Emphasis and Effectiveness of Traditional Lecture Delivery Methods in India

by

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Abstract

The present study examines the emphasis and effectiveness of Traditional Lecture Delivery (TLD) methods that can be justified as contributing significantly and in positive ways to classroom learning in secondary schools in India from the perspective of Indian students currently attending VIU who have completed their Grade 9-12 education in India. This researcher created a mixed-method questionnaire and posted a message on relevant Facebook pages including World VIU, VIU Indian Students Association, and the VIU Indian Students Club inviting Indian students currently attending VIU to complete the survey. Both quantitative and qualitative data were collected from the participants using a mixed-method survey. A participant consent form was completed by a total of 55 potential participants. Forty-two participants completed the questionnaire, resulting in a 76.3% response rate. The findings of this study suggest that there are no significant reason for de-emphasizing TLD methods compared to other alternative methods used by educators in secondary classrooms in India.

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Chapter One: Problem to be Investigated

“The best teachers are those who show you where to look but don’t tell you what to see.”

(Trenfor, A.)

Introduction

India is a developing country that is going through many changes in different aspects, one of them being education. The Indian government provides schools at different levels with everything that is needed to make education a priority in people's lives, considering education as an important factor in the economic development of India. Along with these developments, the government of India ought to encourage educational researchers to identify educational areas that the government can improve upon and produce high quality educated citizens. Designing and selecting teaching methods for this purpose is one area in which researchers in education should focus.

Research Problem

Lecturing is one of the oldest methods of instructional delivery used in the classrooms of India and in many other countries as well, and traditionally has been widely considered an efficient and effective means of conveying information to large numbers of students. However, there are a growing number of educators who advocate for replacing Traditional Lecture Delivery (TLD) methods with more modern teaching strategies that include an increased use of technology and group activities. The author of the present study believes that underestimating the strong contribution of TLD methods in the pursuit of effective classroom learning may be an important factor that is increasingly overlooked and marginalized when advocating for newer instructional methods in high schools in India.

Context

From previous classroom teaching experience and research, I have observed that educators often compromised their lectures by using new technology-based teaching methods, claiming that these methods pave the way for a better learning environment for their students. School authorities also feel increasingly compelled to hire teachers who are capable of instructing students with the help of electronic devices and advanced technology, often to the exclusion of teachers who continue to support traditional ways of teaching. With constant advancements being made in both electronic devices and teaching methods, it is indisputable that new methodologies can offer timesaving practices and be incredibly beneficial for both teachers and students. However, traditional teaching methods should not be discarded simply because they are older. Traditional lectures offer the benefits of being able to explain concepts in very simple terms and offer additional clarification and insights to students.

Purpose of the Study

Kamboj and Singh (2015) stated that it is important in modern education to select appropriate teaching methods and strategies that induce effective learning for secondary students. They observed that each teaching strategy has its own advantages and disadvantages. The proposed study examines the effectiveness and emphasis of TLD as a significant method of instructional delivery for future classroom learning in secondary schools in India. This study explores basic factors affecting TLD methods in relation to its characteristics, student attitudes, and student satisfaction that is not associated with students' grades.

Schwerdt and Wuppermann (2010) stated that traditional lecture style teaching can have significant disadvantages for some students and “a detrimental effect on overall student learning” (p. 377). The primary goal of this study is to gain a deeper understanding of any significant

problems that persist with traditional lecturing methods for students in secondary classrooms. A secondary goal is to examine the emphasis and effectiveness of TLD methods that can be justified as contributing significantly and in a positive way to future classroom learning in Indian secondary schools from the perspective of current Indian students attending VIU who completed their Grade 9-12 education in India. It is anticipated that the knowledge gained from this study may challenge the observations of Schwerdt and Wuppermann and be applied in the future to increase the emphasis on TLD methods and thus improve teaching strategies for the author as well as other educators.

Justification of the Study

Ramsden (1992) observed that an effective teaching strategy is defined as a teaching method that creates an environment which promotes high-quality and deep learning outcomes for students (as cited in Ghazali et al., 2012). According to Bala et al. (2017), lectures using chalk and talk methods provide a classroom environment with less distraction and draw more attention from students. However, Schwerdt and Wuppermann (2010) argued that the lecture strategy is an old-fashioned method, claiming that lectures fail to provide instructors with feedback of student learning and rest on the presumption that students all learn at the same pace. Furthermore, Suanpang et al. (2004) observed that it is difficult for the teachers to cover all the topics within the limited lecture timeframe that they felt were important and, when students missed lectures, their understanding of the concepts seemed to be impaired when they returned to their studies.

On the other hand, Kauchak and Eggen (1988) concluded that lectures *are* effective due to their flexibility for teachers to simply present the subject content, as this method forces students to learn more directly than any other instructional strategy (as cited in Kaur, 2011). Leish (1976) stated that lectures with the explanation method can inspire enthusiasm and capture

students' imaginations if presented appropriately (as cited in Kaur, 2011). However, listening and note taking are often described as examples of "passive" learning rather than "active" learning.

Nevertheless, Bala et al. (2017) argued most studies have observed that the TLD method with chalk and talk is more effective in academic learning than other, more advanced methods of teaching that use advanced technologies. Kaur (2011) stated that the TLD method encourages students to think about the content, thereby heightening the level of their involvement in the learning process.

This researcher believes that the traditional lecture method should receive greater emphasis in secondary schools in India, because it can be a very effective method of teaching factual information that is highly structured and also useful when there is insufficient equipment or resources to allow learners to work individually or in small groups.

Research Question

The research question for the present study is: What are the perspectives of Indian students currently attending VIU regarding the effectiveness of TLD methods on classroom learning in secondary schools in India?

Hypothesis

The hypothesis of this researcher is that attitudes and satisfaction levels towards TLD methods among the participants will be positive and will support the continued use of TLD methods in secondary classrooms, and that there will be no significant reasons for de-emphasizing TLD methods among other methods used by educators in secondary classrooms in India.

Definition of Terms

The following definitions are pertinent to the present study:

Emphasis: The significance of the TLD method in classroom learning.

Effectiveness: The measurement of satisfaction of students gained through TLD methods in classroom learning.

Traditional Lecture Delivery (TLD): Includes those method for the delivery of classroom instruction that comes directly from a teacher, which may also include classroom discussions and demonstrations.

Perspectives: The views or preferences of participants concerning the importance of TLD methods used in classroom learning.

Classroom Learning: The face-to-face interaction and open exchange of ideas between teachers and students.

Secondary School: An academic institution providing education more advanced than elementary school or middle school but less advanced than college, and typically offers Grades 9 to 12 formal education in India. It takes four years for the student to complete secondary school.

Brief Overview of the Study

The present study examines the effectiveness and emphasis of TLD as a significant method of instructional delivery for future classroom learning in secondary schools in India. It further examines the perspectives of VIU Indian students and explores the basic factors affecting TLD methods in relation to its characteristics, student attitudes, and student satisfaction. This study uses a mixed-method survey that includes closed-ended and open-ended questions to collect both quantitative and qualitative data.

Means, medians, minimums, and maximums are calculated across all participants, measuring the subjective opinions for each of the eight quantitative items within the themes of the factors affecting TLD methods. The survey is designed in such a way as to ensure that the scale suitably reflects the proposed domains.

Thematic analysis is also used to interpret responses to the two qualitative questions, and to summarize and draw meaning from the participant's responses regarding their experiences and/or suggestions for enhancing TLD methods for classroom learning.

Chapter Two: Literature Review

Introduction

There is an extensive body of research in the literature, written by leading philosophers, theorists, researchers, and writers, accounting the significance of Traditional Lecture Delivery (TLD) methods for classroom learning, basic factors affecting TLD methods in relation to their characteristics and effective approaches to classroom learning. Three themes are explored in this study: 1) TLD methods, 2) a comparison of TLD methods and other instructional methods in relation to student achievement in classroom learning, and 3) the significance of TLD methods for classroom learning.

It was essential for the purpose of this study to explore further literature covering the first theme to develop a sense of context for the second and third themes. Most directly related to the current researcher's area of focus is the second theme, comparing traditional lecture methods and other instructional methods to student achievement in classroom learning.

Initially, at the onset of my investigation into relevant literature on the second theme, I found there to be already extensive literature available. But the recent and continued proliferation of research studies and scholarly literature on this topic serves to highlight the pertinence of this second theme during the sudden and widespread reliance on current technologically-delivered education during the COVID 19 pandemic we are encountering at the present time. The third theme, regarding identifying the significance of lecture methods for classroom learning, will be explored to gain some insights into educators' self-perceptions about the emphasis of TLD methods in secondary classrooms and possible reasons for resistance to its continued use.

Traditional Lecture Delivery Methods

Ekeler (1994) aimed to define and explore the skills and techniques used in lectures and make suggestions for improving instructors' techniques for effective lecture methods. He described the lecture method as the most frequently used, prominent and least expensive method of instruction for teaching a large number of students at one time. However, Ekeler stated that the lecture method receives more criticism than other basic teaching methods such as discussion, seminar and tutorial-independent study. He claimed that despite the fact that many educators and university lecturers support the idea to abandon and abolish the lecture system, because it generates passive learning, some of the lecturers argued that a classroom lecturer is not greatly dissimilar to a politician, a preacher, an actor or a news commentator whose abilities are regarded as effective and highly rewarded without great participation from audience.

Ekeler (1994) divided the lecture delivery methods into two types - *Formal* and *Informal*. He explained a formal lecture as one where the instructor presents highly structured ideas without expecting active participation from students. Whereas in the informal lecture the instructor presents less structured ideas and invites questions from the student audience. These two lecture styles are applied with a number of variations to combine the traditional lecture with other teaching methodologies such as student-teacher discussion, lecture feedback, and student-to-student discussions (1994).

Ekeler claimed that unlike other methods, in the lecture method the teacher is the only person who is active during the whole lecture, hence it is necessary for the instructor to inculcate some techniques and skills to provide opportunities for students to be more actively involved in the lesson. Ekeler pointed out that an effective lecturer pays attention, is creative, hardworking and requires a certain type of personality because the students in the class have diverse interests,

socio-economic backgrounds, and intellectual backgrounds and abilities. He concluded that an impressive lecture requires lot of hard work, a proper amount of preparation, concentration, and self- evaluation to present an effective lecture.

After reviewing a great deal of literature, Ekeler (1994) found that surprisingly little research has been conducted to identify the effectiveness of lecture methods compared to other methods or analyzing relative differences in effectiveness of lecture methods by using limited discussions, audiovisuals, selection of lectures, examining the relationship between the effectiveness of lecture methods and size of the student audience, or even the amount of content retention. He concluded that the results were neither unanimous nor decisive in most cases.

However, from his findings, Ekeler summarized the advantages of lecturing methods: produce greater learning, stimulate students for scholarly research, bridge diverse types of subject content, provide an excellent method for explaining definitions and the historical background of a subject discipline, help an instructor to verbally explore the possibilities and thereby model the correct thinking processes within a discipline for the students, cover more material and summarize results more effectively than other methods and, finally, an economical means of teaching to a large number of students.

Nevertheless, he also pointed out the limitations of lecture methods such as it being inferior to other methods in developing problem-solving skills in students. Furthermore, it does not offer opportunities for conceptual learning, it does not consider the diverse interests, intellectual abilities and skills of students, it does not provide opportunities for immediate feedback and active participation from students and, finally, it is a poor method for long-term retention of subject matter.

In conclusion, Ekeler (1994) argued that the failure of most lectures may be due to insufficient training of the lecturer in this methodology, hence he suggests some ways for lecturers to improve the effectiveness of their lectures. Ekeler recommends maintaining eye contact with the student audience, greater preparation and attention to detail before delivering the lecture, never having absolutely complete notes or reading extensively from a book, avoiding a stationary position in the classroom, being dynamic and dramatic in order to call attention to certain information, applying informal lecturing techniques, developing a mode of lecturing that suits his or her personality, and considering the selection of content within the discipline taught. Overall, Ekeler's work helped to provide a clearer picture about the lecture method, covering its advantages, disadvantages, and providing suggestions to improve the lecturing style of instructors.

In his study, Behr (1988) draws attention to strategies of lecturing and to the possibility of demarcating certain lecturing styles. He stated that lecturing is the most common and economical method of teaching large numbers of students in universities and other institutions of higher education throughout the world. Hence, Behr considered exploring ways and means of improving efficiency and effectiveness of lectures. He contends that the most important aspect of a lecture is *explaining*, which is also the central activity of lecturing, "...explaining is entailed as communication of a definition or a set of facts or instructions on 'how to do' something" (Swift, 1961 cited by Behr, 1988, p. 188). He posited that explaining involves the use of generalizations, cause and effect relationships, as well as reasoning leading to conclusions. However, there are instances in a lecture class where students are unable to understand the explanation given by the lecturer.

