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## B.A. DEGREE STUDENTS' ATTITUDE TOWARDS COMPUTER-BASED TESTING

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### Abstract:

*This study aims at testing the significant differences in using two assessment formats: computer-based testing (CBT) and paper-pencil testing (PPT), to support the grounds of the student-to-hardware interaction and its impact on the learning process. The time completion of this was 11 weeks with the sample of 80 degree students. The results reviews that male students, urban students, students having post graduate parents and students having computer science as their optional subject were shown more positive attitude when comparative to their counterparts*

Key words: computer-based testing, paper-pencil testing, degree students

### 1. Introduction:

Educational systems around the world are investigating further into computer-based assessment due to the potential and proven benefits of the approach. These benefits include cost and time savings that resulted from automated delivery, accurate scoring of students' grades, and providing the faculty members with immediate feedback about students' performance and averages (Hewson, 2011). As computer-based testing (CBT) became a practical alternative for the paper-pencil testing (PPT) (Dammass, 2016), some still associate the computer culture and internet with gender, pointing out that males and females do not use technology the same way, or at the same level of experience. It is assumed that men are more likely than women to use online media and show a higher level of proficiency with computers (Cuadrado-García, Ruiz-Molina, & Montoro-Pons, 2010). One of the most important characteristics of E-learning is interaction, which takes place in three different ways: student to- student, student-to-teacher, and student-to-hardware and software.

This study aims at testing the significant differences using two assessment formats: computer-based testing (CBT) and paper-pencil testing (PPT), to support the grounds of the student-to-hardware interaction and its impact on the learning process. Considering the population of students taking part in this study, the main objective of the current study is to determine the effectiveness of two different testing methods on their attitudes. Consideration was also given to the population's gender, type of the college, locality, optional subject and qualification their parents.

## 2. Objectives:

To study attitudes of B.A. Degree students' attitudes toward computer-based testing based on their different factors.

## 3. Hypotheses:

1.  $H_{01}$ : there is no statistically significant difference in students' attitudes toward computer-based testing based on their gender.
2.  $H_{02}$ : there was a statistical significant differences in students' attitudes towards computer-based testing based on their type of the college
3.  $H_{03}$ : there was a statistical significant differences in students' attitudes towards computer-based testing based on their locality
4.  $H_{04}$ : there was a statistical significant differences in students' attitudes towards computer-based testing based on qualification their parents
5.  $H_{05}$ : there was a statistical significant differences in students' attitudes towards computer-based testing based on having and Computer Science subject as optional subject

## 6. Methodology:

**6.1. Sample:** 80 B.A. Final Year Students of different Degree colleges of Bellary town were treated as samples of the study.

### 6.2. Tools used for data collection:

A survey questionnaire was designed to measure students' attitudes towards computer-based testing system. It is based on Lickert three point attitude scale. It contains 40 statements among those 20 Items are positive and remaining 20 items were negative in nature.

### 6.3. Treatment and data collection:

The first exam of the course was administered using paper-pencil format for 80 students. The second exam of the course was administered using computer-based format for same students. In the traditional paper-pencil testing format (marked as the first exam of the course), the exam was administered in class after six weeks of the start of the course. In the computer-based testing format (marked the second exam of the course), the exam was administered at a computer lab in the 11th week of the course using MOOC learning system. Students were instructed to take the exam on campus to avoid technical difficulties. Students were tested using two tests with the same format (PPT and CBT)

at the same time of the course period. Finally, students were asked to complete a survey after finishing the course. The second exam (CBT) that was scheduled on the 5th week of the course.

## 7. Data analysis:

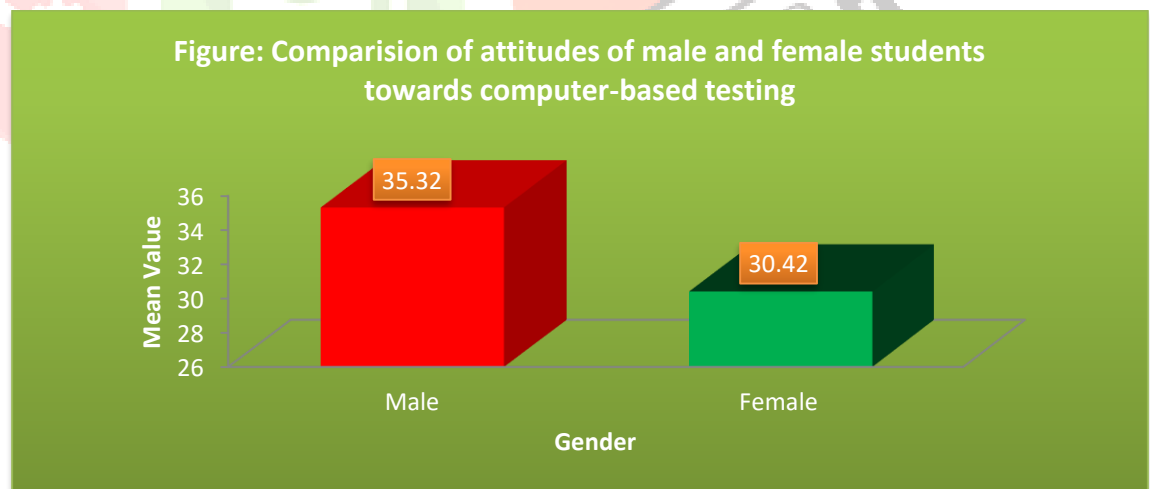
### 1. B.A. degree students' attitude toward computer-based testing differ by gender:

