Abstract

Objectives: To explore the opinion towards the awareness of information and communication technology related to State-wise Institutions.

Methods/Analysis: This study uses student T-test with equal variance to discover out meaningful diversity between faculty and students in relation to their state of residence. A stratifies random sampling method is used used to collect five hundred sixty samples of students and three hundred forty four samples of faculty from six Universities of Punjab and Haryana. In this paper four Independent and thirty five dependant variables have been considered. Item analysis test has been used to selection of dependant variables.

Findings: This study explores the ICT awareness between student and faculty of Punjab and Haryana states. The outcome of this study reveals no meaningful difference among students- faculty in relation to their state of residence. There is no diversity found in between Punjab's student and Haryana's student towards ICT awareness. Similarly there is no diversity found between Punjab's faculty and Haryana's faculty about ICT awareness for state variable.

Conclusion/Application: Evaluating state diversity towards ICT would be prove beneficial and supportive lead to state government administration and other organizations such as UGC, AICTE, DEC, MHRD to realize the current scenario of ICT awareness in Indian Institutions.

Keywords: Degree of Freedom, Diversity, State, T-Test

1. Introduction

There are a variety of ICT tools available in market which can be utilized for the knowledge formation and distributions over the globe. These tools include Fax, Radio- FM (Frequency Modulation), Television, Internet, Mobile phone, Printer, Scanner, Computer, laptop, tablets and many more hardware and software applications. All these devices can be used in imparting in learning, teaching and training for teachers and students. ICT have been used in various activities. It is also said that 96.82% persons are using electronic journals in university library and 93.65% involvement of them is visible to e-mail access for sending and receiving files. Then after 87.30% found to search and gather work using Internet. Many of them (80.95%) are interested in internet surfing; 76.19%, are using ICT tools for preparing their manuscripts for research proposals and papers; 71.43% persons use ICT for online database storage. Many on them found (69.84%) for making power point presentations and other documents; followed by 55.55% for blogging, Web OPAC (Open public access), discussion forums and career development. ICT is not only the backbone of the information society, but is also presented as an important catalyst for inducing educational reforms that change our students into productive knowledge workers. ICT plays a major role to covers a broad continuum of higher educational tools and approaches that continues to grow to meet the needs of students and educators. With the global communication and internet connection speed, web content has grown
An Analytical Approach to Investigate State Diversity towards ICT: A Study of Six Universities of Punjab and Haryana

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2. Objectives and Hypothesis

This study is carried out in order to analysis ICT Awareness among students and faculty members are evolving in higher education system of India. This paper is exploring no meaningful state wise diversity in between students-faculty towards ICT awareness. We have framed the following objectives and their corresponding null hypotheses:

- To explore state diversity towards Information and communication technology Awareness between Punjab and Haryana students.
- To explore state diversity towards Information and communication technology Awareness between Punjab and Haryana Faculty.

In order to accomplish the mentioned objectives, we have set the two null hypotheses:

H01: There is no meaningful diversity between Punjab’s student and Haryana’s student towards ICT Awareness in relation to state.
H02: There is no meaningful diversity between Punjab’s faculty and Haryana’s faculty towards ICT Awareness in relation to state.
3. Data Collection and Sampling

A well-defined structured questionnaire is framed to collect primary data using stratified random sampling method. The questionnaire consists of thirty-five items (questions or dependent variables). The five-point Likert scale is used. Item Analysis test has been performed on instrument for selection of questions or variables. Out of total seventy variables, only 50% variables are passed under Item analysis test. Table 1 shows the description of all passed (35) and failed to accept (35) independent variables. Item analysis test is found twenty-six variables have VG status and no need for updating further as the Discriminating Power (DP) lies in between the range of 0.40-0.9. There are nine variables are found with G status for DP 0.30-0.39, requires little bit modification; the thirty-five variables are found with P status for DP<0.19. Hence, these variables are rejected here due to difficulty value (DV) is less than 0.20.

A normative survey method is used to gather primary data (904 samples of faculty and students). In order to evaluate the assumed null hypotheses t-test at 5% confidence level is applied using data analysis tool in MS-Excel. Each respondent have taken approximately 20 to 30 minutes to fill-up the questionnaires. This research includes the 4 independent and 35 five dependent variables. Table 2 displays the name of four independent variables used in study.

The total size of samples is 904 and sample space area is limited to 6 Universities located in Haryana and Punjab. Table 3 shows that there are 560 (62%) students and 344 (38%) faculty members are participated in this research study. Out of total 560 students 282 (50.4%) and 278 (49.6%) were belongs to Punjab and Haryana states respectively.