Behr (1988) stated that explaining can be divided into three types: *Descriptive* - which tells the listener how processes, structures and procedures operate; *Interpretative* - which clarifies the central meaning of a word or a statement; and *Reason-giving* - which gives tentative and speculative answers. Apart from the different types of explanations, he pointed out that a student's level of understanding is dependent upon whether the person doing the explaining has succeeded in this aim or not. Behr observed that some teachers or lecturers explain clearly all the essentials of the material, using all the right terminology, examples and the organization of ideas, whereas others cause confusion by using concepts and principles that cannot be easily understood.

Behr (1988) explained that a lecture should be an interesting presentation that involves fluency of expression, variation in voice, gesture, and usage of teaching aids because lack of inadequacy of structure and presentation of lectures causes learning difficulties. He cites Brown, Bakhtar & Youngman (1984) who described five types of lecturers and associated lecturing styles: *Oral Presenter* – one who communicates verbally and visually presenting in the form of chalkboard summaries; *Exemplary Presenter* – one who organizes lectures logically and uses visual aids for explaining procedures (avoids reading the lecture notes); *Information Provider* – one who structures their lectures well but provides too much detail in a single lecture; *Amorphous Presenter* – one who has no selected objectives and does not structure the lectures and, finally; *Self-doubter* – one who does not keep close to their content and structure of their notes and at the end of most lectures has not achieved the objectives in teaching. Behr clarified that the exemplary presenters are the best at providing clear, well-structured, and interesting explanations.

Behr (1988) studied two hundred university instructors in South Africa. Based on his empirical study, involving a Lecturing Styles Questionnaire (LSQ) of twenty items to self-assess their lecturing styles and the formulation of a lecturing self-profile, he divided the twenty items into four categories: *dramatic presenter* – one who impresses students and ensures audience involvement; *information provider* - one who gives too much detail to students and with occasional use of chalkboard; *structured presenter* - one who lectures with structured notes; and *visual presenter* – one who make use of visual aids. Behr purported that each category displays what might be regarded as a distinctive lecturing style and investigated whether a typology of lecturing style can be demarcated and whether these styles are related to subject disciplines.

Behr analyzed the results and reported that most of the lecturers are information providers and structured presenters and some of them are visual presenters, but the least commendable is the fact that few lecturers ensure student involvement. His findings found that the subject-centered lecturing style found in most humanities classes, use the information provider style, whereas science lecturers make greater use of visual aids to teach. He also observed that commerce lecturers use structured lecturing style, and that engineering lecturers tend to question students during lectures less often than lecturers in other faculties.

Behr contends that no definitive conclusions about lecturing strategies and styles can be drawn from the small-scale research reported in this article. He stated these results do not mean that a lecturer adheres to a particular style. Other styles may be used to present a lecture element. In addition, the lecturer may find difficulty asking questions in between lecture sessions due to the large number of classes and the lecture content. However, the study suggested that lecture as a teaching method can be much improved from its traditional approach.

Comparing TLD Methods and Other Instructional Methods in Relation to Student Achievement

Al-Faleh (1992) proposed a study to determine the significant differences between TLD methods and discussion methods in teaching Biology for tenth grade students in Saudi Arabia. She explained that in the traditional lecture delivery method, an instructor selects the topic and presents it in a formal oral presentation with no invitation of opinions from students who are only mere listeners. In contrast, Al-Faleh described a discussion method in which there is sharing of opinions and evaluations between students and teachers, and students can also talk to each other to share information about the topic. She observed that though a controversy about whether a lecture method or discussion method is better for students' learning achievements still exists, she maintained that after reviewing the available literature covering a number of research studies conducted for comparison between these two methods, no significant differences were indicated.

Al-Faleh aimed to identify the students' levels of satisfaction and levels of achievement in biology by applying both discussion and lecture teaching methods. Al-Faleh (1992) conducted a study with female high school students in Saudi Arabia. She selected three teachers and 151 students who were then divided into six groups to participate in this study. Al-Faleh explained that each teacher taught two groups for one month; each group was taught by the lecture method for two weeks and the discussion method for two weeks. Al-Faleh assessed the students using two pre-tests and two post-tests. In her study, each pre-test was given at the beginning of the first treatment of the lecture method and before the second treatment of the discussion method. Al-Faleh stated that post-tests were given after the completion of each method. She recorded the students' test scores and used the data for measuring the students' learning achievement levels.

Al-Faleh also distributed a questionnaire attached to the second post-test to measure the students' satisfaction level.

Al-Faleh (1992) concluded from the results obtained, that the students gained more knowledge after applying both methods in classroom learning. She observed that the students scored higher when taught by the lecture method, and that a significant proportion of students preferred to learn in classroom discussions. Al-Faleh's study revealed that the lecture method is superior with respect to student performance. However, she also concluded that if the lecture method is used as the only means for teaching subjects, students will become bored and lose enthusiasm and interest.

In contrast, Al-Faleh (1992) believed that the discussion method became popular among students because of the activity and creativity that is associated with this method. However, she also concluded that neither the lecture nor the discussion method should dominate in teaching, and that lecture and discussion methods should be employed together in a way that fits the subject matter and meets most of the teacher's and students' needs. A limitation of this research is that it is gender specific, carrying out the survey only in high schools with female populations. Al-Faleh's study is also quasi-experimental, as the teachers and students were not randomly selected.

Jabeen and Ghani (2015) proposed a study to compare the traditional chalk and board lecture method to the PowerPoint presentation (PPT) method as a teaching technique for teaching gross anatomy to first year medical students. The study was conducted among 140 first-year students, including 67 males and 73 females of MBBS, Department of Anatomy in a government medical college in Jammu, India to assess the students' perceptions and preferences to any method for any particular aspect of a lecture. Jabeen and Ghani experimented by holding

some lectures using the chalk and board method while other lectures were given to students using PPT presentations. They circulated a pre-structured questionnaire after each delivery method and collected students' responses pertaining to different aspects of lecture and overall satisfaction with the two methods.

Jabeen and Ghani (2015) evaluated the findings statistically using a questionnaire method. They concluded from the results that a significant number of students preferred PPT presentations for overall effectiveness and satisfaction of lecture delivery effectiveness, while only a few supported the chalk and talk method for delivery of lectures. Jabeen and Ghani determined that most students felt that PPT contributed to the lectures being clear and understandable, making the students more active listeners and stimulating their interest in the subject matter by use of animations and other properties of PPT. However, they also pointed out that chalk and board methods allow the students to take down notes and diagrams during the lecture delivery. But nevertheless, due to time constraints and new developments in information technology, this method carries less preference among educators.

Jabeen and Ghani (2015) focused on the role and effects of PPT as a means of delivering lectures to anatomy students compared to traditional lectures by the chalk and board method. They claimed that PPT is a boon for anatomists in delivering the lecture through the transmission of visual information, which proved to be a more useful and constructive way to teach gross anatomy. However, they also found that although the discussion method in small groups appeared to be a superior method, it was difficult to draw any conclusions because the number of medical students in Indian colleges is very high in comparison to the teaching staff available.

Jabeen and Ghani also observed that in a well-prepared lecture, an instructor explains orally the complex concepts using board and chalk to visually draw simple diagrams and PPT or

an overhead projector to present complex concepts or diagrams. However, after viewing many studies based on comparing the TLD and PPT methods, Jabeen and Ghani determined that it is not clear whether one specific lecture delivery method is more effective than others. In addition, Jabeen and Ghani specified that educators are divided on the superiority of using PPT with respect to traditional lecture delivery methods.

In conclusion, Jabeen and Ghani suggested that to be effective it is important to continually upgrade and modernize the lectures. They further recommended that the traditional lecture delivery methods should be replaced with PPT to meet the aspirations of students and combat the limitations of the chalk and board method. A limitation of their study is that it cannot be generalized for all subjects in classroom learning, as the study was limited to a specific sample of medical students.

Wong and Day (2008) investigated the learning achievements of junior secondary school students by comparing Problem-based Learning (PBL) with TLD methods. They hypothesized that the study would offer encouraging evidence for teachers to incorporate alternative teaching styles and assure parents that students' academic achievement would not be negatively impacted because of changing teaching strategies. Wong and Day explained PBL as an instructional model, presenting well-structured problems that act as focused stimuli for student learning, which is "...characterized by students' working in small groups to increase knowledge and develop understanding by identifying learning objectives, engaging in self-directed work, and participating in discussions" (Barrows and Tamblyn, 1980 cited in Wong & Day, 2008, p. 627). On the other hand, they characterized the use of TLD methods as one wherein an instructor transmits information verbally and directly to large groups of students.

Wong and Day (2008) selected two parallel Secondary One classes, in a coeducational secondary School, in Hong Kong with similar enrolments of 37 and 38 students and with approximately the same number of girls and boys. They introduced the smaller group to PBL and the larger group to TLD methods on two topics from the *Junior Integrated Science Syllabus of Human Reproduction and Density* (Wong & Day, 2008, pp. 625-642). Wong and Day conducted pre-tests, post-tests and delayed post-tests, categorized under three domains including knowledge, comprehension, and application. They included multiple choice questions and short, structured response items to assess student academic performance.

Wong and Day (2008) analyzed the results statistically and found that PBL is at least as effective as TLD methods in gaining the knowledge required to achieve the learning objectives in the syllabus. They also concluded from the study that the PBL method showed a significant improvement in students' comprehension and application of knowledge over an extended period of time. The students' satisfaction with the learning style developed by PBL was also significantly greater than their satisfaction with TLD, particularly because PBL allowed greater student co-operation in the learning process. Wong and Day determined that the test data points to the students learning at least as well with PBL, as as they do when being taught using TLD methods.

Wong and Day (2008) argued that their findings offered evidence that PBL is an instructional model that could be effective in achieving higher educational goals in secondary science education. They pointed out that in PBL the students were motivated by their own curiosity when presented with interesting problems, and experienced both satisfaction and pressure from a task to be completed within a time-period. Wong and Day found that although students were motivated and their interests stimulated by the teacher's charisma using TLD

methods, the students were also less motivated to ask questions or take down notes from the teacher's prepared content.

A limitation of the research is that there were only two topics in this study and, therefore, it is not possible to determine how the nature of a topic may influence student performance. The findings of the study cannot be generalized for all subjects in classroom learning.

Meguid and Collins (2017) proposed a study comparing TLD methods with Interactive Teaching. They considered classroom interaction to be significant in understanding the subject content, and that it also influenced good relationships between teachers and students. Meguid and Collins studied the Poll Everywhere Audience Response System (Poll Everywhere ARS), which enhances active learning and engagement of students in both large and small group settings. They explained that ARS is a technological tool that allows lecturers to present questions and get immediate feedback from students that increases opportunities for interactive teaching and student engagement. In addition, the lecturer immediately sees the student responses and can choose whether to reveal the correct answers to them (Meguid & Collins). They intended to use Poll Everywhere ARS because it is one of the best methods to overcome many of the drawbacks of other types of ARS, such as decreased lecture coverage and the wastage of time in distributing or collecting handset remote controls at the beginning and end of the lecture. In this study students responded via their own mobile phones, saving at least 10 minutes every time.

Meguid and Collins (2017) aimed to analyze the students' perception about the effectiveness of Poll Everywhere ARS as an interactive lecturing method in their classroom learning. They introduced the Poll Everywhere ARS to 60 undergraduate medical students at Queen's University in their Anatomy class for a total 24 hours of lectures in one semester.

Meguid and Collins included 133 Computer Science students who were familiar with this system among the 193 students in total to compare and validate the findings. They explained that instructors asked questions during lectures by using Poll Everywhere ARS to get immediate feedback from the students. Meguid and Collins evaluated the findings statistically using a questionnaire method. They concluded from the similar reports of both the groups that this method is effective in engaging students' attention and highly influences their classroom learning.

Meguid and Collins (2017) used a secondary survey method consisting of twenty-minute interviews with each student in the focused groups in order to understand their attitudes towards the traditional and more innovative lecturing methods. They collected the qualitative data of the students' comments and analyzed them using thematic analysis. Meguid and Collins stated that the analysis of both the findings in primary and secondary survey methods provided similar findings in students' positive attitude towards interactive lecturing methods. They determined from the feedback of both cohorts that embarrassment and anonymity about speaking out in lectures is their strongest motivation to favor this software. Meguid and Collins argued that the use of interactive questions in Poll Everywhere ARS tended to help in focusing students' attention that was not always present in a traditional lecture.