Independent sample t-test was used to identify if there was a statistical significant differences in students' attitudes towards computer-based testing based on their gender. "Table 1" displays more of these findings.

**Table -1: Independent Sample t-test to identify the variance in B.A. degree students' attitudes toward CBT testing based on their gender.**

Gender	N	Mean	S.D.	t-value	df	Sig.
Male	40	35.32	4.42	4.35	78	Significant
Female	40	30.42	3.48			

The results from table-1 show that there is no statistically significant difference in students' attitudes toward computer-based testing based on their gender. Hence we can conclude that there is significant difference between attitudes of male and female students towards computer-based testing. Hence hypothesis  $H_{01}$  was rejected. The mean value for the males was 35.32 with a standard deviation of 4.42 (medium level) and as for the females, the mean value was 30.42 with a standard deviation 3.48 (medium level), it means male students were shows more positive attitude towards computer-based testing that of female students.



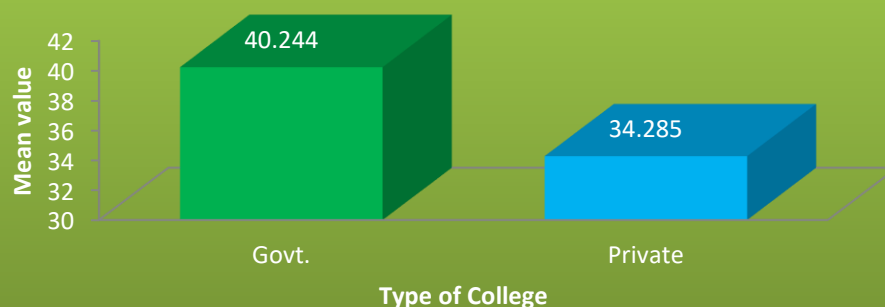
## 2. Students' attitude toward computer-based testing differ by type of the college:

**Table -2: Independent Sample t-test to identify the variance in B.A. degree students' attitudes toward CBT and PPT testing based on their type of the college.**

Gender	N	Mean	S.D.	t-value	df	Sig.
Govt.	40	40.244	4.428	4.358	78	Significant
Private	40	34.285	3.489			

The results from table-2 show that there is no statistically significant difference in students' attitudes toward computer-based testing based on their type of the college. Hence we can conclude that there is significant difference between attitudes of Govt. and private college students towards computer-based testing. Hence hypothesis  $H_{02}$  was rejected. The mean value for the Govt. students was 40.244 with a standard deviation of 4.428 (medium level) and as for the females, the mean value was 34.285 with a standard deviation 3.489 (medium level), it means Govt. students were shows more positive attitude towards computer-based testing that of private students.

