UNIVERSITY OF BELIZE

ABSTRACT

This research is about how information technology is integrated in the teacher training program currently offered by the University of Belize. Teacher education and its relevance to the field of information technology as a tool to enhance teaching and learning in the classroom should be a vital component that constitutes the composition of the core teacher education courses offered by the University of Belize, in order to prepare teachers to be efficient and effective in their delivery.

by Isaac Longsworth

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A survey to determine the attitudes of primary education students at University of Belize Belmopan Campus, towards the current teacher training program offered by UB in relation to information technology integration into the teacher training program to enhance the teaching-learning experience in the Belizean classroom.

TABLE OF CONTENTS

Contents

Table of Figures

Acknowledgments

The researcher wishes to express sincere gratitude and appreciation to all those who aided in this study. Sincere thanks is extended to all persons who provided the researcher with related materials such as reference-books and simply, advice to make this study interesting and worth-while.

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To all the student-teachers enrolled in the Primary Education Program, the researcher would like to express sincerest thanks for the invaluable information you have provided and made this study possible.

To my family and friends who has been a powerful pillar of support and encouragement, the researcher would like to express heart-felt gratitude for your invaluable contribution to this study.

Last, but most importantly, the researcher would like to acknowledge the divine source of power and life, Jehovah. To God of all creations, whose graces enabled the researcher to carry out this investigation.

Seremein.

Gracias.

Thanks.

Glossary

IT - Information Technology

UB - University of Belize

Seremein – Thanks

Gracias – Thanks

Proficiency – The level of competence where an individual can operate independently, without assistance from an outside source.

Integration – The incorporation of one entity into another, to reflect more than one component.

Primary Ed. - Primary Education

Teacher Ed. – Teacher's Education

ISTE - International Society for Technology in Education

CONNECT-ED - Connectivity for Educator Development

BPREW – Bachelor's Degree Primary Education Program (Belmopan Campus)

APREW – Associate's Degree Primary Education Program (Belmopan Campus)

Chapter 1

INTRODUCTION

Background to the study

This study arouse out of the verbal interaction and communications of Primary Education Program student-teachers in informal settings on the University of Belize Campus Belmopan, where the researcher have encountered student teachers talking about computer aided presentations required by different lecturers and the problems they had with such an activity.

Many teachers before entry into UB, have never seen nor used a computer in their classroom to aid classroom learning activities, need-less to say make presentations to groups on any topic or issue in regards to education. As a matter of fact, the older teachers expressed the concern that they have seen computers before, but do not know how, and have never used one in their entire lives. They openly expressed that computer-aided exposure at UB for presentations by some lecturers, has been a bewildering experience geared to the young students who have already been exposed to the technology. Others have expressed sentiments that the use of this technology is not applicable to their environment or school where they come from, due to the unavailability of the resource to make this knowledge practical and meaningful.

There were student-teachers who expressed the concern of the level of the information technology course that is considered introduction; to be far advance to their complete ignorance of computers, hence they felt intimidated and inferior. Opinions were also expressed that the course teaches them to use computers for their personal use, but not its implementation as a tool to promote learning in the classroom.

These concerns to the researcher as a current student are also the sentiments that the researcher can relate to and shared on a personal basis, hence

it prompted the researcher's interest in this topic to examine these concerns and determine the extent to which the information technology course offered at UB really prepare teachers for the use of information technology to enhance learning in the classroom.

Problem

Within the concerns and issues surrounding teacher education and preparation expressed by student teachers, Primary Education Program, UB Campus Belmopan, the researcher has determined that there are obvious dissatisfactions with the current teacher training program offered by the University of Belize and its aim to align the demands of the twenty-first century with that of the goals of the Ministry of Education in regards to improving the quality of teacher education in education system of Belize.

In general the student teachers expressed dissatisfaction and the general feeling of not being confident and prepared to enter or re-enter the classroom. The general sentiment is that of pedagogical preparation in regards to making the teaching-learning experience, one that will be of interest, motivating, and a worth-while experience that will prepare students for life. The students of this generation can be referred today as the digital technological generation, due to the diverse technology they have been exposed to in their daily lives. As a result, teachers have to compete with the digitized and fast-track pace that students have been accustomed or acculturated into, in order to grasp and maintain the interest level of the students they teach.

The one-dimensional visual-aids that were once effective in the past, is fast becoming obsolete and uninteresting for students. As a result, teachers are finding themselves facing unmotivated children, who have little interest in learning. This obvious disparity between the teacher education program that is currently being used to train teachers is in itself becoming obsolete, as it is not preparing teachers to meet the demands of the twenty-first century.

The influx of computers and modern information technology such as the cell-phones, i-pods, lap-top and desktop computers have been steadily increasing in Belize at an alarming rate that no one person can control or detect. This brings the researcher to the question: Should the education system of Belize in regards

to teacher-training be stuck in the pass, hanging on to a system that is no longer effective or efficient? The answer would be an obvious no.

Being cognizant of this situation, the researcher would like to evaluate the attitude and extent to which the current information technology and pedagogical courses offered to teachers by the University of Belize prepare teachers to implement the use of information technology to enhance the teaching-learning experience in the Belizean classroom for their return to their individual school.

Hypothesis:

If IT is fully integrated as a tool to enhance the teaching-learning experience in the Primary Education Programs currently offered at UB, the students who are currently enrolled in these programs will be fully prepared to enter or re-enter the classroom.

Research Questions:

Do student-teachers see IT integration in the Primary Education Programs at UB as a tool to enhance their teacher-training experience?

Do student-teachers see IT integration at the core of teacher-training for the new millennium?

Do student-teachers see the Primary Education Programs offered by UB as adequate preparation for them to enter or re-enter the classroom?

Purpose

The purpose of this study is hinged on two important aspects that the researcher wishes to investigate. These being; to obtain relevant data that can be utilized to improve the design of the current information technology course prescribed by the University of Belize, in regards to teacher training and its relevance to the delivery and implementation of the use of information technology to enhance the teaching learning experience in the classroom. It also sets out to assess the level of efficiency and effectiveness of the information technology course in regards to teacher training preparation.

Significance

The significance of this study is to provide the administrative body of the University of Belize with credible information, that can be utilized to improve the quality of teacher training, in order to design and structure relevant course components that will meet the needs of teachers in today's classrooms and at the same time prepare students to interact competently with technological learning media that are required to meet the technological demands of the world today and the future.

Secondly, it provides insight and relevance to the Ministry of Education, in the need for a revised curriculum and restructured implementation strategy in regards to embracing technology to improve the quality of student output that enter the workforce of the Belizean society.

Thirdly, this study materializes and represents the voice of those students who are not able to voice their interests and concerns in forums that critically evaluate the education system of Belize. It is aimed at the promotion of higher level thinking and problem-solving skills, through the development of awareness and feelings expressed by the student-teachers of the University of Belize in order to advocate meaningful change in the evolution of education in Belize.

Limitations

This study has time constraints as a limitation, as the allotted time for this study would not allow the researcher to conduct a survey of all the student-teachers attending the University of Belize. However, a sample of fifty (50) participants of the approximately five hundred and ninety-eight (598) student-teachers, enrolled in both associates and bachelor's degree teacher-training programs on a full-time and part-time basis.

Secondly, there are time constraints on the researcher's part, in preparing this paper, on account of the researcher being a full-time student at the University of Belize, enrolled in the Bachelor's Primary Education Program being investigated in this study. The timeframe of this study has limited the researcher to over an approximate three months period or one semester. With the influences of other courses taken by the researcher, time constraints and scheduling pose a challenge to meet other students who only have a few minutes before attending other classes, but in consideration of these limitations, the researcher had to make time to locate students immediately after classes and on other occasions where they were vacant, in order to obtain the data required for this study.

Choosing a method of research was a challenge, but I chose to do a survey for obtaining the relevant and required data as this method is one of the most effective and accessible means by which the researcher saw it possible to obtain the responses required, considering that students are busy people and do not have much time to spare for personal interviews and long survey instruments. This method also makes the manipulation and extraction of the data required accessible and manageable, considering the limitations that are involved.

Chapter 2

LITERATURE REVIEW

Teacher education and its relevance to the field of information technology as a tool to enhance teaching and learning in the classroom should be a vital component that constitutes the composition of the core teacher education programs. This sentiment is echoed by many educators who have seen the importance and the potential that IT integration can impact the field of education and the teaching-learning experience.

Dr. Lynne Schrum, President of ISTE once said and I quote, "We want pre-service teachers to learn how to use information technology as a tool for helping their students learn." With the sentiments echoed by Dr. Schrum, Dr. MURPHY, C., GREENWOOD, L., 1998. Effective integration of information and communications technology in teacher education. Journal of Information Technology for Teacher Education, 7 (3), pp. 413-426. In this journal examines effective and practical means to enhance the teaching-learning experience in the classroom through IT integration, because it is seen as very important.

Since the early 1980's and 1990's there has been a steady influx of computers into the Belize's education system. Fonseca F. (2003, October 9). Belize's Education System. Amandala, p. 1.. More and more schools have received computers from charitable organizations and foreign entities such as universities and institutions at home and abroad, having realized the potential and necessity that IT poses in the field of education and beyond.

Today many schools have established computer labs and have adapted programs designed to promote IT education in the primary schools. Embracing IT integration into the primary curriculum has been a slow effort on the part of the Ministry of Education, as IT integration to many has been seen as a very

expensive undertaking and one that cannot be afforded for all primary school in Belize.

Though many computers have been donated by members of government, there is no initiative to construct a primary education IT curriculum that would promote IT knowledge and skills development.

There are many countries that are considered third-world countries like Belize, and very poor for that matter, that have embraced IT development in its education system. Uganda is emerging as a leader in African education reform. One of the country's most progressive moves is its adoption and application of ICTs for national development with its growing computer capability harnessed to serve education. Through the CONNECT-ED (Connectivity for Educator Development) project, for example, Uganda is integrating ICT's into professional development programs for primary school teachers, with a focus on computer-assisted teacher-training. *TechKnowLogia*,September/October 2001 (*www.TechKnowLogia.org*).