Meguid and Collins (2017) were persuaded that using Poll Everywhere ARS technology in lectures was an effective teaching method and emphasized the value of interaction and engagement. Meguid and Collins concluded on the basis of students' opinions and experience with lecturers, that this technology made traditional lecture delivery (TLD) methods more interactive, student-centered, and effective. They pointed out that open-ended question types in Poll Everywhere ARS proved best for class discussion and debate because of its flexibility and

freedom to create engaging discussions. Meguid and Collins suggested adjusting lectures in future medical schools to suit this method, which can lead to the prioritization of content and redirect the focus of lectures towards key concepts.

A limitation of this study is that it focused on medical and computer science students only, so it is not possible to determine how the Poll Everywhere ARS method might influence the performance of students in other academic cohorts. The findings of the study cannot be generalized for all subjects in classroom learning.

Suanpang et al. (2004) proposed a study to determine significant differences in attitudes towards business statistics between students studying online and students using TLD methods. They commented that the advantage and the reason for the popularity of teaching online in higher education is because it well suits the students who desire to learn anywhere, at any place, and at any time. Suanpang et al. reviewed several studies in which some claim that there is no significant difference in learning effectiveness between technology-based and the TLD methods of learning, however, others argued that the online instruction helped the students to solve complicated problems better than the students who used the traditional approach.

Suanpang et al. (2004) conducted their study at Suan Dusit Rajabhat University (SDRU) in Thailand. They explained that the current teaching methods used for Business Statistics in the University were the TLD methods in which the instructor used a standard lecture delivery approach and delivered the information to students with the help of textbooks and transparencies. Additionally, they also used distance learning technology in which students are taught using lectures delivered via a video conferencing system. Suanpang et al. specified that in traditional lecture delivery methods, if the students missed the lectures, they found it was difficult to

understand the statistical concepts and their learning seemed to be impaired. In addition, it was difficult for the teachers to cover all the important topics in the limited time.

Moreover, in distance-learning, video-conferencing systems provided a lack of interaction between teachers and students who could not ask questions during video-lectures (Suanpang et al., 2004). They proposed an online system teaching to determine its significance over traditional and distance learning methods. Suanpang et al., described the four major components of the online system: 1) *Content Areas* - which included Announcements, Course Information, Staff Information, Course Documents, Assignments, Books, and External Links; 2) *Communication Areas* - in which students communicate with teachers and amongst students using both synchronous mode (roster, virtual classroom, MSN, Yahoo Messenger and telephone) and asynchronous mode (e-mail, discussion board and fax); 3) *Group Areas* – which included a Home page, Discussion Board, File exchange, Virtual Classroom, and E-mail between group members; and 4) *Student Areas* – which provided tools to support learning activities, including Grade Listings, Submission of Assignment and Editing Facilities.

(Suanpang et al., 2004) focused on investigating student attitudes towards Business Statistics, comparing the results from classes using online learning, TLD learning, and distance learning. They selected 230 participants for the study (112 online students and 118 traditional learning participants), in which research groups were separated into two modes, namely TLD learning and distance learning. The participants were divided into six groups. Two groups used TLD teaching (students attend classes at the campus). Another two groups used online campus-based learning (students used computer facilities in campus). A fifth group used distance traditional learning (lectures attended via video conferencing system from their own comfortable spot), while the sixth and final group used distance online learning (lectures attended via video

conferencing system from their own comfortable location, however, they had authorized access to the online course).

(Suanpang et al., 2004) applied the Survey of Attitude Toward Statistics (SATS) method using questionnaire instruments in a Pre-Test and Post-Test, measuring four aspects of students' attitudes towards statistics: Affect, Cognitive Competence, Value and Easiness. They also collected qualitative data in the form of interviews conducted before, during and after the study, both face-to-face and by email.

(Suanpang et al., 2004) collected data after a period of 16 weeks, and the results from online learning were then compared with those of the TLD teaching. They evaluated the results and found that online students had developed a more positive attitude, a greater ability to solve problems, and a greater sense of the importance of statistics in their daily life and future work than the TLD group, who viewed statistics as more difficult at the end of the course. Suanpang et al. found that TLD students scored lower than the online students at the end of the course in all four aspects. They analyzed the qualitative data and gathered information stating that the students taught online developed strongly positive attitudes toward learning statistics, which influenced their learning and made understanding easier. They specified the feature that supported the success of the E-learning mode was its novelty and excitement. In addition, internet technologies assisted students' learning of statistics and made the experience less frustrating, less fearful and more effective (Suanpang et al.).

However, (Suanpang et al., 2004) determined from evidence in the student interviews that there were also some drawbacks to the online learning, such as the occurrence of various computer-based problems during online-learning, hanging up, slow internet speed, a lack of the latest computer skills among students, and that many students who did not have computers at

home were compelled to study online on campus, leading to occasional access problems due to the insufficient numbers of computers available. They observed that there were no significant differences in students' attitudes towards statistics between campus-based or distance learning.

Finally, the study concluded that a theoretical framework should be developed for learning statistics on line that combines instructional strategies and delivery media to create positive attitudes in students and result in the best learning outcomes. (Suanpang et al., 2004) suggested E-learning can be applied to courses that are in similar technical areas, such as Accounting or Information Technology, which could be enhanced. Although they concluded that the Internet can play a part in learning any subject, they also found that it may be difficult for humanities subjects that rely more on face-to-face discussion and debate, which gives greater weight to TLD methods of teaching.

Angelopoulou et al. (2014) conducted a study to compare the effectiveness of Experiential Learning (EL) methods and TLD methods in school-based oral health education for the oral health knowledge, attitude, habits, oral hygiene, gingival health and caries incidences of 13-year-old Greek children. They explained that oral health-education programmes are conducted in schools because they provide opportunities to promote proper healthy lifestyles and self-care practices in children at a very low cost. In addition, school-based oral health-education programmes have shown positive outcomes in adolescents' oral cleanliness, oral health knowledge and oral behaviors. Angelopoulou et al. argued that although TLD methods are the commonly selected methods in the literature for oral health-education, they show a low level of effectiveness in changing oral health behavior and attitudes. On the other hand, experiential learning, an alternative learning delivery method providing students with hands-on experience, proved more successful in improving knowledge and attitudes.

Angelopoulou et al. (2014) recruited 167 students (13 years old) in which the EL group comprised of 87 children selected from schools that had teachers previously trained in EL, while the TLD group comprised of 80 children selected from similar school-grade levels and socio-economic levels as in the EL group. In their experimental study, teachers who received training taught the EL Group for three months using strategies that included brainstorming; discussion sessions; projects; extramural visits to dentists; presentations to their peers and parents in the form of theoretical play, posters, songs, crafts and role-playing; followed by a discussion between teachers and students to clarify any questions. Experientially, students recognized the importance of oral health. At the same time, the TLD group received lectures given at baseline with no extra-curricular activities during the same time period (Angelopoulou et al., 2014).

Angelopoulou et al. (2014) evaluated the test variables via a questionnaire regarding health knowledge, attitude, behavior, and parental education. As well, clinical examinations of both groups were carried out by pediatric dentists to identify dental plaque and the absence or presence of gingival bleeding and dental caries. After analyzing the reports, they found that the EL group showed a greater positive reduction of dental plaque, gingivitis, and caries, as well as greater improvement in health knowledge, behavior and attitude when compared to the TLD group. Angelopoulou et al. concluded from the study that oral health education, using EL applied in school by teachers, had a positive influence on improving adolescents' oral health knowledge and oral hygiene and in reducing gingivitis for up to 18 months of post-intervention.

They also specified that when TLD methods were used for the delivery of school-based oral health education, it did show some improvements in oral health knowledge but showed no effect on oral health behavior of the children. On the other hand, Angelopoulou et al. suggested that EL, which is an innovative educational method, can be used with adolescents as an oral

health-education method to improve oral health. However, they also pointed out limitations of their study, such as the sample groups they used were too small and not representative of the teenage Greek population, and that EL can be modified by each teacher even though the EL programme was based on a structured model.

Stetzik et al. (2015) described a pedagogical comparison of Traditional Lecture Delivery (TLD) method teaching and puzzle-based teaching in a Human Anatomy and Physiology II Lab. They argued that TLD methods convey information and content but lack sufficient provision for development in critical thinking and problem-solving skills in students. To assess the broader effects of pedagogy on these student skills, Stetzik et al. implemented a framework with which to determine the level of students' authentic intellectual performance, which is based on standards such as higher-order thinking, depth of knowledge, connectedness to the world beyond the classroom, substantive conversation and social support for student achievement. They reviewed previous studies that had established the definition of puzzle-learning as the most abstract method built upon problem-based and project-based learning to develop critical thinking and logical reasoning independent of a specific domain.

Stetzik et al. (2015) aimed to assess the impact of puzzle-based learning on conventionally valued academic knowledge such as course specific material, conceptual understanding and skills like conceptual reasoning independent of course material. They hypothesized that class activities which used puzzle-based teaching would help students to connect to their newly acquired knowledge as well as develop personal perspective and understanding. The researchers aimed to compare the effects of TLD methods and puzzle-based teaching on authentic intellectual performance and learning outcomes.

Stetzik et al. (2015) selected 185 students in total who were taking the Human Anatomy and Physiology II Lab at the University of Akron. They experimented by teaching seven sections of this lab to half of the students using the TLD methods in the first half of the semester and taught using puzzle-based methods in the second half of the semester. The other half of the students were taught the same material but with the order of the pedagogies reversed. Stetzik et al. measured their levels of authentic intellectual performance and learning outcomes based on students' performance on quizzes, exams specific to the course, and in-class assignments.

The researchers then analyzed the results, which showed a significant improvement in students' performance on standard course-specific assessments using a puzzle-based pedagogy versus a traditional lecture delivery style. They concluded that a puzzle-based pedagogy, when compared to TLD methods of teaching, can effectively enhance the performance of students on standard course specific assessments, even when the assessments only test a limited conceptual understanding of the material. Stetzik et al. (2015) pointed out that the puzzle-based pedagogy is an effective tool of *experiential learning* theories that improves the student's ability to recall specific details in comparison with traditional lecture-based pedagogies.

However, Stetzik et al. (2015) reported that some of the students felt puzzle-based, in-class activities were extremely difficult and that their understanding of the material benefited little from this method. The study suggested that since pedagogical style plays a critical and significant role in learning, it is essential to embrace a broad contextual framework like puzzle-based learning that helps to improve students' performance. The limitation on this study is that the assessment only tested a limited conceptual understanding of the material and, therefore, the findings cannot be generalized for all subjects in classroom learning.

Thrall et al. (2015) proposed a study to evaluate the efficacy of Team-Based Learning (TBL) on knowledge retention compared to TLD methods using a randomized controlled trial. They claimed that educators have shown a great interest in replacing TLD methods of teaching with more active learning techniques. TBL, on the other hand, has gained popularity because it is a disciplined and systematically constructed active learning instruction method for teaching large groups of students and shows improvement in satisfaction level and classroom engagement in students. This study was conducted during a daylong conference for psychiatric educators on attention-deficit hyperactivity disorder (ADHD) at Duke University, focusing on the learning objectives of students such as improvement of both content knowledge and research literacy skill related to ADHD (Thrall et al., 2015).

Thrall et al. (2015) selected 115 conference participants randomized with concealed allocations (56 to the TBL group and 59 to the TLD group). The TLD group was taught using traditional lecture delivery methods with two 45-minute break-out sessions in which the participants were divided into six small groups of seven to ten participants (led by seven facilitators) and included a mini-talk, a facilitator, journal reviews using worksheets, and group discussions.

The TBL group used recommended TBL core design elements, including team formation, brief individual study, individual and group readiness assurance testing using Immediate Feedback Assessment Technique forms, and three intra-team application exercises. They evaluated both groups with pre-tests before the interventions and post-tests immediately afterwards and two months later using multiple choice questions to measure knowledge retention and test content related to efficacy and effectiveness studies of ADHD.

Thrall et al. (2015) analyzed the results and concluded there was no statistically significant difference in knowledge scores between TBL and TLD groups, and determined that both groups improved in their knowledge of concepts of efficacy and effectiveness related to ADHD between the pre-test and both follow-up tests. They admitted that this study failed to demonstrate the superiority of TBL over TLD methods as hypothesized in the primary outcome of knowledge retention at two months post-intervention.

Thrall et al. (2015) pointed out that this study had limitations such as the short length of the trial, which did not permit them to incorporate all elements of TBL, including learner assignment to teams; longer pre-class preparation time-period; peer evaluations and grading accountability. They suggested that TBL can be used successfully with large conference groups that have traditionally depended on a lecture format. They further suggested that active learning strategies are vital for classroom engagement and that they would continue evaluating the efficacy of team learning on meaningful outcomes that relate to knowledge retention and lifelong learning skills.

