COMP 7036 Research Proposal
Hands-On Versus Simulation Training

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1 Abstract

The debate between advocates of in-class education and advocates of remote education have been conflicting for years now; much like the one between hands-on and simulation laboratories. Each claim that their methodology provides better utility for both the student and the educator (whether the individual instructor or the institute). The Information Technology field of work is one that can be debated whether the costs of a classroom environment and the time spent outweigh the benefits from this traditional method.

This proposal seeks to study compare the two educational environments and provide a definitive answer for students of the field. This study would not only give students the best chance to find a job or a career, but it would also provide better workers for the industry. The first part of this process will be to look up employment rates from educational institutes. The second will be to contact IT companies or businesses for interviews. This data will define how the current batch of IT professionals learned there trade.

2 Introduction

There has always been an unsettling debate between the advocates of in-class education and the advocates of remote education. The in-class advocates claim that it is important to learn and work in a social environment with instructor and peers in-person to guide you. This will also lead to improved teamwork ability and social communications. On the other side, the remote advocates claim that technology has advanced enough that an in-class environment is not necessary any longer.

This study will be looking into this matter within the Information Technology (IT) field of work. Since most or all the work is or can be done on a computer, people will be using their own machines at home with Internet. Any assignments and work can be done remotely and delivered through email or virtual drop-in service. A simulated environment can also be set up remotely and allow students to test their applications. With all these advancements in technology and the speed at which we can communicate, advocates believe that it is the future of education.

The question that this study will attempt to conclude is "Which type of employee or student education environment, in-class or remote, provides more success within the Information Technology industry?"

3 Problem and Setting

3.1 Problems

3.1.1 Main Problem

Which type of employee or student education environment, in-class or remote, provides more success within the Information Technology industry?

3.1.2 Subproblem 1

What is the success rate of finding and remaining in a job through in-class schooling/training compared to the remote process?

3.1.3 Subproblem 2

What are the influences of schooling/training through in-class experience compared to remote training?

3.1.4 Subproblem 3

Are there any differences in benefits or limitations for the methodologies between males and females?

3.2 Hypotheses

Employees and students who learn from an in-class environment gain cooperative and social experience that will help in the job search and stability.

IT professionals who learn from a remote environment obtain better skills for working on individual projects.

3.3 Delimitations

This research study will only provide statistics from IT-based jobs

3.4 Definitions

This section will define several terms that are used in the research proposal. This will clarify any misconceptions or confusions for any of the terms to be used.

Benefits	Knowledge and skills gained through the training method.
Cooperative Experience	Ability to work projects in a team environment.
Environment	Atmosphere and culture of the training or workplace.
In-class Training	Learning and improving skills in a classroom environment.
Influence	Change the student's or employee's way of thinking.
IT	Information Technology
Limitations	Knowledge or skills that the training method fails to teach.
Remote Training	Learning and improving skills through online services
Social Experience	Ability to communicate with peers effectively.
Stability	Good job security in their current jobs and/or careers.
Success Rate	Percentage of IT professionals with successful careers.

3.5 Assumptions

3.6 Importance of Study

This study is important because it will help define training programs in the future. Choosing the proper training program will ensure that the employees or students emerging will have necessary skills for the job. It will aid companies

and educational institutes when making decisions on how to implement their training programs.

4   Literature Review

5 Data

5.1 Data Required and Means to Obtain the Data

The problem being researched requires qualitative data from participants of hands-on and simulation training.

5.2 Research Methodology

5.3 Data Treatment Per Subproblem

5.3.1 Subproblem 1

5.3.2 Subproblem 2

6   Researcher Qualifications

I am student in the Bachelor degree program at British Columbia Institute of Technology. My field of expertise is under network administration with both theory and programming. I am currently enrolled in a course for Applied Research Methods in Software Development in which the research proposal initiated. I have also been involved in a project for marketing research in which our team performed quantitative research methods.

7 Outline of Proposed Study

8 Appendices

9 References

Figure 1: Overall Transmission Diagram