

Title of the Practice

Research as a tool to understand Statistics

Goal: -

1. Make the students understand the actual data analysis procedures in Statistics for research
2. Teaching the students to apply statistical techniques that were learnt before and also the new techniques like testing of hypotheses, to the data collected by other students
3. Show the students how to perform statistical analysis on the data collected by students of other subject, viz. costing by using Excel software
4. Teach the students to apply the techniques in similar situations elsewhere by identifying the data first

The Context: -

- The TYBCom Statistics students were given the data collected by TYBCom Costing subject students for their research which was an internal assessment
- Statistics students were few in number as compared to the Costing subject students hence each Statistics student took upon the task of catering to 3-4 groups of Costing students for data analysis
- Statistics students were told to help Costing students to collect relevant data using questionnaires and after receiving the data in the Excel sheets, Statistics students applied various tools and techniques to analyse the data and interpret the analysis
- Statistics students prepared graphs, charts, one-way tables, two-way tables and applied statistical tests like chi-square test of independence, time series analysis, regression analysis, correlation analysis and so on as per the requirement
- Another volunteer group of TYBCom students who signed up for learning research methodology subject that was out of their syllabus, worked on a full-fledged research project on the subject "Spirituality" for the entire academic year 2019-2020 where students selected this research topic on their own, created questionnaires for data collection with guidance from the mentors, again a collaboration between Statistics teacher and Business Communication teacher, wrote the entire research project report and analysed the data using Excel software. The same group of students also participated in research paper writing which is currently on its way to get published

The Practice: -

The students learn

- The how to apply various statistical techniques and analyse data independently.
- To interpret statistical results to a layman.
- The research process.
- The subject of research methodology, outside their syllabus.

- The importance of collaborative learning through Statistics students helping Costing students use statistics in the research.

Evidence of success: -

Students are more interested, curious and excited about the actual use of Statistics in the area of research and are extremely surprised to see that a serious subject like Statistics has real life applications and use. It also helps them and leads them to look up to applications of Statistics to grab good career opportunities especially in the area of research thus promoting research culture and imbibing research attitude at the right age. As they say, “catch them young”. Taking Statistics to implementation in research has helped them permanently remember certain concepts for life. Another evident success was observed in the way in which students gave the feedback after completing the independent research activity by saying “today we understood really what Spirituality means through extensive reading on the subject which we would not studied until late in life”. Value education through topic like Spirituality was an added bonus.

Resources required: -

- The right attitude and enthusiasm to learn
- Excel software
- Computer
- Stationery
- Library facility

Problems encountered: -

- Students are less aware of the applications of Statistics in research.
- The Costing students should have been given an initial lecture on what research is all about the requirement in terms of data.
- Not enough time to cater to a huge group of Costing students as Costing group was huge in size whereas Statistics group was very small as compared to Costing.

Note (if any): Continuous guidance to the students during the period is essential and more teachers from other subjects need to open their minds to providing the research data analysis opportunities to the students to observe, absorb and learn the applications of Statistics which otherwise is a very dry and drab subject within the confines of a classroom and theoretical framework.