Alpert and Hodkinson (2019) studied the effectiveness of video use in TLD methods to determine a student's perception about lecture-video strategy and preferences for videos used in their recent in-class video experiences during traditional lectures. They theorized that TLD could be more engaging and made more effective by including videos as an introduction to the topic or highlighting the complex facts in the topic. Alpert and Hodkinson claimed that higher education is quickly adapting to the digital age, hence it is necessary to know students' perceptions and preferences about whether videos enrich face-to face lectures effectively.

Alpert and Hodkinson (2019) conducted a two-stage, mixed method study using focus groups to gain a rich understanding of students' video experiences, preferences and the types of

videos they are shown. They utilized a detailed on-line questionnaire to give to a diverse sample of seven focus groups in a varied range of disciplines, adding up to 32 participants (28 undergraduates and 4 postgraduates) recruited from the general student population of a large urban public university in the USA. Alpert and Hodkinson evaluated the results and stated that a significant number of students want to see videos during live traditional lecture delivery, but not too many per lecture. About 66 percent of students wanted to see videos featuring the instructor and most of the students suggested that the video content should be well-integrated and relevant to the subject matter.

Alpert and Hodkinson (2019) addressed the significance of current practices of video integration into live traditional lecture delivery methods. They commented that some students regarded videos as a waste of class time which diminished the opportunity for face-to-face interaction in live classes. However, Alpert and Hodkinson found that students appeared to appreciate the lecturer who located on-topic videos in the public domain, which saved them from spending time and effort searching for videos by themselves before exams.

Moreover, the students claimed that instructor-made videos have high credibility among students. Nevertheless, Alpert and Hodkinson (2019) stated that some students commented on the shortcomings of technical skills of instructors, problems with installed software and slow internet access that paralyzes the smooth integration of the video presentation. They suggested that the instructors should consider the general preferences of students, such as showing a small number of videos sourced from the internet, not too long and should be well-integrated into the flow of lecture. The study was limited to one country, the USA, and the results may vary if the survey was conducted in countries that have high student population levels in classrooms.

Significance of Traditional Lecture Delivery Method for classroom Learning

Chaudhury (2011) investigated and presented evidence that TLD methods can be an effective element of instructional practice. He focused specifically on TLD methods that deliver information in an organized way to a large number of students by one person, and the lecture system that encourages specific activities and ensures active participation of students in learning the subject matter. Chaudhury cited Bligh (2000) who conducted an extensive systematic analysis of the lecture literature, in which he reviewed over one hundred studies comparing the traditional lecture delivery method against other teaching methods like discussion, independent reading, and inquiry projects in regard to acquisition of information by students. Chaudhury stated that evidence supported Bligh's (2000) statement that TLD methods are as effective as any other method for transmitting information, although not more effective.

However, Chaudhury (2011) argued that since TLD methods continue to be the primary method of instruction, it is important to look for ways in which modern lecture classrooms can transform into more effective environments for engaging students in learning. He cited Zollman (1990) who adapted the learning cycle, which is a pedagogical approach that promotes critical thinking and active inquiry based on a structure that offers exploration, concept introduction and an application phase to restructure a large-enrollment science course. Chaudhury cited that when Zollman (1990) compared student learning in two sections of the class; one taught by conventional lecture and one by the learning cycle method, which Zollman analyzed from the final exam results, that the learning cycle scored higher than the TLD group representing the major topics in conceptual explanation and calculations, but lower on recalling questions. Chaudhury cited Bransford et al. (2000) who figured that a knowledge-centered environmental

approach to instruction encourages teachers to put more importance on developing students' abilities to think and solve problems with accessible knowledge and applied appropriately.

Hence, (Chaudhury, 2011) considered some interesting variations to traditional lecture delivery methods in the sciences by citing Mazur (1997) who had implemented Peer Instruction (PI), an interactive student engagement strategy that utilizes a structured questioning process in developing student learning. He stated that PI had improved student understanding when used in combination with other strategies, citing reports of Fagen et al. (2002), which showed increased student mastery of both conceptual reasoning and problem-solving skills in physics.

(Chaudhury, 2011) explained the success of the workshop approach in biology, citing Wilson (1994) and Laws (1991) who demonstrated that inquiry learning activities in the workshop course were more effective than traditional lecture methods. He concluded that although TLD methods remain an efficient way to deliver large amounts of information to a large number of students, lecturing methods are currently evolving that encourage greater student engagement in the learning process, based on empirical research on human learning.

Kaur (2011) studied and analyzed TLD models of teaching with reference to varied relevant literature. He cites Howe (1980) who commented that the lecture method is a traditional model of teaching, which though frequently criticized, has nevertheless managed to survive so long in place of many technological developments in instructional methods. Kaur cites Lowman (1987) who has classified the major types of lectures into seven categories: 1) *Formal Oral Essay* - in which the instructor reads out to the students what he has written for the lecture; 2) *Expository Lecture* - in which the instructor does most of the talking, only inviting a few occasional questions from pupils; 3) *Provocative Lecture* - in which the instructor initiates thought provoking processes in students; 4) *Lecture Discussion* - in which the students do most

of the talking by discussing in groups; 5) *Lecture Recitation* - in which the instructor asks specific questions to which the pupils read out their prepared answers; 6) *Lecture Laboratory* - in which the students attend short lectures by making their own observations or other independent work; and 7) *Lecture Discussion Cycle* – in which the instructor follows five phases of reviewing previous knowledge with students, including presenting new information, then monitoring students to think and share ideas (by providing examples), followed by integrating ideas into discussion of casual and effect relationships, and finishing the session by summarizing the collected information.

Kaur (2011) presented the Lecture Discussion Cycle as a more valuable method than other methods because it encourages students to think about the content being presented as well as heightening their involvement in the lecture proceedings. Kaur also specified that this cycle allows teachers to break instruction into manageable parts, both in planning and in the lesson itself. He claimed that each cycle lasts a matter of minutes and teachers can divide a body of content into parts that are teachable and learnable.

Kaur (2011) explained the advantages of TLD methods as those that can stimulate interest in the subject to the students by presenting orientation, with a proper perspective and general outline of the scope of the subject in a short time and in an impressive way. He claimed that this method can secure greater attention through the spoken word than the more mute appeal of books. Although, Kaur pointed out several possible limitations of using TLD methods such as it being a waste of time presenting matter that is already present in books and the pacing of the lecture being so fast that it can be futile for the pupils who cannot easily take notes or end up not having any written record of the salient points made. He also stated that in the process of

lecturing, there is often no cooperation and interaction between teachers and students, leading to a passive kind of learning.

Kaur (2011) argued that viewing the learner as an active information processor in the Lecture Discussion Cycle rather than as a passive recipient of knowledge, can help transform TLD methods into a completely new medium. He concluded by citing Brown (1987) who considered that the flaws of a particular TLD method may depend upon insufficiency in the preparation, presentation, and structure of a particular lecturer rather than upon the lecture method itself.

Exley and Dennick (2004) commented that although TLD methods are the cornerstone of academics and overused in many higher education courses, some aspects of the curriculum cannot be practically balanced in a lecture classroom. They argued, after considering the weakness and strengths of this form of teaching, TLD methods can be used effectively when introducing new skills and techniques, by providing a sense of clarity and promoting interest in the subject matter among students. Exley and Dennick categorized the knowledge outcomes of lectures into three broad categories including: 1) factual and conceptual understanding, 2) application and use, and 3) problem solving and evaluation. They contend that some teachers might argue that TLD methods can also facilitate these outcomes, but the authors pointed out the difference between teaching *about* applying knowledge and problem solving, and learners *actually* applying their problem-solving abilities.

Exley and Dennick (2004) specified that due to the exponential growth of knowledge in the ever-expanding curriculum, it is obvious there is tremendous pressure to decide upon the number of lectures required to present all the increased facts, ideas, and concepts to students.

However, they support the fact that TLD methods influence the curriculum because they deal with the issue of individual learning styles.

Exley and Dennick (2004) studied several psychometric tests which revealed that each individual learner has a different learning approach. They cited Honey and Munford (1982), who suggested four categories of learning styles including: activists, reflectors, theorists and pragmatists. Exley and Dennick showed that learners who have a strong activist approach will prefer learning contexts that allow them to learn by doing, whereas pragmatists apply their knowledge and use it for their learning. They pointed out though, that TLD methods are the most cost-effective way of teaching students. However, evidence presented by Johnstone and Su (1994) suggested "...that only ten percent of the words delivered in a lecture are recorded in the notes of the students with only a small proportion effectively learned in the short term and with long term retention significantly reduced" (Exley & Dennick, p. 7).

However, Exley and Dennick (2004, pp. 8-9) summarized the strengths and reasons for the opting of TLD methods by teachers. Lectures tend to: 1) communicate enthusiasm for the topic, 2) provide a structure or framework for the material, 3) tailor the material to the students' needs, 4) provide the current information, and 5) be cost-effectiveness. They concluded that TLD methods are effective for the expedient transmission of facts and information and, if the traditional lecture is delivered by a knowledgeable, prepared and enthusiastic teacher, it can prove highly beneficial to the students.

Marmah (2014) proposed a study to determine students' preferences for TLD methods of teaching in tertiary institutions. He commented that traditional lecture delivery is the most preferable method to teach many students at a particular teaching period despite the development of new teaching approaches in the educational field. Marmah pointed out that the pedagogical

value of TLD methods will be questioned continuously based on the students' gaining of knowledge or effectiveness of learning from lectures. He argues that the contribution of TLD methods to the learning process will also be questioned, and specifically the emphasis of traditional lecturing in the teaching process. However, Marmah claimed that a major factor influencing the continued adoption of TLD methods is their ability to teach several students at one time.

In addition, Marmah (2014) explained that lectures helped to clarify and organize difficult concepts and important facts. He specified that TLD methods are cost-effective and provide enthusiasm and motivation for further study. Marmah pointed out that this method is flexible for every student even those who are not creative and innovative. Nevertheless, he stated some disadvantages of using TLD methods, such as not using them for long periods of time, as students can lose focus of the lesson. He cites Killen (2007) who addressed the limitations of TLD methods such as the information tends not to be retained for a long time, they encourage passiveness of learners, and lecturers believe that students all learn at the same pace, which is not the case.

Marmah (2014) focused on determining student preferences over TLD methods in tertiary institutions and thereby conducted the study at the College of Technology Education, Kumasi and used a questionnaire as a methodology instrument. He selected 197 undergraduate students made up of 97 males and 100 females out of which 112 of the respondents were full time students and 85 were part time students. Marmah prepared the questionnaire which consisted of two parts; Part I included biographical data like gender, age, level, and admission status; and Part II made up of 14 close-ended questions and one open-ended that required the respondents to give their suggestions on how to improve the TLD methods to enhance better

teaching. He listed 14 items, and students were asked to indicate the extent to which they agreed or disagreed on a Likert-point scale. Marmah collected data and analyzed it using mean, standard deviation, and the 't' test.

Marmah (2014) found from his study that there was no statistical difference between level and gender, but there were significant differences between full-time and part-time students and the age of the students in terms of their preferences for TLD methods. The study revealed that undergraduate students preferred the TLD methods and did not totally share with the education experts' negative views of the TLD method. Marmah concluded that TLD methods will continue to be the dominant method of instruction in tertiary institutions, and that students will continue to prefer TLD methods because they believe that they pay fees for gaining information with the help of teachers but not for finding information on their own. He suggested that since students find TLD methods to be the preferred method of information delivery, it is necessary for lecturers to determine new ways to improve the lecture to make traditional lectures more interesting and to increase student engagement.

The principal findings and recommendations from the above studies has been summarized in Appendix A.

Chapter Three: Procedures and Methods

Description of the Research Design

This study is designed to gain a deeper understanding of any significant problems that persist with Traditional Lecturing Delivery (TLD) methods for students and to examine the emphasis and effectiveness of TLD methods used in classroom learning in secondary schools in India. The research question asks the following: *What are the perspectives of Indian students currently attending VIU regarding the effectiveness of TLD methods used in classroom learning in secondary schools in India?*

This study uses a mixed-method survey design to collect both qualitative and quantitative data. Each of the eight closed-ended survey questions include an attitude rating scale to measure participant agreement or disagreement on statements regarding characteristics of TLD methods, student attitudes and student satisfaction in classroom learning. The data from this survey is used to collect the quantitative data. Two open-ended questions are also included to collect qualitative data.

The participants were asked to participate in the study voluntarily with the assurance of confidentiality and anonymity. Participants were informed that they were able to opt out or discontinue their involvement in the study at any time.

Description of the Sample

The population for the study consists of current Vancouver Island University (VIU) Indian students in Nanaimo, British Columbia. VIU is one of the leading universities on Vancouver Island, with an enrolment of approximately 18,000 students, of which 18% are international students from over forty countries. The criteria for participation in this study included the following requirements: (a) be an Indian student; (b) have completed Grades 9-12

education in India; (c) be at least 19 years of age; (d) be enrolled at VIU; (e) be willing to give consent and complete an online questionnaire. The author of this study is a graduate student currently enrolled at VIU.

