall is 17%, the participants who see the alphabet in the blurred form is 32%, the participants who cannot see the alphabet which is projected on the screen is 51%. In the study what font size, when slide with the alphabets of font 36 is projected in the screen on the lecture hall, the participants were asked to mark whether they can see the image very clearly or blurred or they cannot see the alphabet which is projected in the screen in the lecture hall.

From row 1, the participants who can see the alphabets very clearly on the screen in the lecture hall is 100%. This shows that all the participants in the lecture hall can see the alphabets with size 36 font from the first row.

From row 2, the participants who can see the alphabets very clearly on the screen in the lecture hall is 100%. This shows that all the participants in the lecture hall can see the alphabets with size 36 font from the second row.

From row 3, the participants who can see the alphabets very clearly on the screen in the lecture hall is 100%. This shows that all the participants in the lecture hall can see the alphabets with size 36 font from the first row.

From row 4, the participants who can see the alphabets very clearly on the screen in the lecture hall is 95%, the participants who see the alphabet in the blurred form is 5%, this shows that at least all the participant see the alphabet either clearly or blurred.

From row 5, the participants who can see the alphabets very clearly on the screen in the lecture hall is 87%, the participants who see the alphabet in the blurred form is 13%, this shows that at least all the participant see the alphabet either clearly or blurred.

From row 6, the participants who can see the alphabets very clearly on the screen in the lecture hall is 79%, the participants who see the alphabet in the blurred form is 18%, the participants who cannot see the alphabet which is projected on the screen is 3%.

From row 7, the participants who can see the alphabets very clearly on the screen in the lecture hall is 69%, the participants who see the alphabet in the blurred form is 24%, the participants who cannot see the alphabet which is projected on the screen is 7%.

From row 8, the participants who can see the alphabets very clearly on the screen in the lecture hall is 55%, the participants who see the alphabet in the blurred form is 36%, the participants who cannot see the alphabet which is projected on the screen is 9%.

From row 9, the participants who can see the alphabets very clearly on the screen in the lecture hall is 41%, the participants who see the alphabet in the blurred form is 45%, the participants who cannot see the alphabet which is projected on the screen is 14%.

From row 10, the participants who can see the alphabets very clearly on the screen in the lecture hall is 31%, the participants who see the alphabet in the blurred form is 45%, the participants who cannot see the alphabet which is projected on the screen is 24%. From this result, it is clear that as font size decreases the visibility of the alphabet also decrease. This result also shows that as the row increase that is when the distance between the participant and the screen increases the visibility of the alphabet decreases. So, in considering size 28 font, all the participants can see the alphabet from row 1 but 51% of the participants cannot see the alphabet which is projected on the screen from row 10.

So, in considering size 36 font, all the participants can see the alphabet from row 1 but 24% of the participants cannot see the alphabet which is projected on the screen from row 10.

#### Conclusion

The students sitting at the back of the lecture hall often complain about not seeing the projected alphabet clearly. Factors such as font size, color of the font and the background color play a vital role in seeing the projected alphabet clearly. Some earlier studies show that color of the font and background color play a vital role in visibility. In this present study, the effect of only the font size was studied. In this case the font size 36 was too small for some students sitting at the back of the class. Thus, increase in font size above 36 will provide clarity of the alphabet projected in the lecture hall. This will help the students to see clearly while sitting at the back of the lecture hall [19,20].

The use of I-pad will largely eliminate the problem of visibility in the lecture hall

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