In the consideration of the many factors that influence IT integration positively or impedes the efficiency and effectiveness of the delivery of education, the focus of relevance and purpose is at the fore-front of the education agenda. As times passes and societies evolve, educators have been drawn into new dynamics in regards to the delivery of quality and relevant education. The classrooms and students of the past are no longer the same and should not be seen or thought of in that light. The Belize classroom has been challenged by the demands of the classroom, in terms of technological advancement and its relevance to the enhancement of the teaching-learning experience).

In the examination of the current teacher-training programs in the BPREW and APREW offered by UB, (UB's Catalogue 2008-2009, pg 112, 119) located in the Appendix of this research-paper, there are only two IT related courses, these being; Introduction to computers (COMP140) and Instructional Technology in Education (EDUC301). These courses lay the foundation to

computer literacy development, and are taught in isolation. IT integration on the other hand goes beyond the foundation; it emphasizes application of the skills learned, into the pedagogical components of teacher-training to train teachers to integrate IT into lesson-planning, so as to enhance the quality of the delivery of the teachers trained to do so efficiently. This position is supported with the quote, "The use of technology in everyday classroom and practicum experiences — seems to be more important than specific computer classes," says Talbot Bielefeldt, (1990).

Lemke (1990), "The findings in this report should be a wake-up call for higher education institutions and policymakers across the country — today's students live in a global, knowledge-based age, and they deserve teachers whose practice embraces the best that technology can bring to learning."

It is also the researcher's perspective that real change lies in the policymakers and those in the position to do so. If those in authority do not see the relevance of the required change that is necessary to improve the quality of teachers and preparing students for IT integration to enhance the teaching-learning experience, then it can be concluded that our teacher-training is deficient and ineffective.

Chapter 3

Research Design

This is an exploratory research in which a survey was used to collect data. Prior to the distribution and administration of the questionnaires, the ethnographic method was used to collect information. The observations were made at different informal setting along the Belmopan campus.

An individual questionnaire was distributed to student teachers on an individual basis, without time constraints, in order to collect opinions about the integration of IT in the current Primary Education Programs at UB.

The variables considered in this research were:

Independent variable: IT integration into the current Primary Education Programs at UB.

Dependent variable: Teacher training process of students currently enrolled in one of the Primary Education Programs at UB.

Sample

The criteria to select the final sample are:

1. All students are currently enrolled in one of the Primary Education Programs at UB.
2. All students study in Belmopan.
3. All students have already completed the IT course.
4.

The sample population is fifty (50) student-teachers, who are enrolled on a part-time and full-time basis, in both the associates and bachelor's degree teacher education programs. This sample population of fifty (50) student-teachers, the research believes would be an adequate and manageable number of respondents to use in this study, all of whom have done or is currently doing IT Courses and core education subjects at the University of Belize.

This sample population represents approximately nine percent (9%) of the entire enrollment of student-teachers in both associates and bachelor's courses at the University of Belize.

Instrument

The questionnaire required approximately five minutes for completion for those who had the time to spare. For those with time constraints, the survey instruments were given for return upon their encounter with the researcher.

The instrument consisted of two major components. The first section labeled Section (1) is the demographic component that seeks to elicit the background and relative information about the respondents' personal and professional data. The second part, Section (2) is the questionnaire that was designed using Likert's Rating Scale of measurement. This scale has a range of (1 – 4) with indicators one (1) and two (2) being on the negative side of the scale, and three (3) and four (4) being on the positive side of the side of the scale. One (1) being equivalent to Strongly Disagree, two (2) is Disagree, three (3) is Agree, and four (4) being equivalent to Strongly Agree.

The questionnaire consists of twenty (20) items, numbered in sequential order, numbering one (1) through twenty (20) that are statements that are reflective of the topic. These were presented in tabular format with the response requirement of using a check-mark to indicate the respondents' response to each item using a pencil or pen.

The items given in the instrument contain statements that are reinforcements of students concerns and related issues that the researcher hopes to obtain as feedback from the respondents, in regards to their opinions being rated on a scale of one to four (1-4).

The final draft instrument was printed first on two sheets of paper that were stapled together. However, the paper were a bit bulky to keep together in a file, so the researcher decided to do print-outs that were double-sided, reducing the quantity of paper used and the paper-weight.

Data Collection

The researcher targeted a total of fifty respondents making copies of approximately seventy-five (75) instrument, with the leverage of instruments that would not be completed and returned. Of the seventy-five instrument distributed sixty (60) were returned. This represents eighty percent (80%) of the total instrument distributed.

The respondents read and provided responses to the survey within the presumed designated timeframe of approximately five minutes (5 min.). They were willing to participate due to the fact that the number of items were adequate and did not pose itself to be burdensome.

The general criteria or requirement for participation in this research is Enrollment in the University of Belize's Primary Education Program, whether associates or bachelor's, and having done or is doing core education subjects and IT.

Upon the return of the instrument with the responses from each respondent, the researcher constructed spreadsheet tables that were used to enter each response on each item from each respondent. [See figure 1.1] This table then provided data that were compiled and accumulated into a table that reconciled all the respondents' individual response on each item. [See figure 1.2] The final data from this table, then was used to chart pertinent graphs that are used in the data analysis of this research.

Data Analysis

To analyze the data collected, the researcher first created tables using Microsoft Excel spreadsheet workbook with data-sheets for different requirements of this survey. A very large table was created for the categorization of the responses from each of the 50 respondents with all the different options given in the Likert Scale provided in the questionnaire instrument ranging from strongly agree on the positive side of the scale to strongly disagree on the negative side of the response scale, for each of the twenty items that were given.

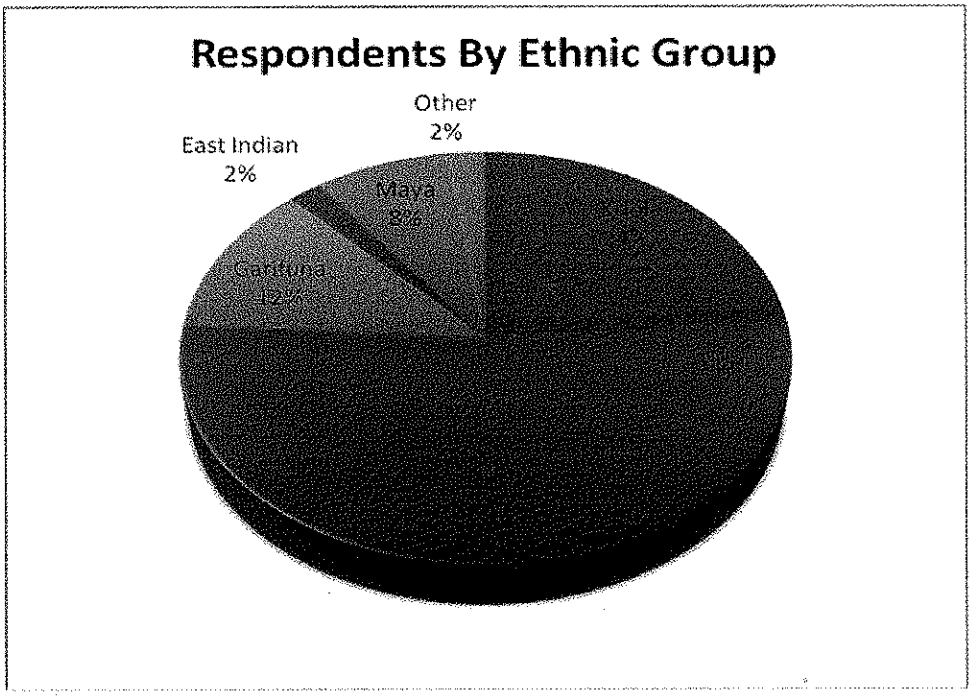
For each response that was provided by each respondent, the researcher uses the number 1 as a count for each response in the given categories. These were then totaled in other tables to indicate totals and percentages for each response to each item for each respondent, as seen in figure ___.

The data that was recorded and totaled for each respondent on each question was then used to construct graphs such as pie-charts and bar-graphs that are used to graphically represent the responses for each item so as to analyze and interpret the data obtained from the survey instruments. Tally-charts were also utilized to collect data that were converted into graphical representations to depict the biographic data obtained from the participants of this survey.

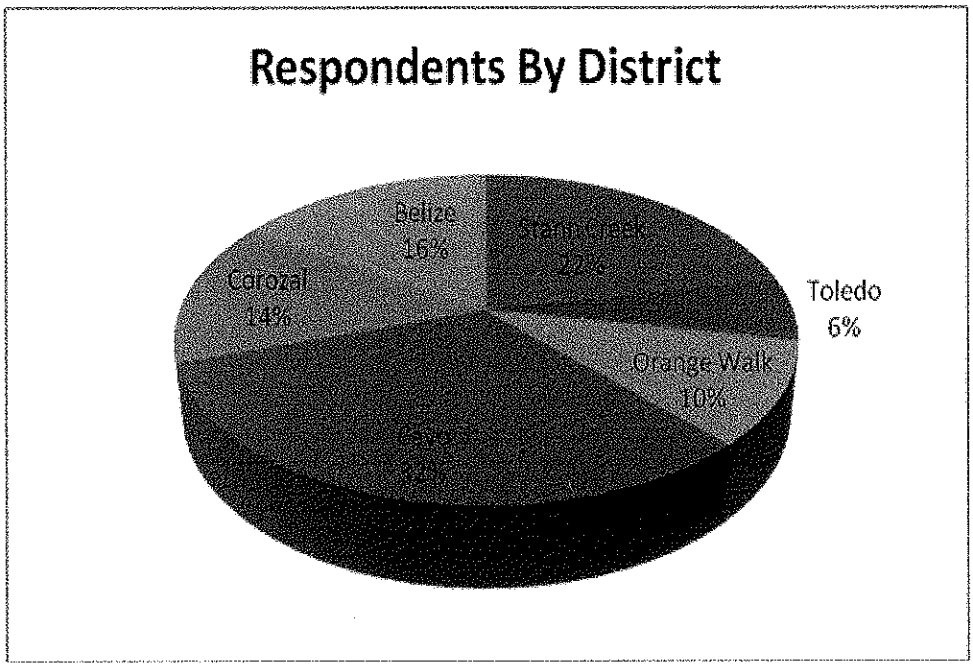
A response summary chart was also constructed to indicate each item indicated by the survey instrument, with each category of responses that were presented in the Likert Scale, with the total responses and the percentage that each response represent in relation to the total number of respondents. This information the researcher utilizes in the analysis of the data.