This researcher created and posted a message on relevant Facebook pages including World VIU, VIU Indian Students Association, and the VIU Indian Students Club inviting current VIU Indian students to complete the survey. The researcher invited the Indian students who met the criteria by providing the URL link of the survey below the Facebook post. The participants were requested to forward the post and share the link with other Indian students who might meet the criteria for participation. Interested, eligible, informed and willing participants completed and submitted the online survey via the *SurveyMonkey* platform. A participant consent form was completed by a total of 55 potential participants. 42 participants actually completed the questionnaire, indicating a 76.3% response rate.

Description of the Instruments Used

The instrument used in this study is an author-designed survey, created in and administered through *Survey Monkey* website. The survey is designed to gain a deeper understanding of any significant problems that may persist with traditional lecturing methods and to examine the emphasis and effectiveness of Traditional Lecture Delivery (TLD) methods used in classroom learning in Indian secondary schools from the perspective of current Indian students attending VIU who had completed their Grade 9-12 education in India.

Various quantitative and qualitative research methodologies are reviewed in the literature for determining the effectiveness of TLD methods compared to other methods of instruction for identifying students' levels of satisfaction with a particular method of instructional delivery and student preference over TLD methods. These other methods include: 1) Experimental Research

methods followed by a questionnaire (Al-Faleh, 1992; Jabeen & Ghani, 2015; Thrall et al., 2015; Wong & Day, 2008); 2) Experimental Research followed by interviews as a secondary survey method (Meguid & Collins, 2017); 3) Survey of Attitude Toward Statistics (SATS) method using questionnaire instruments (Suanpang et al., 2004); 4) Experimental Research (Angelopoulou et al., 2014; Stetzik et al., 2015); and 5) Mixed Method Survey (Alpert & Hodkinson, 2019; Marmah, 2014).

I feel that the Mixed Method Survey, which is designed to collect both qualitative and quantitative data, is the most effective methodology for examining the above thesis question. The participants are asked to complete an online questionnaire to answer questions that are specifically designed to gain more information concerning the basic factors that affect TLD methods in relation to its characteristics, student attitudes, and student satisfaction.

The survey begins with eight closed-ended questions inquiring into characteristics of TLD, student attitudes, and student satisfaction in classroom learning. Each question is matched with a 5-point Likert Scale. Participants are asked to answer statements with choices ranging from ‘strongly disagree’ (1) to ‘strongly agree’ (5). The first question (Q1) asks the participants whether TLD methods were the most effective methods for them in learning explicit concepts and skills (Marmah, 2014). Question 2 (Q2) asks whether TLD methods helped them in retaining newly acquired knowledge for extended periods of time (challenging the observations of Marmah, 2014; Ekeler, 1994).

Question 3 (Q3) asks participants whether they felt that TLD methods were a dull and boring technique for them (Al-Faleh, 1992; Kaur, 2011), which is immediately followed by Question 4 (Q4) which asks whether TLD was interesting when taught by the chalk and board method (challenging the findings of Jabeen & Ghani, 2015). Question 5 (Q5) asks the

participants to answer whether TLD provided them with sufficient opportunities to understand complex information (Ekeler, 1994; Exley & Dennick, 2004). Question 6 (Q6) asks if TLD had a negative impact on their problem-solving abilities (Wong & Day, 2008; Ekeler, 1994).

Question 7 (Q7) asks participants to answer whether TLD plays a significant role in stimulating them to learn more (Ekeler, 1994; Kaur, 2011; Exley & Dennick, 2004). Finally, Question 8 (Q8) asks whether TLD methods resulted in less active involvement and engagement in their classes (Meguid & Collins, 2017; Stetzik et al., 2015; Ekeler, 1994).

The mean of each participant's score on the 8 questions reflects the attitudes of these students towards TLD methods, which determines either positive or negative effectiveness and the importance of TLD methods in their experiences.

The remaining two open-ended questions, Questions 9 and 10 (Q9 and Q10), are presented in an expanding text box to accommodate any length of response. Q9 inquires as to whether the participant has experienced instructional methods other than TLD. If the participant answers "yes", then they are asked to identify those alternative instructional methods that encourage more active learning compared to TLD methods (based on recommendations of Thrall et al., 2015; Stetzik et al., 2015; Angelopoulou et al., 2014; Suanpang et al., 2004; Meguid & Collins, 2017; Wong & Day 2008; Jabeen & Ghani, 2015). For those participants who answer Q9 with a "No", Q10 asks these participants to provide recommendations for improving TLD methods using more innovative ways (based on recommendations of Marmah, 2014; Exley & Dennick, 2004; Kaur, 2011; Chaudhury, 2011; Alpert & Hodkinson, 2019; Behr, 1988)

Explanation of the Procedures Followed

This author sought and attained approval from the Vancouver Island University Research Ethics Board. The potential participants were selected from Google search engine with the help

of Facebook Application. I created and posted a message on relevant Facebook pages such as World VIU, VIU Indian Students Association, and the VIU Indian Students Club that invited Indian students to complete the survey. I invited the Indian students who met the criteria by providing the URL link of the survey below the Facebook post. The participants were asked to forward the post and share the link with other Indian students who meet the criteria to participate in the survey.

Prior to completing the online questionnaire, the potential participants were asked to read the informed consent form which was attached to the Facebook post and also presented at the beginning of the questionnaire by clicking the link to the survey. They were informed that their participation would be completely voluntary and anonymous.

Participants were informed that they were not required to complete the questionnaire and could choose to discontinue participation by simply not submitting their questionnaire. Participants were also informed that by completing and submitting the questionnaire and consent form they were providing their consent to participate in the study. The consent forms were collected from the participants prior to their participation in the online survey. Participants were told that they would be informed as to where and when the results of this study would be available in the Facebook invitation post. The online questionnaire answers submitted and selected by participants in the research data will be digitally recorded on the *SurveyMonkey* server.

The participants were asked to complete the questionnaire by December 2020 via the *SurveyMonkey* website. *SurveyMonkey* was used to create and administer the survey to ensure that the participants' responses would remain secure, confidential, and anonymous. The data from the questionnaire was collected and analyzed in January and February of 2021.

Ethical Considerations

The author applied on October 13, 2020 to the Vancouver Island University Research Ethics Board (REB) for ethical guidance and approval. In attaining the approval for the survey, content advice was sought from my research supervisor and the REB. Their suggestions and recommendations were followed in the procedure for incorporating this research instrument. This was done to enhance assurance that the survey would be easily available to the potential participants in a social media platform. This study does not cause any physical distress or mental distress to the potential participants and does not place the participants in any vulnerable circumstances. This research also does not involve any potential risk or harm to the community or any social group. The author attained approval from REB to proceed on November 18, 2020.

Discussion of Validity

This study used a mixed-method survey to collect both quantitative and qualitative data. The nature of mixed-method survey strengthens the validity of the findings because it provides more than one venue for participants to express and communicate their preferences over characteristics of TLD methods based on their previous experiences. The close-ended questions allowed the participants to rate, quantitatively and sensitively, on a 5-point Likert scale, their perceptions of the effectiveness of the Traditional Lecture Delivery methods used in schools in India. The questions were specifically designed to gain information regarding the basic factors affecting TLD methods in relation to its characteristics, student attitudes and student satisfaction.

The open-ended survey questions provided an opportunity for participants to contribute deep and personal responses from their individual experiences related to recurring themes that can be identified and analyzed. Participants were asked to provide any suggestions or recommendations for improving TLD methods in more innovative ways. Participants were also

asked to give suggestions for different instructional strategies that might encourage more active learning compared to the engagement offered by TLD methods.

Data Analysis

The data has been examined using both quantitative and qualitative procedures. Each potential participant will produce eight quantitative scores, along with two qualitative responses. Means, medians, minimums, and maximums are calculated for all participants for each of the eight quantitative items, measuring subjective opinions on eight themes relating to the characteristics, student attitudes, and student satisfaction with TLD methods (Table 1). The survey is designed in such a way as to ensure that the scale items suitably reflects the proposed domains. In this way, this researcher hopes to gain a deeper understanding of any significant problems that continue to persist with TLD methods in secondary classrooms.

Thematic analysis is also used to interpret responses to the two qualitative questions, and to summarize and draw meaning from the participant's responses regarding their experiences and/or suggestions for enhancing TLD methods in classroom learning. In this way this researcher will be able to examine the emphasis and effectiveness of those TLD methods that can be justified as being significant to promote for future classroom learning in secondary schools in India from the perspectives of current Indian students attending VIU who have experienced Grade 9-12 high school education in India.

Chapter 4: Findings and Results

Introduction

The findings of the present research study aim to answer the following question: *What are the perspectives of Indian students currently attending VIU regarding the effectiveness of TLD methods on classroom learning in secondary schools in India?* A mixed methods survey is used to obtain both quantitative (closed-ended questions on a 5-point Likert-scale) and qualitative data (open-ended questions).

Findings

The submitted questionnaires were scrutinized to identify errors and then coded. Each question was evaluated on a 5-point Likert Scale, with choices ranging from (1) “strongly disagree” to (5) “strongly agree” (Marmah, 2014) measuring subjective opinions on eight different items or themes. All the responses were inputted into the computer for analysis using IBM SPSS version 26. The outcomes of the responses by the participants are illustrated below under the corresponding headings of Quantitative and Qualitative data.

Quantitative Results

Question 1 (Q1) represents: *TLD was the most effective method in learning explicit concepts and skills.* Mean for first question is 3.55, median is 4.00, mode is 4.00, standard deviation is 1.086, minimum is 2 and maximum is 5.

Question 2 (Q2) represents: *TLD helped to retain newly acquired knowledge for a long time.* The mean calculated for this question is 3.67, median is 4.00, mode is 4.00, standard deviation is 1.140, minimum is 1 and maximum is 5.

Question 3 (Q3) represents: *TLD, used by teachers for classroom learning, was a dull and boring technique.* The calculated mean is 2.93, median is 3.00, mode is 2.00, standard deviation is 1.068, minimum is 1 and maximum is 5.

Question 4 (Q4) represents: *TLD was interesting when taught by chalk and board method.* Calculated mean for this question is 3.43, median is 4.00, mode is 4.00, standard deviation is 1.062, minimum is 2 and maximum is 5.

Question 5 (Q5) represents: *TLD provided with sufficient opportunities to understand complex information.* The calculated mean for this question is 3.31, median is 3.00, mode is 4.00, standard deviation is 1.070, minimum is 2 and maximum is 5.

Question 6 (Q6) represents: *TLD had a negative impact on your problem-solving abilities.* Calculated mean is 2.64, median is 2.50, mode is 2.00, standard deviation is 1.100, minimum is 1 and maximum is 5.

Question 7 (Q7) represents: *TLD played a significant role in stimulating to learn more.* The calculated mean for this problem is 3.57, median is 4.00, mode is 4.00, standard deviation is 0.991, minimum is 1 and maximum is 5.

Question 8 (Q8) represents: *TLD had less active involvement in classroom.* The calculated mean is 2.83, median is 2.50, mode is 2.00, standard deviation is 1.166, minimum is 1 and maximum is 5. A total of 42 participants responded to each of the questions.

Table 1 provides a statistical summary of responses from the eight, closed-ended questions. Table 2 summarizes the responses of 42 participants for the first question. 28% of the respondents agreed that TLD was the most effective method in learning explicit concepts and skills, while 21% participants disagreed with this statement. 26% percent of participants neither agreed nor disagreed in this question.

Table 1*Statistical Summary of Responses to Eight Close-ended Survey Questions*

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Mean	3.55	3.67	2.93	3.43	3.31	2.64	3.57	2.83
Median	4.00	4.00	3.00	4.00	3.00	2.50	4.00	2.50
Mode	4.00	4.00	2.00	4.00	4.00	2.00	4.00	2.00
SD	1.086	1.140	1.068	1.062	1.070	1.100	0.991	1.166
Minimum	2.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Maximum	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Total	42	42	42	42	42	42	42	42

Table 2*Responses to Q1: TLD was the most effective method in learning explicit concepts and skills.*

5-Point Likert Scale	Frequency	Percentage
1	00	0.00%
2	09	21.43%
3	11	26.19%
4	12	28.57%
5	10	23.81%
Total	42	100%

Figure 1 provides a graphical representation of the summary data displayed in Table 2. Approximately 28% of respondents agreed with this statement, while 21% disagreed.

Figure 1

Responses to Q1 – “TLD was the most effective method in learning explicit concepts and skills.”

