PROFILE OF THE UWI DISTANCE LEARNERS:
The Implications for Online Curriculum Development, Teaching and Learning at the University

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ABSTRACT

The purpose of this study was to create a more recent profile of the UWI distance learners as a follow up to a study undertaken in 2000, and, based on the profile created, discuss the implications for online curriculum development, teaching and learning at the University. Data on four descriptive characteristics were collected from UWI distance students in two courses in the B. Sc Management Studies degree programme. Comparisons were made with trends in the field spanning the last decade as well as with a 2000 research and development project which examined the use of ICTs and highlighted the critical components necessary for the introduction of full online teaching and learning into the UWI's distance education programmes. The findings of the present study suggest that there has been no significant change in the demographic, motivational and experiential characteristics of the UWI distance learner over the past decade. They also suggest a new trend in the inhibitory characteristics during this period.

Keywords: profile, demographic, motivational, experiential, inhibitory, online learning media tools, virtual classrooms.

INTRODUCTION

According to Tucker (2003), "distance education is in a unique position to serve diverse learners who cannot or will not participate in the traditional classroom setting". The University of the West Indies (UWI) has been cognizant of this 'unique position' since 1996, when, in its ongoing effort to promote regional development through higher education, it took the decision to widen access to its programmes and courses by incorporating distance education as an integral part of its operations. With this decision, the UWI was transformed from a single-mode to a dual-mode institution. The UWI has periodically restructured the distance education and outreach components of its operations in an effort to meet the changing needs of its constituents. In August 2008, the UWI carried out its most radical restructuring when it amalgamated its distance education component, known at that time as the University of the West Indies Distance Education Centre (UWIDEC), with its outreach sectors and formally established a fourth campus –the University of the West Indies Open Campus (UWIOC). This new thrust was in response to the needs of the University's Contributing Countries, as expressed in the fourth strategic aim of the University's Strategic Plan for 2007–2012 (p. 20):

> *"... to enable the University to expand the scope, enhance the appeal and improve the efficiency of its service to the individuals, communities and countries which it serves."*

The extent to which the Strategic Plan delivers on its goals and objectives will depend on many factors. A critical factor will be to ensure that the needs and capabilities of the individuals, communities and countries which the UWI serves are met. Specific to the UWI's provision of distance education, ensuring that the needs and capabilities of its distance learners are met requires that we better understand who they are. As Tucker (2003) points out, "it is important to examine the characteristics, a portrait if you will, of these learners in order to be able to best serve them."

This study seeks to provide an updated profile of the UWI distance learners by tracing how their characteristics may have changed since the last study of this nature was undertaken nearly a decade ago. In so doing, it seeks to contribute to our continued understanding of these learners.

In addition, it is intended that the data provided will guide and inform decisions pertaining to online curriculum development, teaching and learning at the institution, ensuring that the specific needs and capabilities of these learners are met. This study therefore seeks to determine: who are the UWI's current distance learners? What motivates them to study at a distance? How are they pursuing their programmes of study? What are their technological proficiencies? What do they perceive as the situational, institutional and dispositional barriers to studying at a distance at the UWI?

And, finally, based on these findings, what are the implications for online curriculum development, teaching and learning specific to the UWI's distance learners? According to Tucker (2003), learner profiles "--- should prove valuable to educators as they strive to develop distance education curricula as well as to implement innovative teaching strategies that best motivate and meet the needs of their students".

RESEARCH METHOD

The purpose of this quantitative study was to collect data to answer questions on students' perceptions on four descriptive characteristics. A survey design method was therefore selected to collect data that describes these characteristics in the population which was large and geographically distributed. The four models of descriptive characteristics i.e., demographic, motivational, experiential and inhibitory used by Qureshi, Morton and Antosz, (2002) were used to create the instrument which was a thirty item questionnaire administered online using Survey Monkey©.