Similarly out of total 344 faculty members 184 (53.5%) and 160 (46.5%) were belongs to Punjab and Haryana States respectively. All the participants are doing study in either private or government universities from two states. They are belonging to various domains such as engineering, arts, law and sciences.

The above Figure 1 shows the four independents variables contains population under each. The variable Punjab student contains 282 (50.4%) boys and girls; the variable Haryana student contains 278 (49.6%) boys and girls; the variable Punjab faculty have 184 (53.5%) including male and female; the Haryana faculty has 160 (46.5%) including male and female faculty. The total number of students and faculty from two states is 904.

4. Data Analysis

In order to evaluate our framed two null hypotheses, t-test at 5% confidence level is used with few descriptive statistics such as mean and standard deviation. The

Table 1. Item Analysis Test

| Status            | N  | Value of DV-DP |
|-------------------|----|----------------|
| No. of Accepted variables | 35 | DV>0.20<0.75   |
| No. of Rejected variables   | 35 | DV<0.20       |
| Very Good (VG) | 26 | 0.9>DP>0.40   |
| Good (G)        | 09 | 0.39>DP>0.3   |
| Poor (P)        | 35 | DP<0.19       |

(Source: Authors)

Table 2. Independents Variables

| S.No. | Name of Independent Variable |
|-------|-------------------------------|
| 1     | Punjab Student                |
| 2     | Haryana Student               |
| 3     | Punjab Faculty                |
| 4     | Haryana Faculty               |

(Source: Authors)

Table 3. State Wise Distributions of Participants

| State                  | Punjab Student | Haryana student | Punjab Faculty | Haryana Faculty | Total |
|------------------------|----------------|-----------------|----------------|-----------------|-------|
| N                      | 282            | 278             | 184            | 160             | 904   |
| Total                  | 560            | 344             | 344            | 904             |
| %                      | 50.4           | 49.6            | 53.5           | 46.5            | 100   |

(Source: Authors)

Figure 1. Population Percentage, (Source: Author).
data analysis tool named VBA –tool pack is installed in MS-Excel is used appropriately.

4.1 Evaluation of Hypothesis H01

After applying t-test at 5% level of confidence, we found that calculated t-value 0.36 is lesser than the table t-value 2.0 at 5% level of confidence with 68 degree of freedom (0.36<2.0 at df =68 at 5%). Therefore, it is not meaningful at 5% level. Hence, our first hypothesis H01 “There is no meaningful diversity between Punjab’s student and Haryana’s student towards ICT Awareness in relation to state” is failed to reject here. It reflects that residence state didn’t affect state diversity for students towards ICT. There is no significant diversity between students of two states towards Information and communication technology awareness.

From Table 5 It is found that there is no meaningful difference between Punjab’s student and Haryana’s student towards ICT. The mean value of Haryana’s students is slightly greater than mean score of Punjab’s student showing little bit more awareness level among Haryana’s student as compared to Punjab’s student.

4.2 Evaluation of Hypothesis H02

Here we discovered that table t-value 2.0 is found to be greater than the calculated t-value 0.3 at 5% level of confidence with 68 df (2.0>0.3 with df =68 at 5%). It is not significant at 5% level. Hence our second hypothesis H02 “There is no meaningful diversity between Punjab’s faculty and Haryana’s faculty towards ICT Awareness in relation to state” is failed to reject here. Thus, we are not found any meaningful difference between two state’s faculty towards ICT.

The data from Table 6 infers that there is no meaningful diversity between Punjab’s faculty and Haryana's faculty about ICT. The mean value of Haryana’s faculty is slightly lesser than the mean score of Punjab’s faculty.

Figure 2 is displaying mean, standard deviation and variance scores of both students and faculty of two states. It shows no meaningful diversity among stakeholders (students-faculty) towards ICT awareness in relation to residence state. It is also apparent from the above Figure 2 that mean values are deviating less from standard deviations for both faculty and students of Punjab and Haryana. Hence, their responses lie in between range of “Agree to strongly agree” sub-scale. It is observed that no significant diversity between two states towards ICT awareness.

5. Conclusion

The main focus on this paper is to evaluate the state diversity for their students and faculty towards Information and communication technology awareness. The outcomes of this study show that there is no consequential diversity between student and faculty towards Information and communication technology awareness in relation to their state diversity.
of residence. The residency of stakeholder does not make impact on diversity. The state variable didn’t influence the thoughts or opinions of educators and students towards ICT. Therefore, it is revealed that there is no considerable diversity between Punjab’s student and Haryana’s student about Information and communication technology awareness. It is also explored that there is no important variation between Punjab’s faculty and Haryana’s faculty about Information and communication technology awareness. This research is not only beneficial for future researchers of ICT, but also it provides the present scenario of ICT in Indian Higher educational institutions.

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7. References

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