Table 3 summarizes the responses of 42 participants for the second question. 26% percent of the participants strongly agreed and 38% of respondents agreed that TLD helped to retain newly acquired knowledge for a long time. 19% participants disagreed with this statement while 14% of respondents neither agreed nor disagreed.

Figure 2 provides a graphical representation of the summary data displayed in Table 3. Majority of the respondents (about 38%) agreed with this statement, while the least of the respondents (about 2%) strongly disagreed.

Table 3

Responses to Q2: TLD helped to retain newly acquired knowledge for a long time.

5-Point Likert Scale	Frequency	Percentage
1	01	2.38%
2	08	19.05%
3	06	14.29%
4	16	38.10%
5	11	26.19%
Total	42	100%

Figure 2.

Responses to Q2 - TLD helped to retain newly acquired knowledge for a long time.

Table 4 summarizes the responses of 42 participants for third question. About 33% of the respondents reported disagreed that TLD used by teachers for classroom learning, was a dull and boring technique, while 30% participants agreed with this statement. 23% percent of the participants neither agree nor disagreed.

Table 4

Responses to Q3: TLD used by teachers for classroom learning was a dull and boring technique

5-Point Likert Scale	Frequency	Percentage
1	03	7.14%
2	14	33.33%
3	10	23.81%
4	13	30.95%
5	02	4.76%
Total	42	100%

Figure 3 provides a graphical representation of the summary data displayed in Table 4. A majority of the respondents (about 33%) agreed to the statement while the least of the respondents (about 4%) strongly agreed to the statement.

Figure 3.

Responses for Q4 - TLD, used by teachers for classroom learning, was a dull and boring technique.

Table 5 summarizes the responses reported by the total of 42 participants for fourth question. 42% of the respondents reported agreed that TLD was interesting when taught by chalk and board method, while 28% participants disagreed to the statement. Although 14% percent of the participants neither agree nor disagree to this question.

Table 5

Responses to Q.4: TLD was interesting when taught by chalk and board method.

5-Point Likert Scale	Frequency	Percentage
1	00	0.00%
2	12	28.57%
3	06	14.29%
4	18	42.86%
5	06	14.29%
Total	42	100%

Figure 4 provides a graphical representation of the summary data displayed in Table 5. Majority of the respondents (about 42%) agreed to the statement while the least of the respondents (about 14%) neither agreed nor disagreed.

Figure 4.

Responses for Q4 – “TLD was interesting when taught by chalk and board method.”

Table 6 summarize the responses of 42 participants for the fifth question. 33% of the respondents reported agreed that TLD provided with sufficient opportunities to understand complex information, while 30% participants disagreed with the statement. 21% percent of participants neither agreed nor disagreed.

Table 6

Responses to Q.5: TLD provided sufficient opportunities to understand complex information.

5-Point Likert Scale	Frequency	Percentage
1	00	0.00%
2	13	30.95%
3	09	21.43%
4	14	33.33%
5	06	14.29%
Total	42	100%

Figure 5 provides a graphical representation of the summary data displayed in Table 6. Most of the respondents (about 33%) agreed to the statement while the least of the respondents (about 14%) neither agreed nor disagreed.

Figure 5.

Responses to Q5 - TLD provided with sufficient opportunities to understand complex information.

Table 7 summarizes the responses of 42 participants for the sixth question. About 35% of the respondents reported disagree that TLD had a negative impact on problem-solving abilities, while only 19% participants disagreed to the statement. 26% percent of the participants neither agreed nor disagreed.

Table 7

Responses to Q.6: TLD had a negative impact on your problem-solving abilities.

5-Point Likert Scale	Frequency	Percentage
1	06	14.29%
2	15	35.71%
3	11	26.19%
4	08	19.05%
5	02	4.76%
Total	42	100%

Figure 6 provides a graphical representation of the summary data displayed in Table 7. Majority of the respondents (about 35%) disagreed with the statement while the least of the respondents (about 4%) strongly agreed.

Figure 6.

Responses to Q6 – “TLD had a negative impact on your problem-solving abilities.”

Table 8 summarizes the responses of 42 participants for the seventh question. 47% of the respondents reported agree that TLD played a significant role in stimulating to learn more, while only 14% participants disagreed with the statement. 21% percent of the participants neither agreed nor disagreed.

Table 8

Responses to Q.7: TLD played a significant role in stimulating to learn more.

5-Point Likert Scale	Frequency	Percentage
1	01	2.38%
2	06	14.29%
3	09	21.43%
4	20	47.62%
5	06	14.29%
Total	42	100%

Figure 7 provides a graphical representation of the summary data displayed in Table 8. A majority of the respondents (about 47%) agreed to the statement, while the least of the respondents (about 2%) strongly disagreed with the statement.

Figure 7.

Responses to Q7 – “TLD played a significant role in stimulating to learn more.”

Q7. TLD played a significant role in stimulating to learn more

Table 9 summarizes the responses of 42 participants for the eighth question. 40% of respondents disagree that TLD has less active involvement in classroom, while 28% of participants agreed to the statement. 14% percent of the participants neither agreed nor disagreed.

Table 9

Responses to Q.8: TLD had less active involvement in classroom.

5-Point Likert Scale	Frequency	Percentage
1	04	9.52%
2	17	40.48%
3	06	14.29%
4	12	28.57%
5	03	7.14%
Total	42	100%

Figure 8 provides a graphical representation of the summary data displayed in Table 9. A majority of the respondents (about 40%) disagreed with the statement, while the least of the respondents (about 7%) neither agreed or disagreed.

Figure 8.

Responses to Q8 – “TLD had less active involvement in classroom”.

Figure 9 shows a box plot graph providing a graphic representation of the range of attitudes expressed in responding to each of the eight questions:

Figure 9

Box Plot represents the Range of Attitudes in responding to the Eight Quantitative Questions.

Qualitative Results

The qualitative data was collected using the remaining two open-ended questions, Questions 9 and 10 (Q9 and Q10), presented in an expanding text boxes in order to accommodate any length of response. Question 9 (Q9) represents: *whether the participant has experienced instructional methods other than TLD*. If the participant answered “Yes”, then they were asked to *identify those alternative instructional methods that encourage more active learning compared to TLD*. For those participants who answered Q9 with “No”, Question 10 (Q10) asked: *State recommendations for improving the TLD methods through more innovative ways*.

The qualitative written responses are coded (Alpert & Hodkinson, 2017, Marmah, 2014) and divided into seven strategies recommended for alternative instructional methods, and four themes recommended for improving TLD methods by using more innovative methods. The

seven teaching strategies that became evident when grouping the words for the alternative instructional methods were: 1) Activity-based Learning, 2) Inquiry-based Learning, 3) Presentations (with the help of audio-visual aids), 4) Group Discussion, 5) Experiential Learning, 6) Problem-solving, and 7) Co-operative Learning.

The four methods that became evident when grouping the words for improving TLD methods through more innovative ways were: a) Active participation of students in classroom learning b) Implementation of audio-visual aids, c) Discouraging memorization of the concepts while learning, and d) Remodelling lecturing methods through more activities.

Table 10 summarizes the responses to Question 9 (Q9), inquiring whether or not the participant had experienced instructional methods other than TLD. 16 participants (about 38%) reported “No”. Twenty-six respondents (about 62%) reported yes, they had experienced other methods, and attempted the second part of the question, which asked them to identify those alternative instructional methods that encouraged more active learning compared to TLD.

Table 10

Responses to Q9- Part 1: Had the participant experienced instructional methods other than TLD.

Response	Frequency	Percentage
Yes	26	61.90%
No	16	38.10%
Total	42	100%

Table 11 summarize the responses reported by the 26 participants who responded “yes” to the ninth question, stating any alternative instructional methods that encouraged more active learning compared to TLD. Of the total respondents, about 31% suggested Activity-based

Learning, while approximately 7% of the participants felt that Inquiry-based Learning encouraged more active learning compared to TLD. Almost 27% of participants recommended Presentations with the help of audio-visual aids, and about 15% of participants suggested using more Group Discussion. Finally, just over 11% recommended Experiential Learning, while slightly less than 4% of participants suggested either Problem-solving or Co-operative Learning methods.

Table 11

Responses to Q9 -Part 2: Alternative instructional methods that encouraged more active learning compared to TLD methods.

Alternative Instructional Methods	Count	Percentage
Activity-based Learning	8	30.78%
Inquiry-based Learning	2	7.70%
Presentations using Audio/Visual aids	7	26.92%
Group Discussion	4	15.38%
Experiential Learning	3	11.54%
Problem-solving	1	3.84%
Co-operative Learning	1	3.84%
Total	26	100%

Table 12 summarizes the responses of the 16 participants who responded to the tenth question asking them to provide recommendations for improving the TLD methods through more innovative ways. In response to Question 10, about 31% recommended encouraging the active participation of students in classroom learning, while the same number of respondents felt the implementation of audio-visual aids would improve TL methods. 12% of participants

recommended discouraging memorization of the concepts while learning and 25% of the participants recommended remodeling lecturing methods to include more activities.

Table 12

Responses to Q10: State recommendations for improving the TLD methods through more innovative ways.

Recommendations	Count	Percentage
Active participation of students in classroom learning	5	31.25%
Implementation of Audio-Visual aids	5	31.25%
Discourage memorization of the concepts while learning	2	12.5%
Remodel Lecturing method through more activities	4	25%
Total	16	100%

Conclusion

The quantitative and qualitative data obtained from the surveys provide insight regarding the effectiveness of TLD methods on classroom learning in secondary schools in India, and provide additional information concerning the basic factors that affect TLD methods in relation to its characteristics, student attitudes, and student satisfaction. A more thorough discussion of common themes as well as data interpretation and analysis are presented in Chapter 5.

Chapter 5: Summary, Discussion, and Implications

Summary

This researcher framed the present study based on the belief that underestimating the contribution of Traditional Lecture Delivery (TLD) methods, in the pursuit of more effective alternative classroom learning strategies, may be an important factor that is increasingly overlooked and marginalized when advocating for newer instructional methods in high schools in India.

This study also evolved from previous experiences and observations of the author that educators often compromise their lectures by using new technology-based teaching methods, claiming that these methods pave the way for a better learning environment for students. School authorities also feel increasingly compelled to hire teachers who are capable of instructing students with the help of electronic devices and advanced technologies, often to the exclusion of teachers who continue to support traditional ways of teaching. As a matter of fact, a more optimistic and thoughtful approach is needed to find ways and measures that can be applied in future to increase the emphasis placed on TLD methods and thus improve teaching strategies for the author as well as other educators.

To further explore the area of basic factors affecting TLD methods in relation to characteristics, student attitudes, and student satisfaction, a literature review of relevant research was conducted prior to embarking upon this study. A review of the literature helped to identify and expand the clarity of the research problem. The purpose of the present study is to examine the emphasis and effectiveness of TLD methods that can be justified as contributing significantly and in positive ways to classroom learning in secondary schools in India from the perspective of Indian students currently attending VIU who have completed their Grade 9-12 education in

India. This researcher created a mixed-method questionnaire and invited Indian students currently attending VIU to complete the survey.

Both quantitative and qualitative data were collected from the participants. A participant consent form was completed by a total of 55 potential participants. Forty-two participants completed the questionnaire, resulting in a 76.3% response rate. The collected data indicates that this researcher's hypothesis was proved to be correct in terms of the attitudes and satisfaction levels among the participants being positive and supportive of the continued use of TLD methods in secondary classrooms. The data also reveals no significant reasons for de-emphasizing TLD methods when compared to other methods used by educators in secondary classrooms in India.

The outcomes of the participant responses are summarized below under the corresponding headings of Quantitative and Qualitative data. From an analysis of the Likert response to the survey items, the total mean score of the attitudes towards Traditional Lecture Delivery methods is both positive and supportive.

Discussion of the Data

Quantitative Data

A total of 42 participants responded to eight questions in the Likert-scale based questionnaire. A detailed discussion on the statistical analysis and data interpretation is described below. In Table 1, a statistical summary of all responses from the eight, closed-ended questions is represented. The table shows Q1 (*TLD is the most effective method in learning explicit concepts and skills*), Q2 (*TLD helps to retain newly acquired knowledge for a long time*), Q4 (*TLD is interesting when taught by chalk and board method.*), and Q7 (*TLD plays a significant role to stimulate more learning*) all have notably high means and medians when compared to the other questions addressed. These findings also indicate that participants agree on the existence of

all the above-mentioned problems with respect to their experiences learning in TLD-focused classrooms.