These models were selected because they captured the critical areas related to the research questions. However, some variables used in the Qureshi et al. (2002) model were altered for this study to more appropriately reflect and capture the specifics of the UWI distance student population. In the demographic model, the variables used were age, gender, number of dependents, employment status, occupational level, income and matriculation level. In the motivational model, the variables used were personal gain, acquire knowledge, and familial commitments.

In the experiential model, the variables used were the number of courses learners had taken by distance and their assessment of their technological proficiency. In the inhibitory model, the variables used were situational (including technological factors), institutional and dispositional barriers (including learning style preferences).

The questionnaire was administered to a convenience sample which was selected based on the availability of the population to the researcher. The population consisted of all UWI distance students registered in the semester 2, academic year 2008-2009 Level 1 ECON 1002 Introduction to Macroeconomics and Level 2 MGMT 2008 Organizational Behaviors courses in the B. Sc Management Studies degree programme. A 5-point rating scale with 5 as excellent and 1 as poor was used to measure students' perceptions regarding their technological proficiency in the experiential model as well as the three variables in the inhibitory model.

For the purposes of this study, UWI distance students refer to persons whose programmes and courses comprise printed self-instructional material, online tutoring and scheduled audio-conferencing at the Learning Centers located in the sixteen contributing countries of the UWI across the region.

Each Learning Centre has administrative and technical staff, library facilities, at least one audio-conferencing room, computers and access to the Internet for students' use. In addition, the B Sc Management Studies degree programme is divided into three levels. Level 1 and Level 2 students in this study refer to students completing the first and second set of requirements for their programme of study respectively. Of a total of 671 students in ECON 1002, 167 responded. Of a total of 568 students in MGMT 2008, 142 responded. In both cases, approximately 25% of the population responded.

Data collected were compared with trends in the field spanning the last decade as well as the Kuboni, Thurab-Nkhosi and Chen (2000) research and development project which examined the use of ICTs and highlighted the critical components necessary for the introduction of full online teaching and learning into the UWI's distance education programmes.

The findings of the Kuboni et al. (2000) study were presented at the International Conference on problems and prospects of education in developing countries, Bridgetown, Barbados, March 25-28, 2002 in a paper entitled "The expanded use of ICT's in UWIDEC: an analysis of readiness for on-line course delivery".

LIMITATIONS OF THE STUDY

The findings of this study are based on responses from UWI students in a limited number of UWI distance courses as well as low response rates from the convenience sample. Hence the results are not generalisable to all UWI distance learners. In addition, the survey was the only form of measurement used which resulted in one source bias.

Although the survey questions were drawn from another study, they should be examined by other members of the UWI distance community to ensure that they capture data that are comparable across modalities in the four UWI campuses and across a wider cross section of UWI distance learners in order to increase the reliability and validity of the instrument.