In the interpretation of the data, the researcher interprets any result that is greater than 70% as significant whether on the positive side of the scale or on the negative side of the scale, making relation to the research topic.

Presentation and Analysis of Data



From the random population sample that participated in this survey, majority were Mestizo from the Cayo District. This population represents 52% of the entire sample or a total of 26 respondents. This was followed by the Kriol ethnic group which is represented by 24% or a total of 12 respondents. The third largest population sample was the Garifuna ethnic group represented by 12% of the sample population or 6 respondents in this survey. The Maya ethnic group made up 8% of the sample population or 4 respondents, and the smallest population was represented by the East Indian and Other ethnicities with both represented by 2% of the sample population or 1 respondent from each ethnic group. This data is significant to this report as it indicates that all ethnic groups are represented in this survey, hence the opinions of all the participants are reflected, reducing the level of bias that may be insinuated.



Corresponding data collected from the respondents of this survey, reveal that a majority of the sample population was from the Cayo District. This represents 32% (16 respondents) of the total population surveyed, followed by the Stann Creek District with 22% (11 respondents). The Belize District was third in line with a population of 16% (8 respondents), Corozal District with 14% (7 respondents), Orange Walk with 10% (5 respondents) and the smallest population of 6% (3 respondents) from the Toledo District. This data reveal that all districts are represented in the random sample population, hence should reflect the perspective of teachers across the country with no district being omitted. This is significant to this study, in the reflection of all the districts of the country of Belize being represented.

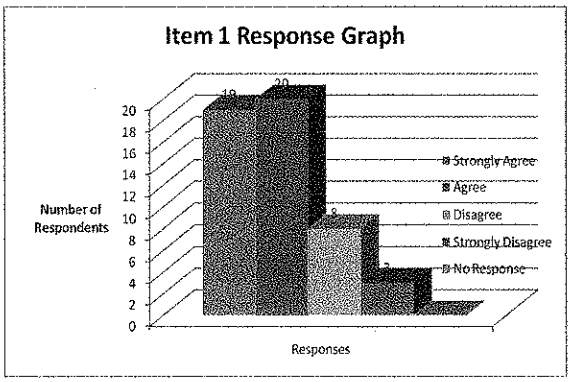


Figure 1

The responses to *Item 1* of this survey reveal that 39 of the 50 or 78% of the respondents are in agreement with the statement: *My background knowledge of computers has helped me to cope with the IT course at UB.* The remaining 11 respondents or 22% disagreed with the statement.

These responses are clear indicators that without the background knowledge of computers in IT obtained previously in high school and sixth-form, it would have been very difficult for student teachers to have coped with the prescribed course at UB, therefore this was a strength that had enabled them to cope with the demands for IT background knowledge.

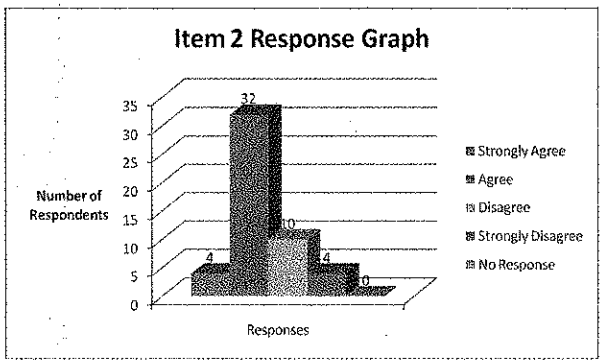


Figure 2

The responses to *Item 2* of this survey reveal that 36 of the 50 respondents or 72% of the respondents are in agreement with the statement: *The IT courses I have taken at UB are geared towards student-teachers proficiency in the use of computers in the classroom.* This majority is indicative that the respondents see themselves performing at a higher level of proficiency in their personal use of computers in the classroom on

their own consideration of implementation, but not necessarily as UB's teacher training program designed to teach them to integrate IT into lessons.

On the contrary to the 28% or 14 respondents that disagreed with this statement, their responses are indicative that the IT courses taken at UB are more geared towards the teacher's personal development in the line of proficiency, rather than that of UB's teacher training programs preparing student-teachers to incorporate IT into the teaching strategies taught in core education subjects to enhance the teaching-learning experience in the classroom.

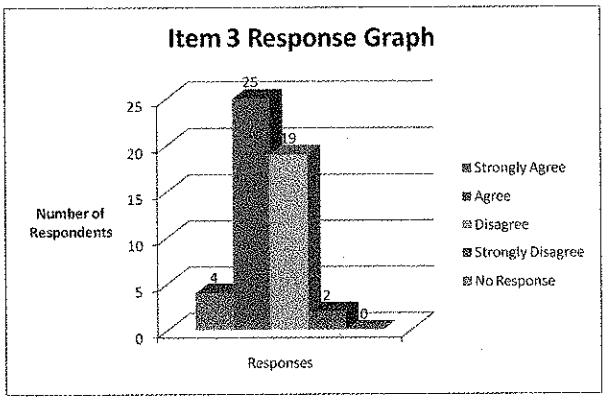


Figure 3

The responses to *Item 3* of this survey indicate that 58% or 29 of the total sample population of 50 are in agreement with the statement: *The IT courses I have taken at UB, prepares me to use IT in the classroom as a teaching-learning tool.* This percentage of responses is reflective of Item 2 that the respondents' personal initiative and proficiency obtained from the IT courses taken at UB, enables them to personally be able to use IT in the classroom as a teaching-learning tool that would enhance the quality of education delivered to students.

On the contrary to the percentage that agreed with this statement, 42% or 21 of the total population of 50 is in disagreement. This is indicating that the IT courses taken in the teacher-training program at UB does not actually train teachers to integrate IT into lesson planning in core education subjects, but rather provide the student-teachers with background knowledge that they can implement as self initiatives and not necessarily as something that is being advocated and encoded in the pedagogical techniques designed by the teacher-

training programs offered by UB. Hence this is rather an unfocused approach that is self initiated by the teacher, leaving room for unscientific methodological approaches by the unskilled student-teacher, or the irrational discretion of the teacher whether or not they would like to accommodate the use of IT to enhance the teaching-learning experience in the Belizean classroom.

With these opposing views, it is fairly evident that both gave the responses the way they did, the situation that exist is that there is no set IT integration model developed by the faculty of education and arts that priorities IT integration into teacher-training.

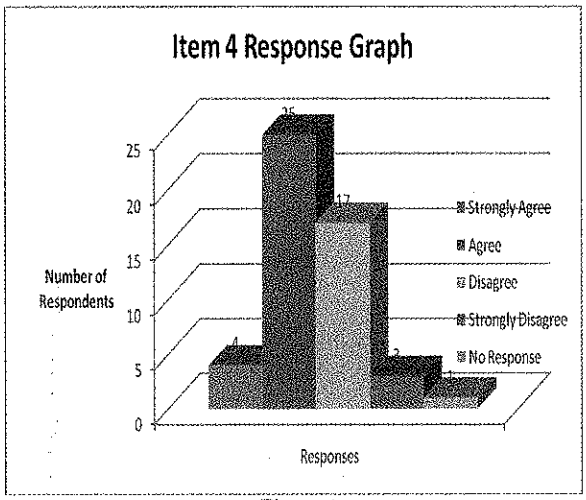


Figure 4

The responses to *Item 4*, indicate that 58% or 29 of the total sample population of 50 respondents are in agreement with the statement: *The pedagogical courses I have taken at UB, prepares me to integrate IT into the teaching of different subject areas.* These responses are indicative as in Item 1, 2 and 3 that the background knowledge and students personal proficiency in IT prepare them to integrate IT into different subject areas that they teach.

On the contrary to the majority of responses, 40% or 20 of the total sample population of 50 are in disagreement with the statement. Their responses are indicative of the disagreement that the pedagogical courses taken by them at UB do not prepare them to integrate IT into the different subject areas taught. As indicated in the responses to Items 3's disagreement reference, the integration of IT into student-teachers' lesson planning is not a focused ideal objective of

UB's teacher-training programs, but rather a self initiative that those who are proficient in IT can possibly integrate on their own accord without a standardize or prescribed scientific approach approved and recognized by the faculty and administration of the UB's teacher-training unit.

Though the responses were more popular on the agreement side of the scale, the disagreement responses carry a very heavy weight, as those that provided the agreement responses most likely agreed with this statement because they were privileged to have had background knowledge that had afforded them the proficiency level of functioning within a different level. Whereas those who did not come to UB with background knowledge is at a great disadvantage, but had UB's IT courses or pedagogical courses incorporated IT into its teacher-training as a focused pedagogical technique within its core education subjects, there would be less respondents in favor of an agreement to Item 4.

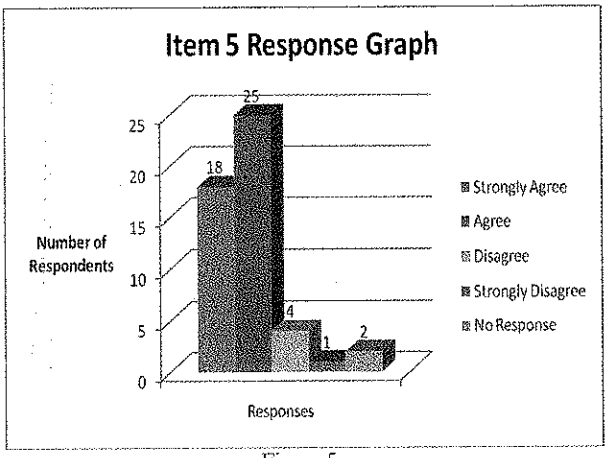


Figure 5

The responses to *Item 5* indicate that 86% of the respondents or 43 of the total sample population of 50, that responded to this item is in agreement with the statement: *I believe that the courses offered by UB Primary Ed. Program, should reflect elements of IT integration into all core subject areas.* In this statement, the responses are significantly greater than those in disagreement. This is indicative that there is little or not enough evidence of IT integration into core education subject of the primary education program, but it is seen as an important component that should be there.