Question 1 (Q1). The research findings displayed in Table 2 show that the *TLD method was the most effective method for learning explicit concepts and skills* for students, findings that are in line with the Marmah's findings (2014). It was also found that out of a total of 42 participants, 22 claim TLD is the most effective method in learning vague concepts, while 9 respondents disagree with this statement. This is a major difference between the attitudes of the two groups of students regarding the above characteristic of TLD methods. Surprisingly, 11 participants neither agree nor disagree with this question. Although in the open-ended questions, eight participants choose Activity-based Learning, claiming that this method is effective in learning complex concepts.

Question 2 (Q2). The research findings displayed in Table 3 indicate that *TLD methods helped to retain newly acquired knowledge for a long time* for the students, which challenges the observations of Marmah (2014) and Ekeler (1994). The results show that a higher number of participants (27) agree that TLD methods help them to remember freshly learned concepts that last for a long time. Nine participants disagree with this statement, while six respondents neither agree nor disagree. There are significant differences in student attitudes regarding the above-mentioned characteristics of TLD methods. Although, in the open-ended questions, two participants recommend discouraging the memorization of the concepts during TLD in classrooms, which points to the retention methods that TLD follows, but the number of participants (2) is too low to consider for validity.

Question 3 (Q3). The research findings displayed in Table 4, showing that *TLD methods used by teachers for classroom learning, was a dull and boring technique* for the students, does

not confirm the findings of Al-Faleh (1992) and Kaur (2011). It is clear from the analytical data that 17 of the respondents' report TLD methods used by teachers for classroom learning are an interesting technique that catches their attention, while 15 participants agree with the research question. However, ten participants neither agree nor disagree that TLD methods contribute to a monotonous technique. There is not a significant difference between the attitudes of the students regarding the above characteristic of TLD. Although, in the open-ended questions, seven participants choose presentation methods that use Audio/Visual aids, claiming that this method is an exciting and lively method for learning among this group of students.

Question 4 (Q4). The research findings displayed in Table 5, showing that the *TLD method was interesting when taught by chalk and board* for the students, challenges the observations of Jabeen & Ghani (2015). The results indicate that a majority of the respondents (24) agree that TLD is interesting when taught using a chalk and board method, while 12 participants disagree with this statement. There is a substantial difference between the attitudes of students regarding the above characteristic of TLD. However, in the open-ended questions, five students recommend supplementing the TLD with audio-visual aids for engrossment and to hold the attention of students.

Question 5 (Q5). The research findings displayed in Table 6, showing that *TLD provided sufficient opportunities to understand complex information*, is inconsistent with the findings of Ekeler (1994) and Exley & Dennick (2004). The data shows a higher number (20) of respondents reporting that TLD offers adequate advantages for understanding complex information, while 13 participants disagree with the statement. Surprisingly, nine participants neither agree nor disagree with the question. However, while there is a minimal difference between the attitudes of the students regarding the above characteristics of TLD methods, in the open-ended questions

four of the participants recommend restructuring lecturing methods to include more activities in order to diligently engage students in learning.

Question 6 (Q6). The research findings displayed in Table 7, showing that *TLD does not have a negative impact on problem-solving abilities* of students, which is inconsistent with the findings of Wong & Day (2008) and Ekeler (1994). It is clear from the results, that the majority of the respondents (21) report that TLD has a positive impact on the analytical abilities of students, while only ten participants disagree with this statement. There are also 11 participants who neither agree nor disagree with the question. Hence, there is a notable difference in the attitudes among students regarding the above characteristics of TLD.

Question 7 (Q7). The research findings displayed in Table 8, showing that *TLD played a significant role in stimulating to learn more* for the students, which supports the findings of Ekeler (1994), Kaur (2011) and Exley & Dennick (2004). The data indicates that a higher number (26) of the respondents agree that TLD played a pivotal role in energizing them to learn more, while only seven participants disagree with the statement. The survey results show a crucial difference in the attitudes of students regarding the above characteristics of TLD.

Question 8 (Q8). The research findings displayed in Table 9, showing that *TLD had more active involvement in classroom*, is inconsistent with the findings of Meguid & Collins (2017), Stetzik et al. (2015) and Ekeler (1994). The results indicate that 21 of respondents' report TLD offers more active participation in classroom, while 15 of the participants claim that TLD involves less active involvement of the students. These numbers indicate a sharp difference in the attitudes of students regarding the above characteristics of TLD. Although, in the open-ended questions, five participants recommend that involving students in active participation in classroom learning makes TLD more productive.

Box Plot and Overall Analysis. In an overall analysis of the eight targeted questions concerning characteristics, student attitudes and student satisfaction with TLD methods, the results are presented in the form of a box plot as shown in Figure 9. The data clearly indicates that the reported perspectives of students show positive and strong support for the specified characteristics of Traditional Lecture Delivery methods as stated in Q1, Q2, Q4 and Q7. Most of the respondents agree that *TLD methods: a) were the most effective method in learning explicit concepts and skills, b) helped to retain newly acquired knowledge for a long time, c) were interesting when taught by the chalk and board method, and d) TLD played a significant role in stimulating students to learn more.*

However, there is no notable differences between the attitudes of students in Q3, which states that *TLD, used by teachers for classroom learning, was a dull and boring technique.* Therefore, the results remain insignificant for a valid finding contributing to the research hypothesis. Although, there are small differences between the perspectives of students in Q5, Q6 and Q8, indicating that the participants failed to give an adequate response to the statements *TLD provided sufficient opportunities to understand complex information, TLD had a negative impact on problem-solving abilities and TLD had less active involvement in classroom.* In conclusion, the box plot shown in Figure 9 indicates that the responses in Q1, Q2, Q4 and Q7 have the highest validity, as reported by majority of the participants.

Qualitative Data

The qualitative written responses are coded and divided into seven strategies recommending alternative instructional methods and four themes recommending improving TLD methods using more innovative methods. The seven teaching strategies that became evident when grouping the words for the alternative instructional methods are displayed in Table 11 and include: 1) Activity-based Learning, 2) Inquiry-based Learning, 3) Presentations (with the help

of audio-visual aids), 4) Group Discussion, 5) Experiential Learning, 6) Problem-solving, and 7) Co-operative Learning.

Alternative Instructional Methods: Table 11 - A Summary of Participants' Responses

Activity-based Learning. While doing the thematic analysis of Q9-Part 2, it was noted that approximately eight participants have experienced this strategy and claim that this method is effective for learning complex concepts. These experiences support the findings of Meguid & Collins (2017) and Stetzik et al. (2015), where students reported that class activities like group-discussions, role-play and games, carried out in the classroom, can help energize the focus of students on their teachers.

Inquiry-based Learning. The thematic analysis indicates only two participants have experienced this method, reporting that they can ask questions and share their ideas in learning without merely listening only to the teacher.

Presentations (with the help of audio-visual aids). A thematic analysis of the qualitative data reveals that seven students recommend the presentation method as an alternative instructional method to TLD. They added that their teachers frequently used projectors and multimedia techniques, which encouraged them to adopt effective learning habits and enabled them to learn concepts in greater depth (Jabeen & Ghani, 2015). Moreover, they state that by using presentation methods, lessons seemed simple and more understandable. In addition, they observe that presentations are not always controlled by the teacher; students also have opportunities to present an explanation of the concepts from their points of view.

Group Discussion. While doing the thematic analysis for this question, four participants remember experiencing this method, claiming that group discussions improve their thinking, listening and speaking skills. In addition, they reason that group discussion strategies encourage

students to search and seek information rather than relying on teacher-focused TLD methods (Al-Faleh, 1992)

Experiential Learning. Only three participants report that learning through hands-on experience is productive. These participants claim that this method directly involves students in the process of their own learning, making it effective and simple while also bringing greater understanding to the learning experience. The respondents reasoned that practical learning helps them by providing an opportunity to apply what they are being taught (Angelopoulou et al., 2014).

Problem-solving. Out of 26 participants, only one reports having experience with problem-solving methods in school. The participant claims that this method emphasizes active participation of students in learning new concepts (Wong & Day, 2008)

Co-operative Learning. This method was experienced by only one participant as an alternative instructional method that encourages more active learning compared with TLD. The respondent reasoned that this method provides a better experience in helping to gain knowledge (Thrall et al., 2015)

Improving TLD Methods: Table 12 - A Summary of Participants' Responses

In Table 12, the four methods that became evident when grouping the words for improving TLD methods through more innovative ways were: 1) Active participation of students in classroom learning, 2) Implementation of audio-visual aids, 3) Discouraging memorization of the concepts while learning, and 4) Remodeling lecturing methods through more activities. An explanation of each recommendation suggested by the participants is stated below:

Active Participation of Students in Classroom Learning. In the thematic analysis of Q10, five participants recommend the active participation of students in classrooms. They claim

that student interaction, activities with friends, playing games while learning and two-way communication between teachers and students in a TLD classroom are effective. These views of active learning opportunities confirm the findings of Chaudhury (2011)

Implementation of Audio-visual Aids. Thematic analysis of the data reveals that five participants report virtual-learning and the use of digital devices in teaching may prove effective in the transmission of knowledge among students (Alpert & Hodkinson, 2019).

Discouraging Memorization of the Concepts While Learning. Only two participants propose avoiding the cramming of concepts. They argue that forcing students to memorize information by-heart is not an learning effective strategy.

Remodeling Lecturing Methods Through More Activities. Four participants recommend remodeling or restructuring the TLD classroom into an interactive classroom. They claim that this will help students to think, create and innovate, which also supports the recommendations of Ekeler (1994); Behr (1988); Exley & Dennick (2004) and Marmah (2014).

Significance of the Study

This study is designed to gain a deeper understanding of any significant problems that persist with Traditional Lecturing Delivery (TLD) methods for students, and to examine the emphasis and effectiveness of the TLD methods used in secondary schools in India from the perspective of Indian students currently attending VIU who have completed their Grade 9-12 education in India.

A recruitment script and link to a digital online survey was created and administered through *Survey Monkey* website and 42 responses were received. Out of the 42 total participants, 26 responses could be interpreted to contribute deep and personal responses from their personal experiences related to alternative and effective instructional strategies compared to TLD. In

addition, 16 students provided suggestions and recommendations for improving TLD methods in more innovative ways.

Implications and Recommendations

This study seeks to examine the emphasis and effectiveness of TLD methods that can be justified as contributing significantly and in positive ways to future classroom learning in secondary schools in India. Supported by the findings of this study, TLD methods are considered to be efficient strategies for learning explicit content and helping to retain freshly learned concepts over an extended period of time. Moreover, the findings indicate that TLD methods are interesting when instructed and demonstrated using a chalk and board method and play a crucial role in stimulating students to learn more.

Although, a majority of the respondents suggest that Activity-based and Presentation-based methods using audio-visual aids as an alternative instructional strategy are more productive than TLD methods, these methods can still be incorporated into TLD methods for a more positive and fruitful outcome. Continuing the effective use of TLD methods by engaging students actively and gripping their attention in learning is strongly suggested. Finally, the findings suggest that a meaningful and intentional use of audio-visual aids may prove beneficial for the active participation of students in a TLD classroom setting.

Limitations of the Study

The primary goal of this study is to gain a deeper understanding of any significant problems that persist with traditional lecturing methods for students in secondary classrooms. A secondary goal is to examine the emphasis and effectiveness of TLD methods that can be justified as contributing significantly and in a positive way to future classroom learning in Indian secondary schools.

One limitation of this study is that the findings are based on only 42 responses, which is very tiny when compared to 40 million Indian students. Originally, this researcher had intended to conduct the study in India in order to increase the number of respondents. However, due to the global outbreak of COVID 19 and the accompanying restrictions it was not possible and, therefore, the findings cannot be generalized to the larger context of India.

Secondly, many efforts were made to minimize further threats to internal validity, thus contributing to any further limitations of this study. However, being a student at VIU, this researcher may have had pre-established relationships and/or familiarity with some participants, which may have had some unintended influence on the study by recruiting people known to the present researcher.

A third limitation of this study is that participants are asked to reflect on their past experiences, which for some of the respondents maybe more than ten years ago. There is a possibility for error or misconstrued perceptions, because the participants' observations of effectiveness upon which they have based their responses may not be recent.

Finally, the limitation caused by using a sample of convenience may present a threat to internal validity, because of the possibility of participants tailoring their survey responses to either what they believe may *please* the current researcher or to match what they assume the intent or desired findings of the study might be.

Suggestions for Further Research

In an overall analysis, TLD methods appear to have maintained their positive impact and have proved significant for students learning up to the present moment. Supported in the literature review for this study, although often considered a passive method of teaching, TLD methods are held to be efficient for learning explicit content and for helping to retain freshly

learned concepts over long periods of time. Further suggestions are also provided for remodeling or restructuring TLD methods to be more productive. The findings of this study complement studies in the literature, as it describes specifically how instructors can make TLD methods more constructive and remain effective in this era of new and modern teaching methods.