Despite these limitations, the researcher is of the opinion that the findings of this study enhance our understanding of the current UWI distance learners and provide a basis for discussing the implications for online curriculum development, teaching and learning at the UWI.
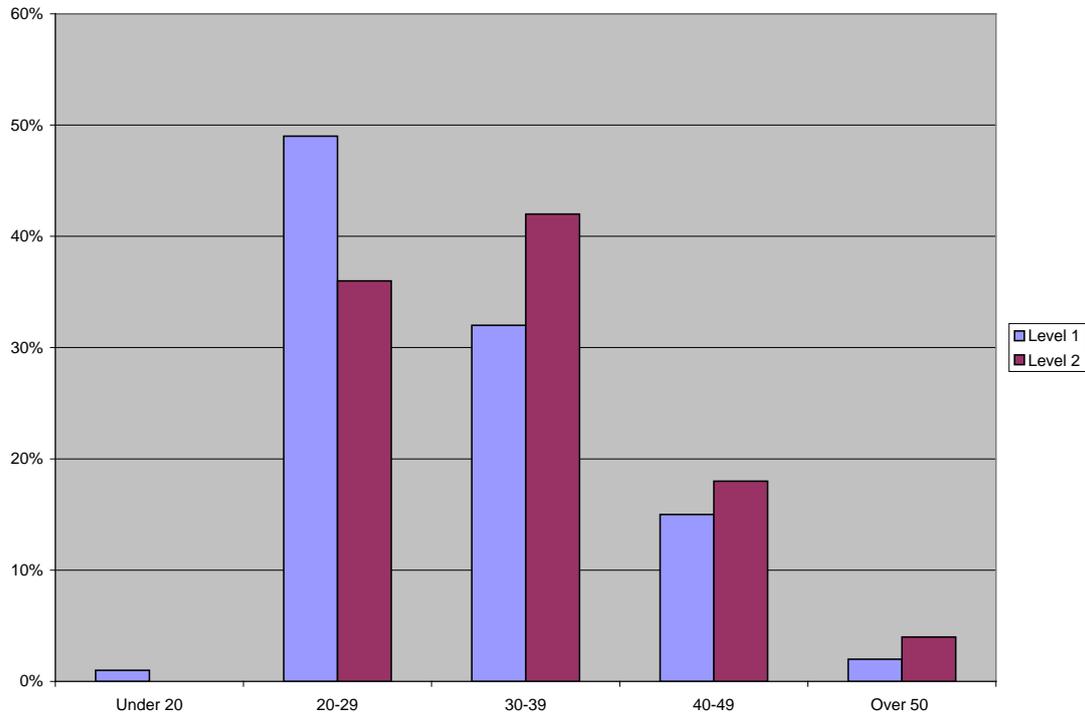
Demographic Characteristics

Age

Figure: 1
Age Distribution of Level 1 and Level 2 Students

The data indicate that by far the majority of students fell within the 20-39 age range (mean age 33.4 and 28.4 for Level 1 and Level 2 students respectively), with very few students being younger than 20 or older than 50.

Gender and Number of Dependents
Most students were female, with 85% of Level 1 students and 87% of Level 2 students being of that gender. The number of dependents for each group is shown in Table: 1. The data indicate that many students were undertaking their degree programmes whilst having at least some persons dependent on them (mean number of dependents 1.3 and 1.4 for Level 1 and Level 2 students respectively).

Table 1
Number of Dependents for Level 1 and Level 2 Students

No of Dependents	Level 1 Students	Level 2 Students
0	35%	26%
1	25%	27%
2	22%	18%
3	12%	11%
4	5%	2%
5	1%	3%