These responses also are indicative that IT courses are taught in isolation rather than integrated into pedagogical technique courses such as instructional techniques, classroom assessment and the primary curriculum within the prescribed primary education programs at UB.

10% of the respondents or 5 of the total sample population of 50 are in disagreement with this statement. These responses are indicating that the importance of IT integration into all core subject areas should not necessarily be reflected in core subject areas of the primary education program for student-teachers, as there are many schools where many teachers currently teach that do not have electricity nor computers, therefore it would be rather irrelevant to them and the children they teach.

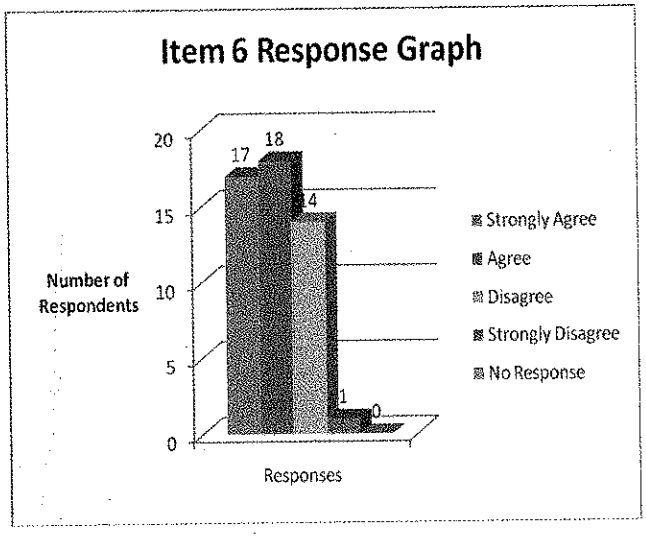


Figure 6

The responses to *Item 6* indicate that 70% or 35 of the total sample population of 50 respondents are in agreement with the statement: *There are adequate IT resources available to IT instructors for effective classroom delivery to students at UB.* These responses are indicative that it is the opinion of the respondents that there are adequate resources for IT instructors to deliver the courses effectively, hence the available resources are adequate to teach the IT courses effectively and efficiently.

Those in disagreement which represent 30% or 15 of the total sample population of 50 are indicative of the opinion from their responses that IT

instructors within the teacher-education program are not equipped adequately to deliver effectively. This may be attributed to factors such as, shortage of resources such as computers for every student-teacher in a class, many down-period of internet access by the IT Department of UB, in-availability of resources such as web-cams, scanners etc that can be used to prepare student-teachers to use this technology to enhance the teaching-learning experience of both the teacher and students.

With these conflicting views there are obvious dissatisfaction with the resources that are available, as 30% is a large number of respondents expressing discontent with the resources that lecturers are provided with at UB, to enhance the teaching-learning experience that the student-teachers get as exposure to a level of proficiency that they are able to integration IT into various subject areas.

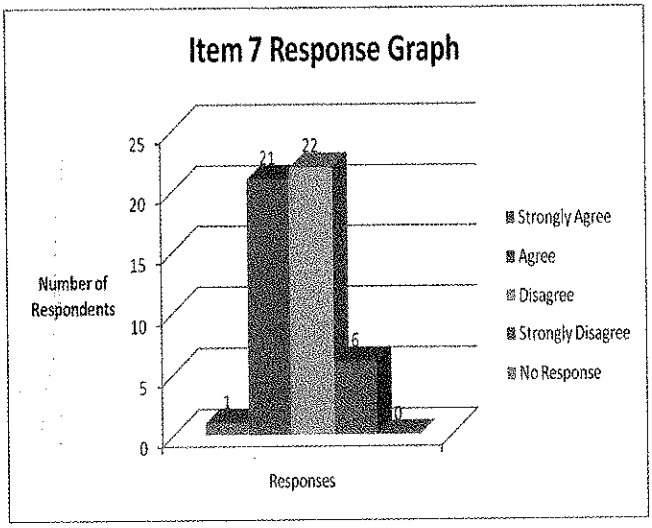


Figure 7

From the responses to *Item 7* of this survey, which state: *The IT courses that I have taken at UB are related to teaching-learning implementation in the classroom.* 28 of the 50 sample total respondents or 56% are in disagreement with the statement. This is a majority of the total sample population which is an indication that the IT courses taken at UB are not related to teaching-learning implementation in the classroom, as reflected in the responses to Items 2, 3 and 4, but rather on Item 1 which basis is on that of the background education and initiatives of the student-teachers in regards to IT, and

not necessarily to a clearly devised program of incorporation of IT into UB's primary education program's enhancement and development.

Contrary to this majority's perspective, 22 respondents or 44% of the total sample population of 50, are in agreement with the statement that the IT courses they have taken at UB are related to teaching-learning implementation in the classroom. These responses are highly reflective of the background knowledge of those student-teachers with a strong background of IT, who would find it as an easy transition into lesson incorporation into the classroom, but as a self-initiative, but not as a structured approach devised by the Primary Education Program of the Faculty of Education and Arts of UB.

In consideration of both perspectives indicated by the respondents in this survey, it is evident that there is not a structured implementation plan for IT integration into the primary education program in regards to teacher education at UB, hence having a structured program would place every student-teacher at the same advantage point of having the skills to integrate IT into the Belizean classroom, so as to enhance the teaching-learning experience of all parties involved in this process.

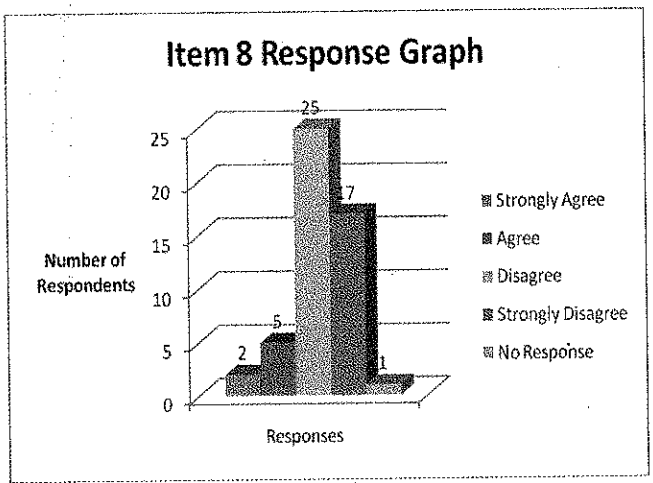


Figure 8

The responses from *Item 8* of this survey reveal that 42 of the total sample population of 50 respondents or 84% disagree with the statement: *IT education should be an option in Teacher Education at UB.* The majority of the respondents are in disagreement with this statement, as it is believed by the

indication of the responses obtained, that IT education should not be an option in the primary education program offered by UB, but rather a mandatory subject that all student-teachers should have proficient knowledge of.

In relation to those who oppose this view, which is rather a small population of 7 respondents or 14% of the total sample population, it is indicated by the responses that IT should be an option, as indicated similarly in Item 5 that the location of many schools, especially in rural Toledo, do not have electricity nor computers to have in its plans ways by which IT can be integrated into the teaching-learning experience at their schools due to distance, therefore it is their opinion that IT should be an option that they would rather not take, due to its irrelevance to their situation and context.

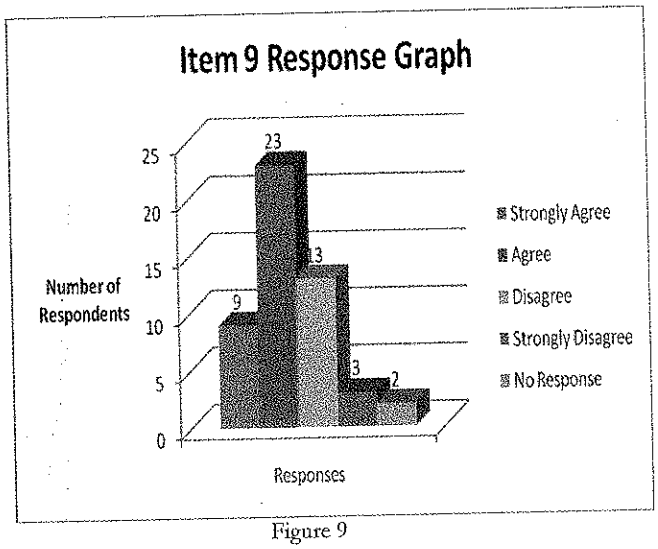


Figure 9

The responses to *Item 9* of this survey reveal that 32 of the total sample population of 50 respondents or 64% of the respondents are in agreement with the statement: *The Primary Education Internship Program should reflect elements of IT usage in the classroom.* Based on these responses, it is evident that a majority of respondents is of the opinion that IT integration should be reflected in the lessons taught in the classroom, as is reflected in Items 4, 5 and 7.

16 of the total sample population or 32% of the respondents are of opposing views to this statement. They are of the view that the Primary Education Internship Program should not reflect elements of IT integration in

the classroom, primarily due to issues such as no electricity, unavailability of computers etc that some areas do not have as resources that would enable this to be done. Some student-teachers still believe that other methodology have brought us thus far, so there is no need or significance for IT in the delivery of education to enhance the teaching-learning experience.