It is recommended that the scope of any future research in this area be widened to incorporate a larger population sample in order to allow for a generalization of outcomes. It is also suggested that future research be conducted in India and include current high school students who can reflect on their current experiences. It is further recommended that the data collection in future studies be followed by personal interviews of the instructors who use TLD methods or any alternative methods to provide a broader view of the challenges and solutions offered when using these methods. Finally, it is proposed that a similar study be conducted in the future using a pre-survey and post-survey to provide comparative *before and after* data, while also providing recent, intentional results that may prove more accurate and objective.

Conclusion

The findings of this study suggest that there is no significant reason for de-emphasizing TLD methods compared to other alternative methods used by educators in secondary classrooms in India. The research also shows that students prefer to stick with TLD methods. With constant advancements being made in the designs of technological devices and teaching methods, it is indisputable that new methodologies will offer timesaving practices and prove to be incredibly beneficial for both teachers and students. However, traditional teaching methods should not be de-emphasized or discarded simply because they are older. Traditional lectures offer benefits of being able to explain concepts in very simple terms and offer additional clarification and insights for students.

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APPENDIX A

Summary of Literature Review

Research Study	Page	Focus of Study	Principle Findings	Recommendations
Ekeler (1994)	8	Informal and formal lecturing methods	<ol style="list-style-type: none"> 1. Failure of lectures may be due to insufficient training 2. TLD can increase learning, stimulate scholarly research, bridge diverse types of subject content, and summarize results. 3. Economical for large classes 4. Less effective for problem-solving skills, conceptual learning, student diversity and participation, feedback, and long-term retention 	Maintain eye contact students, avoid stationary positioning, be dynamic and dramatic, alternate formal and informal lecturing techniques,
Behr (1988)	10	Demarcation of lecturing styles	No definitive conclusions about lecturing strategies and styles can be drawn from the small-scale research.	Lecture as a teaching method can be much improved from its traditional approach.
Al-Faleh (1992)	13	Significant differences between TLD and discussion methods	<ol style="list-style-type: none"> 1. TLD is superior student performance, used as the only method of delivery students become bored and lose interest. 2. The discussion method became popular because it is associated with activity and creativity 	Both the discussion and lecture methods should be employed in a way that fits the subject matter and meets teacher and student needs. .
Jabeen & Ghani (2015)	14	Comparison between the traditional chalk and board lecture method and PowerPoint presentation (PPT) methods	<ol style="list-style-type: none"> 1. PPT improves clarity and understanding, encourages active engagement and stimulates interest with animation 2. TLD enables students to take notes but time constraints restrict content, less preference among educators 3. It is not clear whether one particular lecture delivery method is more effective than other methods 	TLD can be replaced with PPT in order to better meet student aspirations
Wong & Day (2008)	16	Comparison of Problem-based Learning (PBL) with TLD methods.	<ol style="list-style-type: none"> 1. PBL increases student motivation, experience satisfaction and pressure from time-sensitive tasks. 2. TLD and teacher charisma increase student motivation and interest, but less questioning and note taking 	PBL is an instructional model that could be effective in achieving higher educational goals in secondary science education depending on TLD methods used.

Research Study	Page	Focus of Study	Principle Findings	Recommendations
Meguid & Collins (2017)	18	TLD vs IT using Poll Everywhere (ARS).	1. Positive attitudes towards interactive lecturing methods, lack of embarrassment & increased anonymity increases IT popularity 2. Interactive questions in Poll Everywhere ARS improved student focus and attention	1. Using Poll Everywhere ARS emphasizes value of interaction & engagement. 2. IT using ARS methods leads to prioritization of content and a focus on key concepts.
Suanpang et al. (2004)	20	Significant differences in attitudes between students studying online and students using TLD method.	1. OL students had developed a more positive attitude, a greater ability to solve problems 2. Exceptions for OL such as the occurrence of various computer-based problems during online-learning, hanging up, a lack of the latest computer skills and access of students at home.	A theoretical framework should be developed for online learning that combines instructional strategies and delivery media to create positive attitudes.
Angelopoulou et al. (2014)	23	Comparing the effectiveness of Experiential Learning (EL) and TLD methods	1. The EL group showed improvement in health knowledge, behaviour and attitude. 2. TLD group showed some improvement in oral health knowledge but showed no effect on oral health behaviour of the children	Experiential Learning, which is an innovative educational method, can be used with adolescents as an oral health-education method to improve oral health.
Stetzik et al. (2015)	25	Comparison of Traditional Lecture Delivery (TLD) method teaching and puzzle-based teaching	1. A puzzle-based pedagogy can effectively enhance the performance of students on standard course-specific assessments. 2. Some students reported that puzzle-based, in-class activities were extremely difficult and their understanding of the material benefited little from this method.	To embrace a broad contextual framework like puzzle-based learning that helps to improve student performance.
Thrall et al. (2015)	27	Team-Based Learning (TBL) v/s TLD methods using a randomized controlled trial.	1. There was no statistically significant difference in knowledge scores between TBL and TLD groups. 2. Both groups improved in their knowledge of concepts of efficacy and effectiveness.	TBL can be used successfully with large conference groups that have traditionally depended on a lecture format.
Alpert & Hodkinson (2019)	28	The effectiveness of video use in TLD methods	1. A significant number of students want to see videos during live TLD, but not too many 2. Some students regarded videos as a waste of class time that diminished opportunities for face-to-face interactions in live classes. 3. Lecturer presented videos saved the students from spending time and effort searching for videos by themselves before exams.	1. To consider the general preferences of students, such as showing a small number of videos sourced from the internet. 2. The videos should not be too long and should be well-integrated into the flow of lecture.

Research Study	Page	Focus of Study	Principle Findings	Recommendations
Chaudhury (2011)	30	TLD methods can be an effective element of instructional practice.	<ol style="list-style-type: none"> 1. TLD methods are as effective as any other methods for transmitting information, but not more effective. 2. Lecture systems are currently evolving that encourages greater student engagement in the learning process. 	To look for ways in which modern lecture classrooms can transform to more effective environments for engaging students in learning.
Kaur (2011)	31	TLD models of teaching with reference to varied relevant literature	<ol style="list-style-type: none"> 1. Lecture Discussion Cycle encourages students to think about the content being presented as well as heightening their involvement in the lecture proceedings. 2. Advantages of TLD methods are that they can stimulate interest in the subject by presenting an orientation in an impressive way. 3. Limitations: being a waste of time presenting matter that is already present in books, and the fast pace of the lecture. 	<ol style="list-style-type: none"> 1. Viewing the learner as an active information processor in the Lecture Discussion Cycle rather than as a passive recipient of knowledge. 2. The flaws of the TLD methods may depend upon insufficiency in the preparation, presentation, and structure of a particular lecture rather than upon the lecture method itself.
Exley & Dennick (2004)	33	Effective use of TLD methods.	<ol style="list-style-type: none"> 1. Categorizes the knowledge outcomes of lecturing into three broad categories including: a) factual and conceptual understanding, b) application and use, and c) problem solving and evaluation. 2. Lectures tend to communicate enthusiasm for the topic, provide a structure or framework for the material, tailor the material to the students' needs, provide the current information, and is cost-effective. 	TLD methods can be effective for the expedient transmission of facts and information. If the lecture is delivered by a knowledgeable, well-prepared, and enthusiastic teacher, they can prove beneficial to the students.
Marmah (2014)	34	Students' preferences for TLD as a method of teaching	<ol style="list-style-type: none"> 1. Students preferred the TLD methods. 2. Lectures help to clarify and organize difficult concepts and important facts. 3. The TLD methods will continue to be the dominant method of instruction. 	Lecturers need to find ways to improve the lecture to make traditional lectures more interesting and to increase student engagement.

APPENDIX B

VANCOUVER ISLAND UNIVERSITY

EXPLORE. DISCOVER. EXCEL.

Informed Consent Form

Emphasis and Effectiveness of the Traditional Lecture Delivery Method in India

Principal Investigator

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Supervisor

Dr. Joe Karmel (Ph.D),
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TITLE OF THE STUDY:

My research thesis, entitled “Emphasis and Effectiveness of the Traditional Lecture Delivery Method in India,” aims to evaluate the emphasis and effectiveness of the Traditional Lecture Delivery (TLD) method in secondary classrooms in India.

PURPOSE OF THE STUDY:

Traditional lectures are probably the oldest method of instructional delivery used in India and other countries as well, and were believed to be an efficient means for conveying information to large numbers of students effectively. However, there are a growing number of educators who advocate for replacing the traditional lecture delivery (TLD) method with more modern teaching strategies that include increased use of technology and group activities. I believe that underestimating the importance of TLD methods may be a factor in advocating for newer instructional methods. The proposed study is designed to examine the emphasis and effectiveness of TLD as a significant method of instructional delivery for future classroom learning in secondary schools in India.

CRITERIA FOR PARTICIPANTS:

The criteria for every potential participant is: (a) be an Indian student; (b) have completed Grades 9-12 education in India; (c) be at least 19 years of age; (d) be enrolled at VIU; (e) be willing to give consent and complete an online questionnaire.

PROCEDURE:

If you would be willing to participate in my research, you will be asked to complete an online questionnaire via the *SurveyMonkey* website. Questionnaire data will be stored on *SurveyMonkey*'s servers located in USA, and thus is subject to *SurveyMonkey*'s data privacy policies and foreign legislation. For information on *SurveyMonkey*'s privacy policy, see www.surveymonkey.com/mp/legal/privacy-policy/.

The online questionnaire used in the present study will measure the characteristics of the TLD method and the previous experiences of students with the TLD method. The questions are specifically designed to gain more information regarding the basic factors that affect the TLD method in relation to its characteristics, student attitudes, and student satisfaction. Participants will be asked to answer statements about their level of understanding of the TLD method.

CONFIDENTIALITY:

The nature of the online questionnaire is completely anonymous, and the risk of your questionnaire responses being identifiable is extremely unlikely. All questionnaire responses will be stored in my *SurveyMonkey* account. Only, I will be able to access this account using a unique password. After the data collection, the electronic data will be on my password protected laptop. I will not collect any personally identifiable information, including Internet Protocol (IP) addresses.

RESULTS:

The research findings will be used in my Master's thesis and will be published on VIUSpace. Next year, the results of this study will be available online as part of my final thesis on VIUSpace, see viurrspace.ca/handle/10613/3277. By searching my name on this webpage, you will be able to find this research study.

PARTICIPATION AND WITHDRAWAL:

Your participation is completely voluntary. You may withdraw from the study at any time, for any reason, up until you toggle the 'submit' button at the end of the questionnaire. Once the questionnaire has been submitted, it will not be possible to withdraw your response.

CONTACT INFORMATION:

If you have questions at any time about this study, you may contact the researcher whose contact information is provided on the first page. If you have any concerns about your treatment as a research participant in this study, please contact the VIU Research Ethics Board by telephone at 250-740-6631 or by email at reb@viu.ca.

AUTHORIZATION:

I, Maneesha Linto, promise to adhere to the procedures described to this consent form.

Link to Questionnaire for Participants:

<https://www.surveymonkey.com/r/Maneesha>

APPENDIX C

Questionnaire Presented in Survey Monkey

Instructions: For the 8 prompts below, select the response that best represents your thoughts.

Traditional Lecture Delivery (TLD) is classroom instruction that comes directly from a teacher, which may also include classroom discussions and demonstrations.

1. TLD was the most effective method for you in learning explicit concepts and skills.

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
☆	☆	☆	☆	☆

2. TLD helped you to retain newly acquired knowledge for a long time.

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
☆	☆	☆	☆	☆

3. TLD, used by teachers for classroom learning, was a dull and boring technique for you.

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
☆	☆	☆	☆	☆

4. TLD was interesting for you when taught by chalk and board method.

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
☆	☆	☆	☆	☆

5. TLD provided you with sufficient opportunities to understand complex information.

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
☆	☆	☆	☆	☆

6. TLD had a negative impact on your problem-solving abilities.

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
☆	☆	☆	☆	☆

7. TLD played a significant role in stimulating you to learn more.

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
☆	☆	☆	☆	☆

8. TLD had less active involvement in your classroom.

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
☆	☆	☆	☆	☆

9. Did you experience instructional strategies other than TLD in your school life? If the answer is Yes, please state those instructional methods that encourage more active learning compared to TLD.

10. If the answer is No, please share what you feel would be the most effective ways to improve TLD method for classroom learning.

Thank you for participating in the questionnaire. Your feedback is important.

APPENDIX D

VIU Research Conference Blog Post Presentation: Emphasis and Effectiveness of Traditional Lecture Delivery Methods in India

<https://wordpress.viu.ca/conference2021/2021/02/26/emphasis-and-effectiveness-of-traditional-lecture-delivery-tld-methods-in-india/>