However, most students were not the sole income earner in their family (68% of Level 1 students and 81% of Level 2 students).
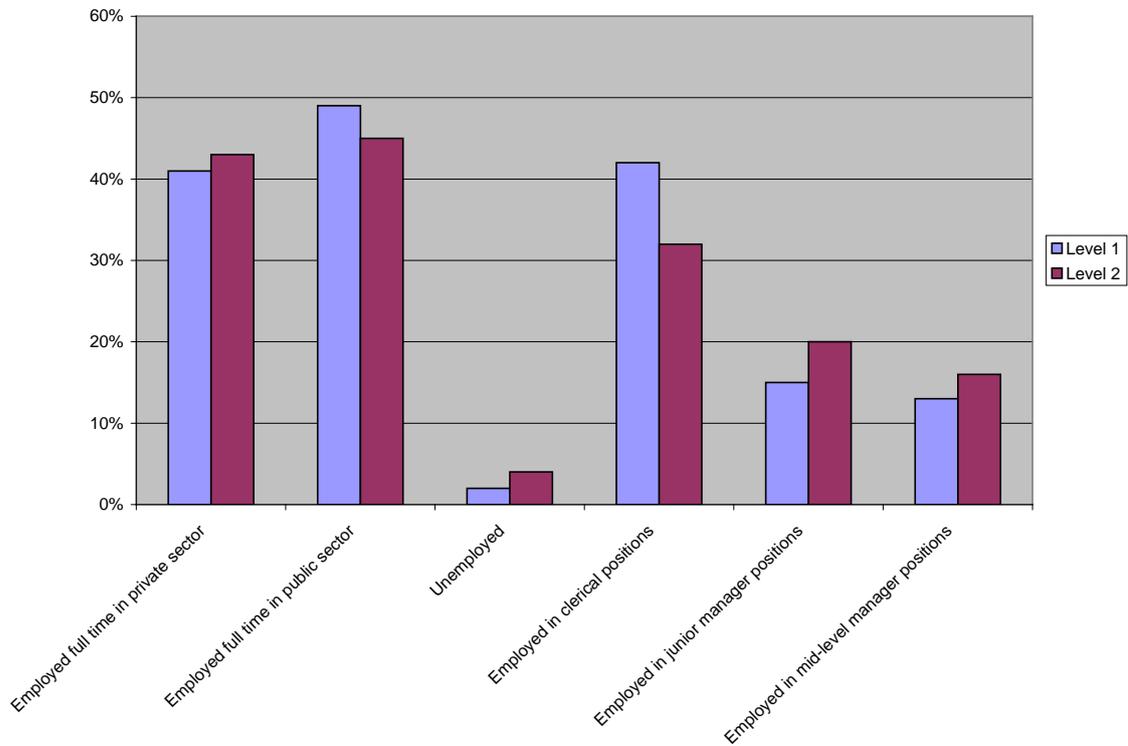
Employment Status and Occupational Level

Figure: 2
Employment Status and Occupational Level of Level 1 and Level 2 Students
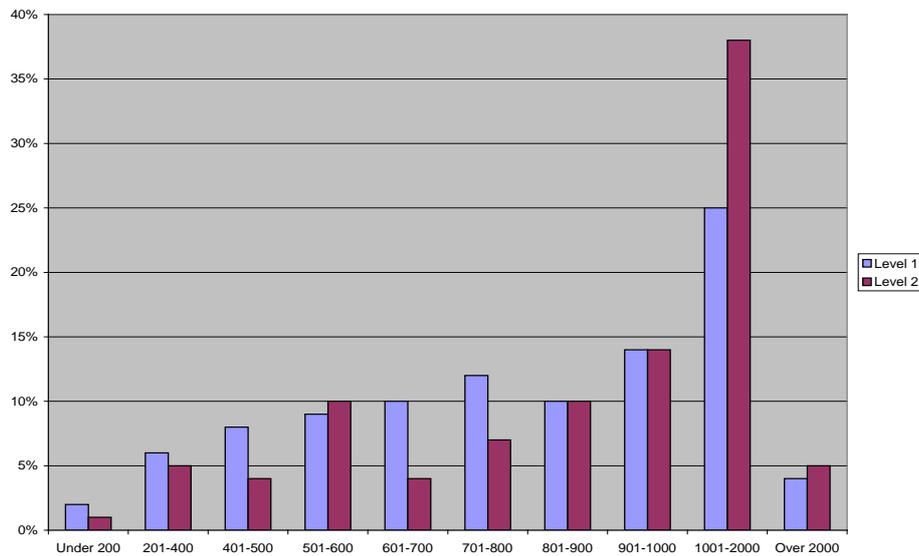
Income