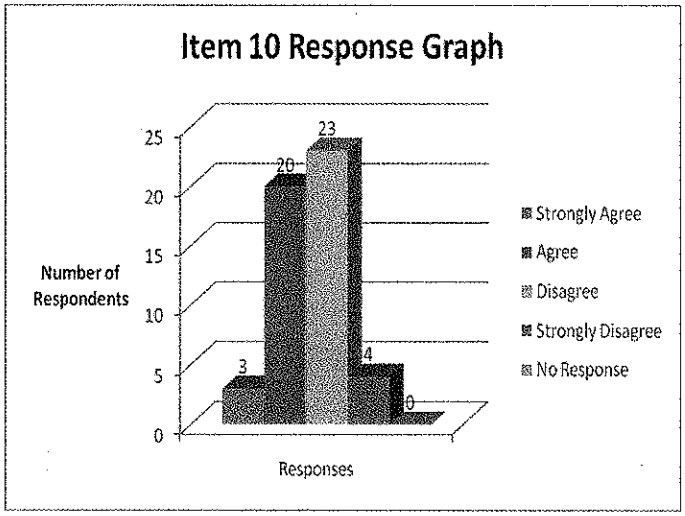


Figure 10

In the responses to *Item 10* of this survey, 23 of the total sample population of 50 respondents are in agreement with the statement: *IT lecturers at UB are of great assistance to student-teachers in facilitating the learning of IT at UB.* This represents 46% of the total respondents to this item, indicating that IT lecturers are helpful to student-teachers in facilitating the learning of IT at UB.

On the contrary however, 27 or 54% of the total sample population of the 50 respondents disagree with this perspective that IT lecturers at UB being of assistance to student-teachers in the learning of IT at UB.

The discrepancy of these contrary views may be attributed to time constraints of the lecturers, as well as the attitudes or relationship that is established between the lecturers and student-teachers.

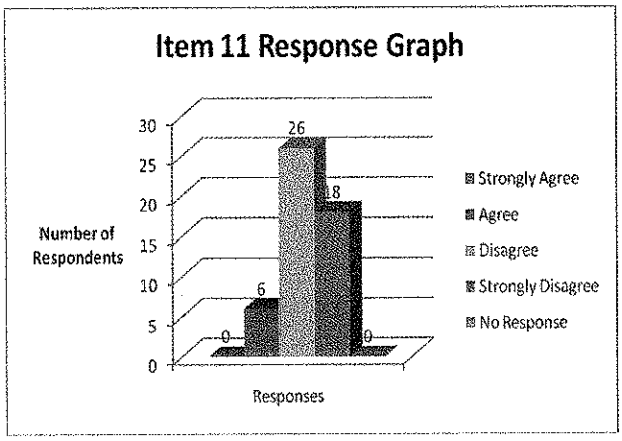


Figure 11

From the responses obtained to *Item 11* of this survey, 6 respondents of a total sample population of 50 are in agreement with the statement: *The relevance of IT to the teaching-learning process is not important.* This represents 12% of the total number of respondents. This is indicative that the student-teachers of UB is of the perspective that IT relevance to the teaching-learning process is important, as 44 respondents or 88% of the total sample population of 50, who significantly disagree with the statement, expressing and confirming IT importance to the teaching-learning process.

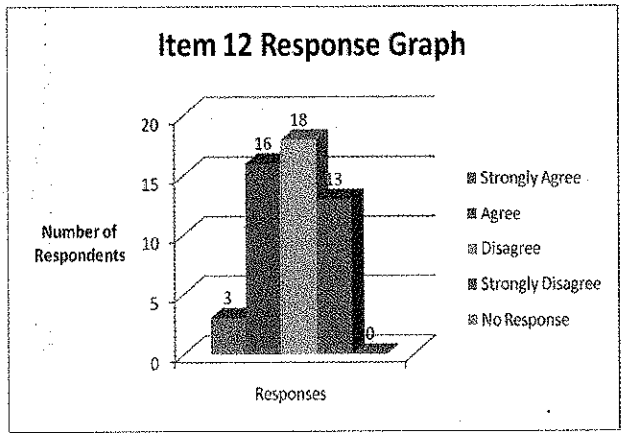


Figure 12

The responses to *Item 12* of this survey reveal that 19 of a total sample population of 50 or 38% is in agreement with the statement: *I have access to computers in my workplace, so IT is relevant to my professional development.* These responses are indicative that a small number of student-teachers are of the opinion that access to computers is relevant to whether or not IT should be a component of the professional development of student-teachers.

On the contrary to the prior perspective indicated above, 31 respondents or 62% of the total sample population are in disagreement with this statement, reflecting the view that access to computers should not be a factor to determine relevance of IT to one's professional development.

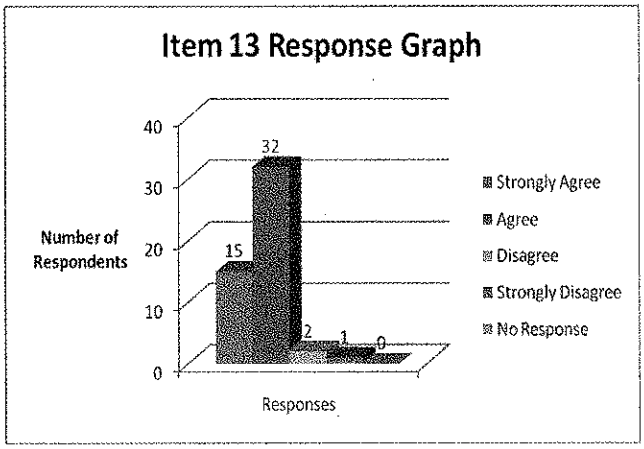


Figure 13

The responses to *Item 13* reveal that 47 of the total sample population of 50 or 94% of the respondents are in agreement with the statement: *I believe that IT education will improve my pedagogical skills in the classroom environment.* This is indicative of a significant number of respondents are of the affirmation that having IT education will improve their ability to deliver more effectively in the classroom.

3 of a total sample population of 50 or 6% of the total respondents are in disagreement with this statement, as it is indicative by the responses of the respondents that this population is of the opinion that having IT education will improve their pedagogical skills in the classroom environment.

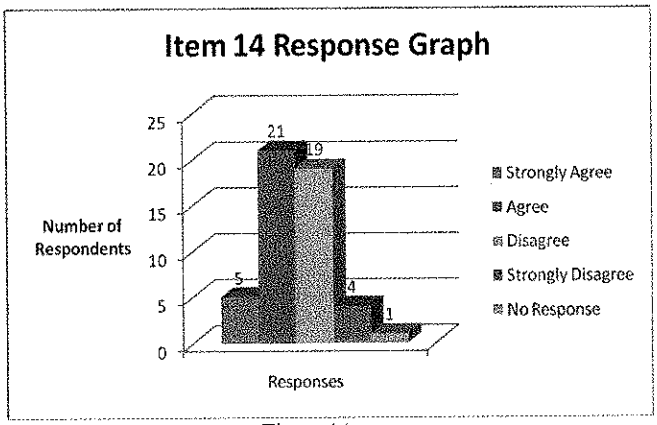


Figure 14

The responses to *Item 14* reveal that 27 of the total sample population of 50 or 54% of the total respondents are in agreement with the statement: *Primary Ed. Lecturers at UB are trained to prepare student-teachers to integrate IT into lesson planning.* These responses indicate that student-teachers are of the opinion that the Primary Ed lecturers at UB are trained to prepare student-teachers to integrate IT into lesson planning.

Contrary to this opinion, 23 respondents or 46% are in disagreement with this opinion, indicating that they do not think that the Primary Ed lecturers at UB are trained to prepare student-teachers to integrate IT into lesson planning.

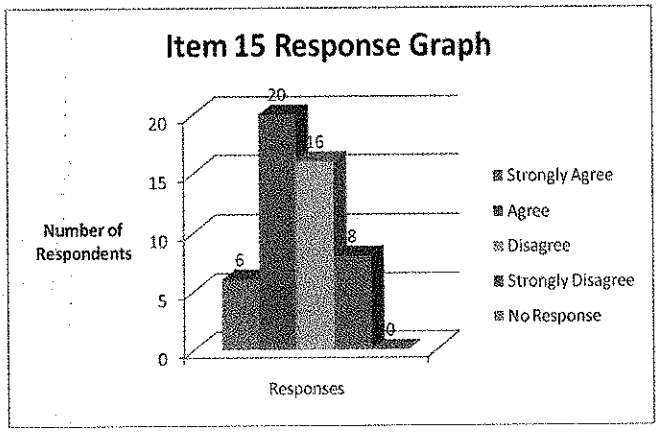


Figure 15

The responses to *Item 15* reveal that 26 of the total sample population of 50 respondents, or 52% are in agreement with the statement: *IT integration into the classroom is a practical venture in the Belizean classroom.* This is indicative that more than half of the total number of respondents is in agreement with the view that IT integration is a practical venture in the Belizean classroom.

On the contrary to this view, 24 respondents or 48% are in opposition to this perspective, that IT integration into the classroom is not a practical venture in the Belizean classroom.

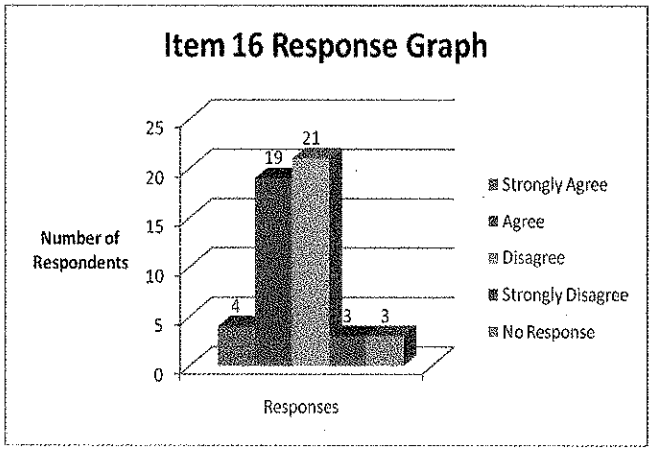


Figure 16

The responses to *Item 16* of this survey reveal that 23 respondents of the total sample population of 50 or 46% of the total number of respondents are in agreement with the statement: *Teacher Ed. Courses offered by UB are aligned with twenty-first century requirements.* This is indicative that a minority is in agreement with this statement.