**Figure-2: Comparision of mean score attitudes of Govt. and private college students towards computer-based testing**



## 3. B.A. degree Students' attitude toward computer-based testing CBT differ by locality.

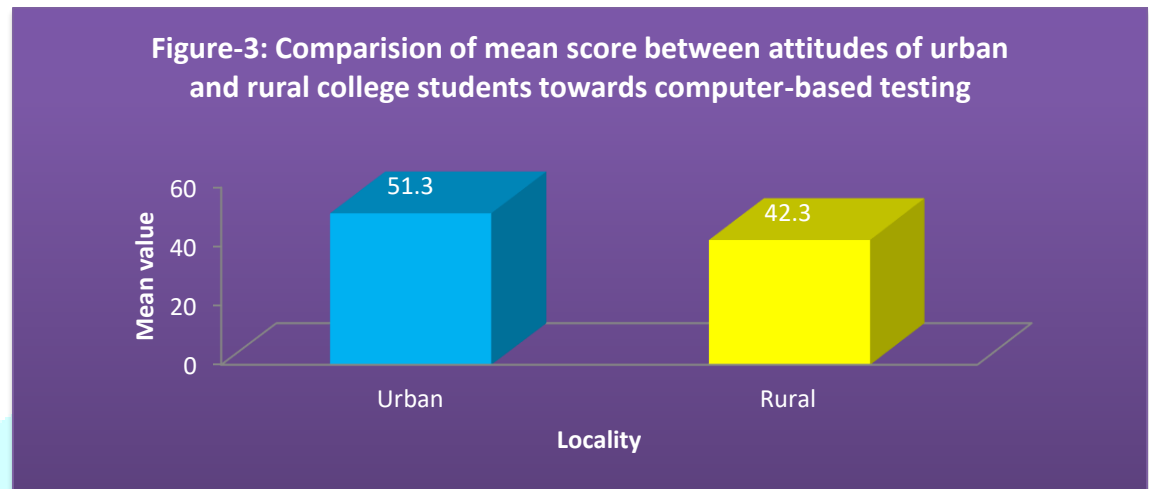
Independent sample t-test was used to identify if there was a statistical significant differences in students' attitudes towards CBT based on their locality. Table-3 displays more of these findings.

**Table -3: Independent Sample t-test to identify the variance in B.A. degree students' attitudes toward CBT based on their type of the college.**

Locality	N	Mean	S.D.	t-value	df	Sig.
Urban	40	51.3	5.34	6.85	78	Significant
Rural	40	42.3	4.38			

The results from table-3 show that there is no statistically significant difference in students' attitudes toward computer-based testing based on their locality. Hence we can conclude that there is

significant difference between attitudes of urban and rural college students towards computer-based testing. Hence hypothesis  $H_{03}$  was rejected. The mean value for the urban students was 51.3 with a standard deviation of 5.34 (medium level) and the mean value of rural students was 42.3 with a standard deviation 4.38 (medium level), it means urban students were shows more positive attitude towards computer-based testing that of rural students.



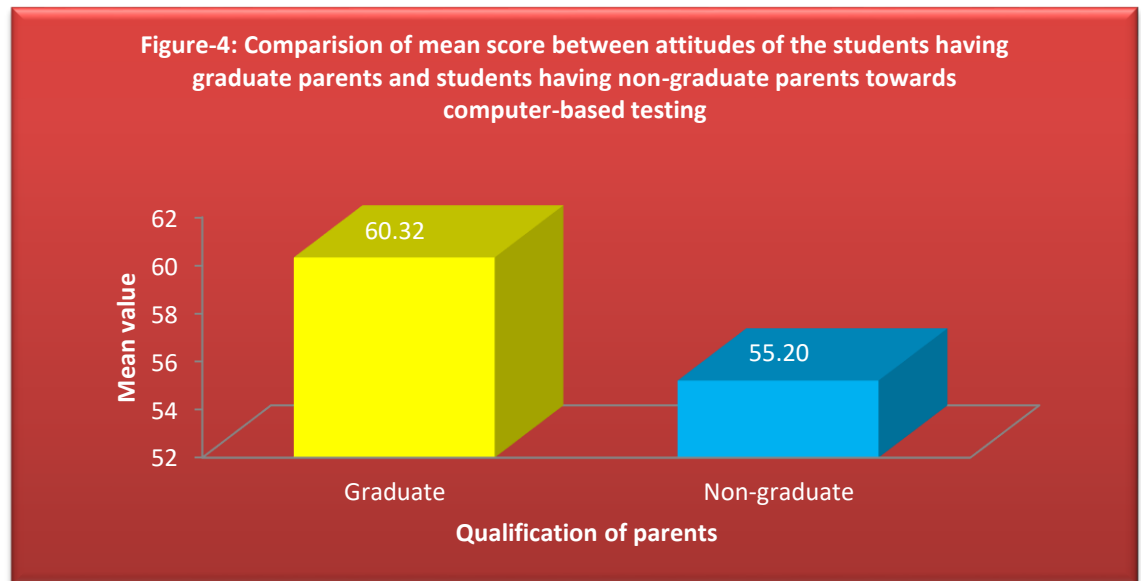
#### 4. B.A. degree Students' attitude towards computer-based testing differ by qualification their parents.

Independent sample t-test was used to identify if there was a statistical significant differences in students' attitudes towards CBT based on qualification their parents. Table-4 displays more of these findings.