Contrary to this perspective is that of 24 respondents or 48% of the total number of respondents in the total sample population of 50, who is of the perspective that the Teacher Ed courses offered by UB is not aligned with twenty-first century requirements such as IT integration into the Primary Ed Programs offered by UB.

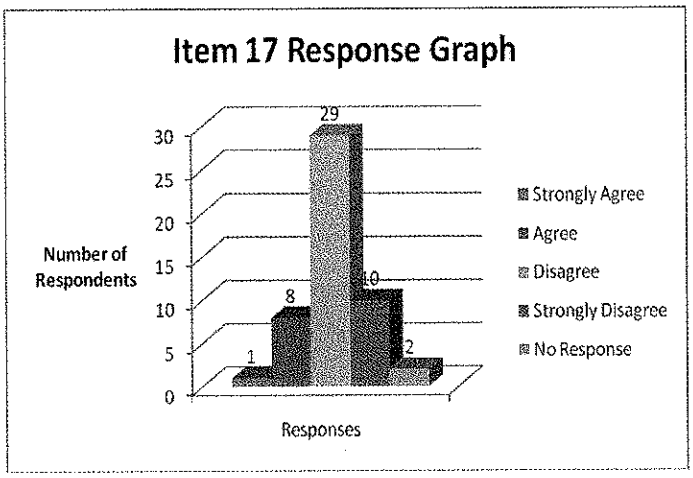


Figure 17

The responses to *Item 17* of this survey reveal that 9 of a total sample population of 50 respondents or 18% is in agreement with the statement: *IT integration into the classroom would not enhance the teaching-learning atmosphere in the classroom.* This is indicative that these respondents do not think that IT integration into the classroom would enhance the teaching-learning atmosphere.

Contrary to those who expressed with this statement, 39 of the total sample population of 50 or 78% of the total number of respondents are indicate the view that IT integration would enhance the teaching-learning atmosphere in the classroom.

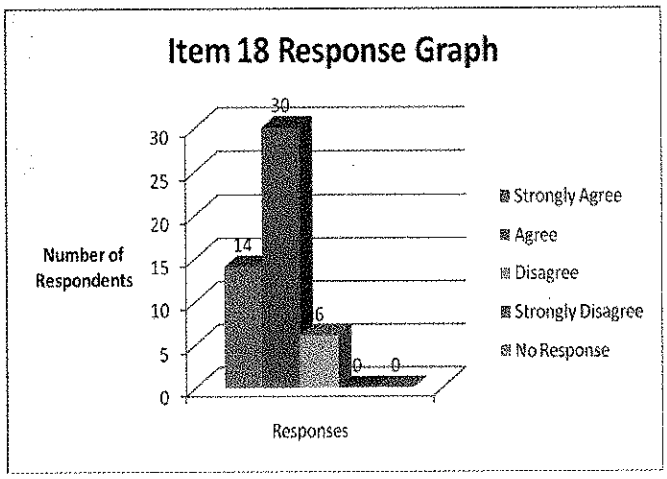


Figure 18

The responses to *Item 18* indicate that 44 or 88% of the total number of respondents are in agreement with the statement: *IT teacher preparation improves the confidence of student-*

teachers upon their return to the classroom. These responses are significant and indicative that majority of student-teachers are of the view that IT teacher preparation improves the confidence of student-teachers upon their return to the classroom.

A relatively small number of respondents or 6 were in disagreement with this statement, indicating that IT teacher preparation does not improve the confidence of student-teachers upon their return to the classroom.

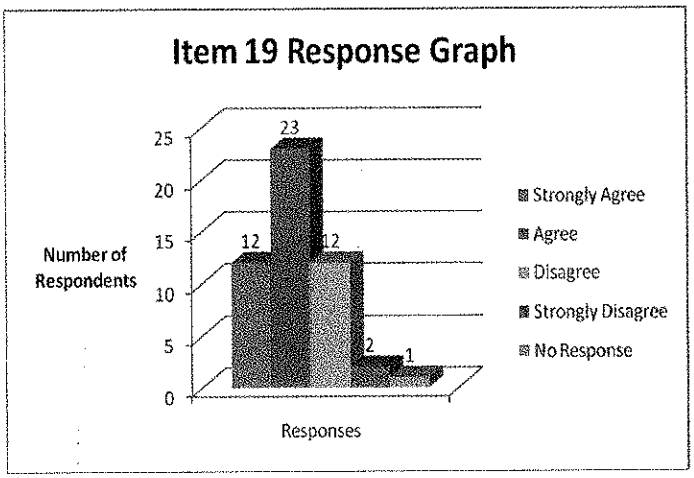


Figure 19

The responses to *Item 19* indicate that 35 of the total sample population of 50 are in agreement with the statement: *The Primary Ed. Program at UB needs to be revised to incorporate IT integration in all subject areas.* These responses are indicative that a majority or 70% of the total number of respondents are in agreement with the statement or of the view that the Primary Ed Program at UB needs to be revised to incorporate IT integration into all subject areas.

Contrary to this perspective are 14 respondents or 28% of the total sample population who are not in agreement with this view.

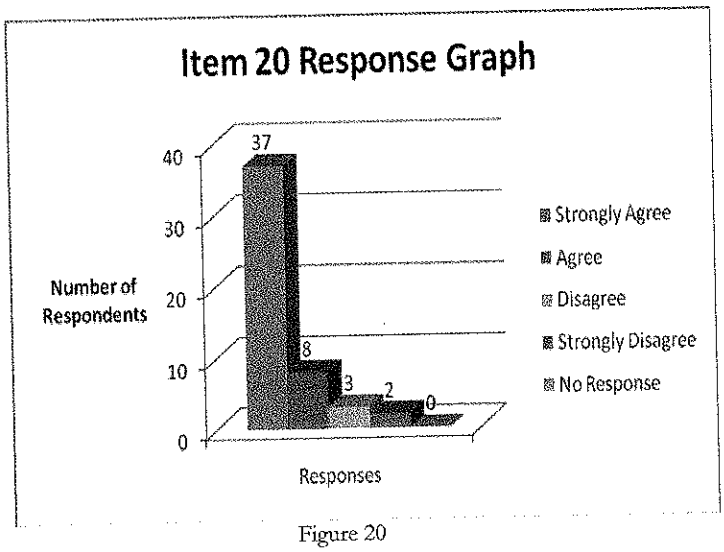


Figure 20

The responses to *Item 20* indicate that 45 of the total sample population of 50 are in agreement with the statement: *The Administration at UB needs to invest in computer labs for teacher education.* These responses are significant to this survey, as it indicates that 90% of the total respondents are in agreement with the statement, that the UB administration needs to invest in computer-labs for teacher education.

Only 5 respondents or 10% of the total sample population were in disagreement with this statement, or of the view that the current facilities were adequate for teacher education.

Chapter 5

Conclusion and Recommendation

From the responses that were indicated by this survey, it is the opinion of the researcher that there are vivid indications that student-teachers enrolled in the Primary Education Programs are of the opinion that there is a clear need for IT Integration into the core educational courses offered by UB, especially in the aspect of pedagogy and lesson-planning.

Secondly, it is evident from the responses gathered, that student-teachers are of the opinion that the quality of delivery in the classroom can be enhanced with IT integration into the major subject areas such as Mathematics, Science, Social-Studies and English, if the necessary training is incorporated into UB's Teacher-Training Programs. The respondents are of the opinion that if student-teachers are equipped with IT knowledge and skills to integrate into the teaching-learning experience, their confidence level would increase, hence the quality of delivery would automatically be higher.

Thirdly, there are clear indications of dissatisfaction with the IT resources that are available to teachers. How can the quality of delivery by the lecturers at UB be of the highest standards if they are not equipped with adequate resources to train student-teachers enrolled in the Primary Ed Programs? If the primary goal of the faculty of Education and Arts of the University of Belize is to produce quality teachers, then it is the opinion of the researcher that UB should invest in the required IT resources to achieve its objectives of producing quality trained-teachers.

Finally, it is the opinion of the researcher from the interpretation of the data collected in this survey is that student-teachers enrolled in the Primary Ed Program believe that the goals of UB's Teacher-Training Program are not aligned with the demands of the new millennium, due to the fact that the demands and impact of IT on the world and its people is becoming overwhelmingly important

and if our educational institutions are not preparing its students to embrace and use this technology to increase productivity, then it is not an efficient and effective entity. The primary objective of education is preparation for life, and if teachers are not preparing the students they teach for life, then it is a useless venture.

My hypothesis was proven to be true, as this survey reveal that like the opinions of a majority of other student-teachers, IT integration into the Belizean classroom is believed will enhance the quality of the teaching-learning experience.

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DEPARTMENT OF EDUCATION

APRE ASSOCIATE DEGREE, PRIMARY EDUCATION

(BMP, BZE, PG Campuses)

Primary Core Courses (97 Cr)

Course ID	Course Name	Cr
Summer I		
ENGL090	Developmental English	0
MATH090	Developmental Math	0
CMPS140	Introduction to Computers	3
GSTU101	Study Skills	1
ENGL111	College English I	3
SPAN	Spanish	3
	Total	10
Semester I		
ECON101	Introduction to Economics	3
	or	
MGMT101	Fundamentals of Management	3
HIST201	Belizean History	3
MATH114	Fundamentals Of Primary Math I	3
EDUC105	Language & Communication	3
HSCI200	Health & Family Life	3
ENGL112	College English II	3
	Total	18
Semester II		
MATH121	Intermediate Algebra	3
ENGL150	Introduction to Literature	3
SPED301	Introduction to Special Education	3
SCIE150	Integrated Science	3
EDUC301	IT in Education	3
MATH220	Math Methods for Lower Primary	3
	Total	18

Course ID	Course Name	Cr
Summer II		
EDUC345	Classroom Assessment	3
PHED250	Physical Education or	3
MUSC250	Music Education	3
ARTE250	Art Education	3
	Total	9
Semester III		
PHIL210	Ethics	3
EDUC212	Fundamentals of Literary Development	3
EDUC102	Child Development	3
EDUC311	Introduction to Primary Curriculum	3
EDUC222	Teaching Methods	3
EDUC312	Managing the Regular & Multi-grade Classroom	3
	Total	18
Semester IV		
SCIE304	Science Methods	3
ENED220	Language Arts for Primary Teachers	3
SOST304	Soc. Studies Methods	3
MATH215	Fund. of Prim. Math II	3
EDUC213	Reading Strategies for the Multi-lingual Classroom	3
	Total	15
Semester V		
EDUC452	Field Experience III	9
	Total	9

BPRE BACHELOR DEGREE PRIMARY EDUCATION

(BMP, BZE, PG Campuses)

Course ID	Course Name	Cr
Pre-requisites - (79 Cr)		
Humanities (12 Cr)		
ENGL111	College English I	3
ENGL112	College English II	3
SPAN	Intermediate Spanish	3
HIST201	Belizean History	3
Maths & Nat. Sciences (13 Cr)		
MATH121	Intermediate Algebra	3
CMPS140	Intro to Computers	3
	Natural Science Elective	3
HSCI200	Health and Family Life or	3
	Physical Education Elective	3
GSTU101	Study Skills	1
Social Sciences (15 Cr)		
PSYC221	Intro. to Psychology	3
SOCL221	Intro. to Sociology	3
PHIL230	Ethics	3
ECON101	Introduction to Economics or	3
MGMT101	Fundamentals of Management	3
HURG211	Intro to Human Rights	3

Course ID	Course Name	Cr
Professional Core (39 Cr)		
MATH220	Math Methods for Lower Primary	3
EDUC222	Teaching Methods	3
EDUC301	Inst. Tech. in Education	3
EDUC311	Intro. To Primary Curriculum	3
EDUC345	Classroom Assessment	3
EDUC351	Field Experience I 3	
SPED301	Intro. To Special Education	3
Methods Courses:		
	Math	3
	Language Arts	3
	Social Studies	3
	Art	3
	Music or	3
	Physical Ed.	3
	Science	3
Primary Core Courses (67 Credits)		
MATH221	Math Methods for Upper Primary	3
EDUC221	Professionalism in Education	3
EDUC324	Psychology of Learning	3
EDUC441	Measurement & Evaluation	3
	Total	12

Course ID	Course Name	Cr
Semester I		
MATH215	Fundamentals of Primary Math II	3
SOST215	Readings in Caribbean & Latin American History	3
EDUC210	History and Development of Education in Belize	3
EDUC212	Foundations of Literacy Development	3
EDUC306	Social Context of School	3
EDUC335	Philosophy of Education	3
	Total	18
Semester II		
ENGL215	Nature & Structure of Language	3
EDUC225	Introduction to Guidance Counseling	3
EDUC323	Instructional Techniques	3
ENED250	Children's Literature	3
	Total	12

Course ID	Course Name	Cr
Semester III		
ENGL375	Advanced TESOL	3
EDUC453	Individual Study	3
EDUC410	Pre-directed teaching Seminar	3
SPED302	Strategies for meeting Learning needs	3
EDUC450	Educational Administration & Supervision or	3
EDUC302	Early Childhood Education	3
	Total	15
Semester IV		
EDUC452	Field Experience III	9
	Total	9

UB Catalogue – Course Description.

EDUC301 INSTRUCTIONAL TECH IN EDUCATION (2-2) Credit 3 Semester II
This course provides the learner with theory and hands-on practical training in instructional technology,equipping them with knowledge of current and emerging educational technology. Students are given an overview of the various forms of technology that can be integrated into the primary and secondary curriculum. The course focuses on the use of educational technology in various subject areas and targets technology in education from a management, research, and pedagogical perspective.
Pre-requisites: CMPS140, EDUC222

CMPS140 INTRODUCTION TO COMPUTER STUDIES (3-0) Credit 3 Semester (ALL)
This course is designed to be an introductory computing concepts course. Topics include: Fundamental Concepts, Theories, and Applications of Computers. The Basics of Hardware, Software. Computer Ethics. Systems Software. Application Software. The Role of Computing in Society Today. Software Suite used to Create and Edit - Text Documents, Spreadsheets, Presentations and Databases. Internet, E-mail.
Pre-requisite: NONE

Appendix

Questionnaire

Part A.

Kindly indicate your response with a check-mark (✓).

Sex

Male	◎
Female	◎

Ethnicity

Kriol	◎	*Mestizo*	◎	*Mayan*	◎	
Garifuna	◎	*East Indian*	◎	*Other*	◎	_____

Age Range

15 - 20	◎	*36 - 40*	◎
21 - 25	◎	*41 - 45*	◎
26 - 30	◎	*46 - 50*	◎
31 - 35	◎	*51 +*	◎

Home Location

StannCreek	◎
Toledo	◎
Corozal	◎
Cayo	◎
Orange Walk	◎
Belize	◎

Professional Qualification

Primary Certificate	◎
High School Diploma	◎
Associates Degree	◎
Bachelor's Degree	◎
Level I & 2 Certificate	◎

Teaching Experience

Below I year	◎
1 - 5 years	◎
6 - 10 years	◎
11 - 15 years	◎
16 - 20 years	◎
21 + years	◎

No. of Children

1 - 3 children	◎
4 - 6 children	◎
7 - 10 children	◎
10 +	◎

Questionnaire

Kindly indicate your response with a check-mark (✓) to indicate your response.

		Strongly Agree	Agree	Disagree	Strongly Disagree	
1	My background knowledge of computers has helped me to cope with the IT course at UB.	⊙	⊙	⊙	⊙	⊙
2	The IT courses I have taken at UB are geared towards student-teachers proficiency in the use of computers in the classroom.	⊙	⊙	⊙	⊙	⊙
3	The IT courses I have taken at UB, prepares me to use IT in the classroom as a teaching-learning tool.	⊙	⊙	⊙	⊙	⊙
4	The pedagogical courses I have taken at UB, prepares me to integrate IT into the teaching of different subject areas.	⊙	⊙	⊙	⊙	⊙
5	I believe that the courses offered by UB Primary Ed. Program, should reflect elements of IT integration into all core subject areas.	⊙	⊙	⊙	⊙	⊙
6	There are adequate IT resources are available to IT instructors for effective classroom delivery to students at UB.	⊙	⊙	⊙	⊙	⊙
7	The IT courses that I have taken at UB are related to teaching-learning implementation in the classroom.	⊙	⊙	⊙	⊙	⊙
8	IT education should be an option in Teacher Education at UB.	⊙	⊙	⊙	⊙	⊙
9	The Primary Education Internship Program should reflect elements of IT usage in the classroom.	⊙	⊙	⊙	⊙	⊙
10	IT lecturers at UB are of great assistance to student-teachers in facilitating the learning of IT at UB.	⊙	⊙	⊙	⊙	⊙
11	The relevance of IT to the teaching-learning process is not important.	⊙	⊙	⊙	⊙	⊙
12	I have access to computers in my workplace, so IT is relevant to my professional development.	⊙	⊙	⊙	⊙	⊙
13	I believe that IT education will improve my pedagogical skills in the classroom environment.	⊙	⊙	⊙	⊙	⊙
14	Primary Ed. Lecturers at UB are trained to prepare student-teachers to integrate IT into lesson planning.	⊙	⊙	⊙	⊙	⊙
15	IT integration into the classroom is a practical venture in the Belizean classroom.	⊙	⊙	⊙	⊙	⊙
16	Teacher Ed. Courses offered by UB are aligned to twenty-first century requirements.	⊙	⊙	⊙	⊙	⊙
17	IT integration into the classroom enhances the teaching-learning atmosphere in the classroom.	⊙	⊙	⊙	⊙	⊙
18	IT teacher preparation improves the confidence of student-teachers upon their return to the classroom.	⊙	⊙	⊙	⊙	⊙
19	The Primary Ed. Program at UB needs to be revised to incorporate IT integration in all subject areas.	⊙	⊙	⊙	⊙	⊙
20	The Administration at UB needs to invest in computer labs for teacher education.	⊙	⊙	⊙	⊙	⊙

Response Summary

		Strongly Agree	%	Agree	%	Disagree	%	Strongly Disagree	%	No Response	%	Total Respdnts
1	My background knowledge of computers has helped me to cope with the IT course at UB.	19	38%	20	40%	8	16%	0	6%	0	0%	50
2	The IT courses I have taken at UB are geared towards student-teachers proficiency in the use of computers in the clas	4	8%	32	64%	10	20%	0	8%	0	0%	50
3	The IT courses I have taken at UB, prepares me to use IT in the classroom as a teaching-learning tool.	4	8%	25	50%	19	38%	0	4%	0	0%	50
4	The pedagogical courses I have taken at UB, prepares me to integrate IT into the teaching of different subject areas.	4	8%	25	50%	17	34%	0	6%	1	2%	50
5	I believe that the courses offered by UB Primary Ed. Program, should reflect elements of IT integration into all core sul	18	36%	25	50%	4	8%	0	2%	2	4%	50
6	There are adequate IT resources available to IT instructors for effective classroom delivery to students at UB.	17	34%	18	36%	14	28%	0	2%	0	0%	50
7	The IT courses that I have taken at UB are related to teaching-learning implementation in the classroom.	1	2%	21	42%	22	44%	0	12%	0	0%	50
8	IT education should be an option in Teacher Education at UB.	2	4%	5	10%	25	50%	0	34%	1	2%	50
9	The Primary Education Internship Program should reflect elements of IT usage in the classroom.	9	18%	23	46%	13	26%	0	6%	2	4%	50
10	IT lecturers at UB are of great assistance to student-teachers in facilitating the learning of IT at UB.	3	6%	20	40%	23	46%	0	8%	0	0%	50
11	The relevance of IT to the teaching-learning process is not important.	0	0%	6	12%	26	52%	0	36%	0	0%	50
12	I have access to computers in my workplace, so IT is relevant to my professional development.	3	6%	16	32%	18	36%	0	26%	0	0%	50
13	I believe that IT education will improve my pedagogical skills in the classroom environment.	15	30%	32	64%	2	4%	0	2%	0	0%	50
14	Primary Ed. Lecturers at UB are trained to prepare student-teachers to integrate IT into lesson planning.	5	10%	21	42%	19	38%	0	8%	1	2%	50
15	IT integration into the classroom is a practical venture in the Belizean classroom.	6	12%	20	40%	16	32%	0	16%	0	0%	50
16	Teacher Ed. Courses offered by UB are aligned to twenty-first century requirements.	4	8%	19	38%	21	42%	0	6%	3	6%	50
17	IT integration into the classroom would not enhances the teaching-learning atmosphere in the classroom.	1	2%	8	16%	29	58%	10	20%	2	4%	50
18	IT teacher preparation improves the confidence of student-teachers upon their return to the classroom.	14	28%	30	60%	6	12%	0	0%	0	0%	50
19	The Primary Ed. Program at UB needs to be revised to incorporate IT integration in all subject areas.	12	24%	23	46%	12	24%	0	4%	1	2%	50
20	The Administration at UB needs to invest in computer labs for teacher education.	37	74%	8	16%	3	6%	0	4%	0	0%	50