**Table-4: Independent Sample t-test to identify the variance in B.A. degree students' attitudes toward CBT based on qualification their parents.**

qualification of parents	N	Mean	S.D.	t-value	df	Sig.
Graduate	40	60.32	6.43	8.34	78	Significant
Non-graduate	40	55.20	5.23			

The results from table-4 show that there is no statistically significant difference in students' attitudes toward computer-based testing based on qualification their parents. Hence we can conclude that there is significant difference between attitudes of the students having graduate parents and students having non-graduate parents towards computer-based testing. Hence hypothesis  $H_{04}$  was rejected. The mean value for the the students having graduate parents was 60.32 with a standard deviation of 6.43 (medium level) and the mean value of students having non-graduate parents 55.20 with a standard deviation 5.23 (medium level), it means the students having graduate parents were shown more positive attitude towards computer-based testing than that of students having non-graduate parents.



**5. B.A. degree students ‘attitude toward computer-based testing differ by Computer Science subject as optional subject.**

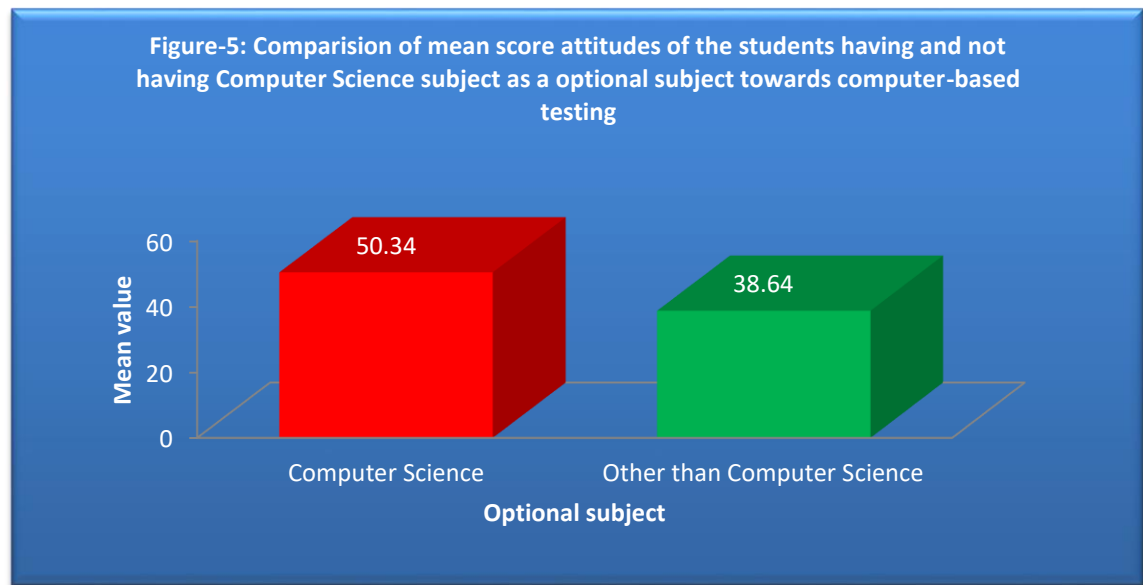
Independent sample t-test was used to identify if there was a statistical significant differences in students’ attitudes towards CBT based on having and not having Computer Science subject as a optional subject. “Table-3” displays more of these findings.

**Table-5: Independent Sample t-test to identify the variance in B.A. degree students’ attitudes toward CBT and PPT testing based on qualification their parents.**

optional subject	N	Mean	S.D.	t-value	df	Sig.
Computer Science	40	50.34	7.82	6.18	78	Significant
Other than Computer Science	40	38.64	6.76			

The results from table-5 show that there is no statistically significant difference in students’ attitudes toward computer-based testing based on having and not having Computer Science subject as a optional subject. Hence we can conclude that there is significant difference between attitudes of the students having and not having Computer Science subject as a optional subject towards computer-based testing. Hence hypothesis  $H_{04}$  was rejected. The mean value for the students having Computer Science subject as optional subject was 50.34 with a standard deviation of 7.82 (medium level). As for the students having other subject as optional subject, the mean value was 38.64 with a standard deviation 6.76 (medium level). it means the students having Computer Science subject as a optional subject were shown more positive attitude towards computer-based testing than that of students not having

Computer Science subject as a optional subject



### 8. Findings:

1. There is significant difference between attitudes of male and female students towards computer-based testing
2. There is significant difference between attitudes of Govt. and private college students towards computer-based testing
3. There is significant difference between attitudes of urban and rural college students towards computer-based testing
4. There is significant difference between attitudes of the students having graduate parents and students having non-graduate parents towards computer-based testing
5. There is significant difference between attitudes of the students having and not having Computer Science subject as a optional subject towards computer-based testing

### 9. Conclusion:

Maximum B.A. degree students are having more positive attitude about computer based test than paper –pencil test. The different factors of B.A. degree students influenced on their attitudes.



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