Data-Table

		50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	1000
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Total
R1	Strongly Agree					1															1	2
	Agree	1					1	1		1				1	1	1	1		1	1		10
	Disagree										1							1				2
	Strongly Disagree																					0
	No Response																					0
R2	Strongly Agree	1			1	1	1							1					1		1	7
	Agree		1	1							1									1		4
	Disagree																					0
	Strongly Disagree																					0
	No Response																					0
R3	Strongly Agree	1																	1	1	1	4
	Agree		1	1	1	1	1						1	1		1	1					9
	Disagree																					0
	Strongly Disagree																					0
	No Response								1													1
R4	Strongly Agree																					0
	Agree		1				1	1		1		1		1	1		1		1			9
	Disagree			1																		1
	Strongly Disagree																					0
	No Response					1														1		2
R5	Strongly Agree						1							1				1	1	1	1	6
	Agree		1			1				1	1		1		1	1	1					8
	Disagree	1																				1
	Strongly Disagree																					0
	No Response																					0
R6	Strongly Agree	1																				1
	Agree		1	1	1	1	1						1	1			1	1	1	1	1	12
	Disagree											1				1						2
	Strongly Disagree																					0
	No Response																					0
R7	Strongly Agree		1				1							1		1					1	5
	Agree	1		1	1	1		1	1		1				1		1		1	1		11
	Disagree									1								1				2
	Strongly Disagree																					0
	No Response																					0
R8	Strongly Agree	1				1	1							1		1			1	1	1	8
	Agree		1	1	1			1		1	1				1		1					8
	Disagree																					0
	Strongly Disagree																					0
	No Response																					0

R9	Strongly Agree																					0
	Agree	1	1			1				1				1	1				1		1	8
	Disagree																					
	Strongly Disagree																					
	No Response																					0
R10	Strongly Agree	1					1														1	3
	Agree		1	1		1		1		1				1	1				1	1		9
	Disagree																					
	Strongly Disagree																					
	No Response																					0
R11	Strongly Agree									1				1					1		1	4
	Agree	1	1	1	1	1	1				1									1		8
	Disagree																					0
	Strongly Disagree																					
	No Response																					0
R12	Strongly Agree									1											1	2
	Agree	1	1	1		1		1			1	1		1		1	1		1	1		12
	Disagree																					4
	Strongly Disagree																					
	No Response																					0
R13	Strongly Agree	1				1								1	1				1	1	1	7
	Agree		1	1	1		1			1	1					1	1					8
	Disagree																					0
	Strongly Disagree																					
	No Response																					0
R14	Strongly Agree				1					1				1							1	4
	Agree	1	1	1		1	1									1			1	1		8
	Disagree																					4
	Strongly Disagree																					
	No Response																					0
R15	Strongly Agree	1																			1	2
	Agree		1	1	1	1				1	1		1	1			1		1	1		11
	Disagree																					7
	Strongly Disagree																					
	No Response																					0
R16	Strongly Agree					1	1										1				1	4
	Agree	1	1	1									1			1			1			6
	Disagree				1						1				1							5
	Strongly Disagree																					
	No Response																					0
R17	Strongly Agree																					0
	Agree				1	1		1	1	1	1			1	1		1		1	1	1	12
	Disagree															1						2
	Strongly Disagree																					
	No Response																					0
R18	Strongly Agree	1																			1	2
	Agree			1		1				1	1			1		1			1			7

	Disagree																					
	Strongly Disagree																					
	No Response																					
R19	Strongly Agree																					0
	Agree					1					1		1	1								4
	Disagree																					
	Strongly Disagree																					
	No Response																					
R20	Strongly Agree				1	1	1		1	1				1		1	1		1	1	1	11
	Agree	1		1									1		1							4
	Disagree																					
	Strongly Disagree																					
	No Response																					0
R21	Strongly Agree																			1	1	2
	Agree	1	1		1	1							1	1			1					7
	Disagree																					
	Strongly Disagree																					
	No Response																					0
R22	Strongly Agree												1						1		1	3
	Agree	1		1	1									1	1							5
	Disagree																					
	Strongly Disagree																					
	No Response																					0
R23	Strongly Agree					1	1															2
	Agree		1	1				1			1			1					1			6
	Disagree																					
	Strongly Disagree																					
	No Response																					0
R24	Strongly Agree					1									1						1	3
	Agree		1				1	1			1		1	1		1	1		1	1		10
	Disagree																					
	Strongly Disagree																					
	No Response																					0
R25	Strongly Agree																					0
	Agree	1	1		1		1	1		1	1			1			1		1	1	1	12
	Disagree																					
	Strongly Disagree																					
	No Response														1							2
R26	Strongly Agree	1				1																2
	Agree		1	1	1		1	1						1					1			7
	Disagree																					
	Strongly Disagree																					
	No Response																					0
R27	Strongly Agree	1		1		1	1			1	1			1		1			1		1	10
	Agree																					0
	Disagree																					
	Strongly Disagree																					

	Agree				1														1	1		3
	Disagree																					
	Strongly Disagree																					
	No Response																					0
R38	Strongly Agree	1		1		1				1	1			1					1	1	1	9
	Agree							1							1							2
	Disagree																					
	Strongly Disagree																					
	No Response																					0
R39	Strongly Agree									1	1			1								3
	Agree																		1			1
	Disagree																					
	Strongly Disagree																					
	No Response																					0
R40	Strongly Agree	1												1	1							3
	Agree		1			1	1	1		1			1			1		1	1	1	1	11
	Disagree			1																		
	Strongly Disagree																					
	No Response																					0
R41	Strongly Agree						1		1	1						1	1					5
	Agree	1	1	1		1						1	1	1				1	1	1	1	11
	Disagree										1											
	Strongly Disagree																					
	No Response																					0
R42	Strongly Agree						1															1
	Agree	1	1	1	1						1			1	1	1					1	9
	Disagree																					
	Strongly Disagree																					
	No Response																					0
R43	Strongly Agree	1					1														1	3
	Agree		1			1				1				1					1			5
	Disagree																					
	Strongly Disagree																					
	No Response																					0
R44	Strongly Agree	1		1	1		1														1	5
	Agree		1			1		1		1	1	1		1	1	1						9
	Disagree																					
	Strongly Disagree																					
	No Response																					0
R45	Strongly Agree		1			1													1	1	1	5
	Agree				1		1	1	1	1		1	1		1	1		1				10
	Disagree																					
	Strongly Disagree																					
	No Response																					0
R46	Strongly Agree	1																			1	2
	Agree			1	1	1	1			1				1	1	1			1	1		10
	Disagree		1					1					1					1				

	No Response																					0
R28	Strongly Agree	1								1			1		1	1	1			1	1	8
	Agree						1	1			1	1		1				1	1			7
	Disagree																					0
	Strongly Disagree																					0
	No Response																					0
R29	Strongly Agree					1													1	1	1	4
	Agree	1		1						1				1	1	1	1					7
	Disagree																					0
	Strongly Disagree																					0
	No Response																					0
R30	Strongly Agree																					0
	Agree	1	1		1	1	1		1	1			1	1	1	1	1	1	1	1	1	16
	Disagree																					0
	Strongly Disagree																					0
	No Response																					0
R31	Strongly Agree					1	1							1						1		4
	Agree	1	1		1			1		1	1								1	1		8
	Disagree																					0
	Strongly Disagree																					0
	No Response																					0
R32	Strongly Agree																			1		1
	Agree	1	1	1	1	1	1	1		1				1		1	1		1	1		13
	Disagree																					0
	Strongly Disagree																					0
	No Response																					0
R33	Strongly Agree	1	1												1				1	1	1	6
	Agree				1					1			1	1		1						5
	Disagree																					0
	Strongly Disagree																					0
	No Response																					0
R34	Strongly Agree					1	1							1						1		4
	Agree		1					1					1		1				1	1		6
	Disagree																					0
	Strongly Disagree																					0
	No Response																					0
R35	Strongly Agree																			1		1
	Agree	1		1	1	1	1			1	1			1					1			9
	Disagree																					0
	Strongly Disagree																					0
	No Response																					0
R36	Strongly Agree						1												1	1		3
	Agree	1	1			1		1	1					1		1			1			8
	Disagree																					0
	Strongly Disagree																					0
	No Response																					0
R37	Strongly Agree	1	1	1		1	1						1	1							1	8

	No Response																				1	1
R47	Strongly Agree				1	1		1					1	1	1			1		1		8
	Agree																					
	Disagree																					
	No Response																					
R48	Strongly Agree	1				1		1													1	4
	Agree		1	1	1										1	1	1	1		1		8
	Disagree																					
	No Response																					
R49	Strongly Agree																				1	1
	Agree	1	1	1	1	1	1			1				1					1			9
	Disagree																					
	No Response																					
R50	Strongly Agree					1													1		1	3
	Agree		1		1						1			1	1		1			1		7
	Disagree																					
	No Response																					