Figure: 3
Monthly Income Distribution ($US) of Level 1 and Level 2 Students

38% percent of Level 1 students have been in the workforce up to five years, 23% for 6-10 years, 14% for 11-15 years and 13% for 16-20 years. By contrast, only 18% of Level 2 students have been in the workforce for up to five years, with 30% for 6-10 years and 19% for 11-15 years.
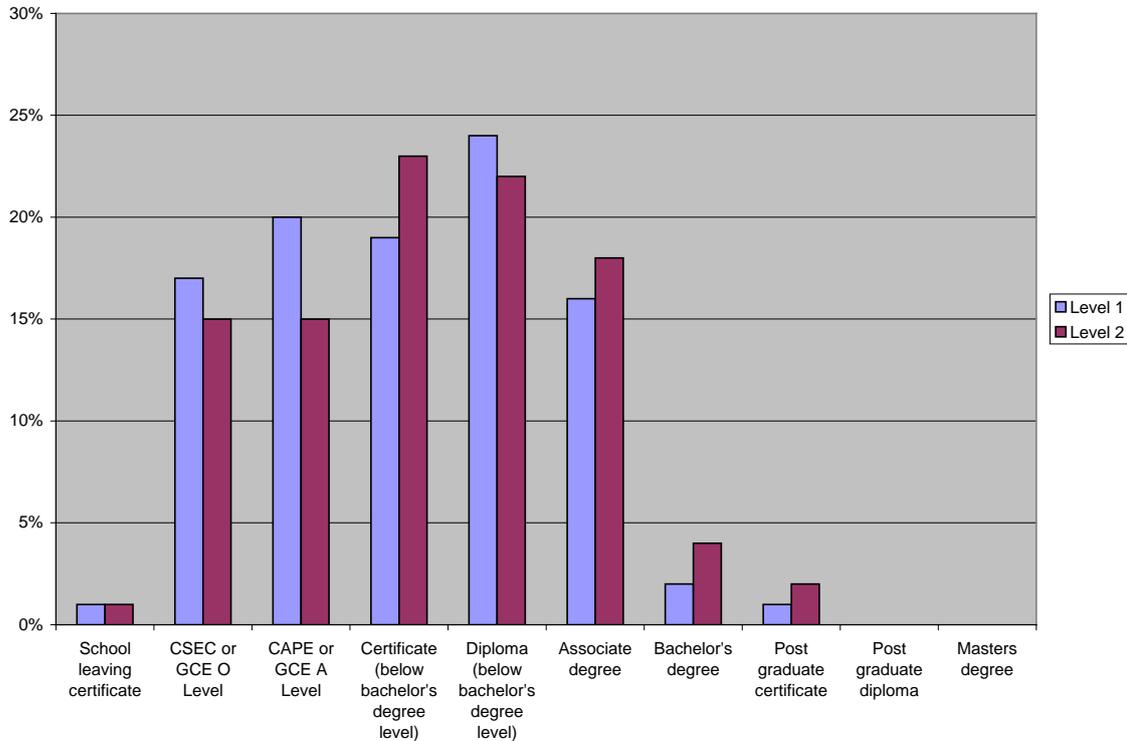
Matriculation Level

Figure: 4
Matriculation Levels of Level 1 and Level 2 Students

The entry requirements into the UWI Faculty of Social Sciences three year undergraduate degree programme is:

> ➤ **a minimum of five Caribbean Secondary Education Certificate (CSEC) General Proficiency (Grades I-III) or General Certificates of Education (GCE) Ordinary Level subjects,**
> ➤ **compulsory English Language and Mathematics, and**
> ➤ **passes in at least two Caribbean Advanced Proficiency Examination (CAPE) or GCE Advanced Level subjects or the equivalent.**

Associate Degrees, certificates and diplomas from approved institutions are recognized substitute qualifications for entry into this programme.

It is evident from the data provided in Figure 4 that the majority of students in both Levels had the qualifications necessary for entry into the UWI Faculty of Social Sciences three year undergraduate programme. Moreover, 82% and 87 % of Level 1 and 2 students respectively possessed Mathematics at the CSEC General Level or its equivalent; and 98% and 97% Level 1 and 2 students respectively possessed English Language at the CSEC General Level or its equivalent.

The data therefore indicate that students registering in these courses are meeting the UWI's normal entry requirements for its undergraduate degree programmes. The exception may be the 1% entering as Mature Students with only School Leaving Certificates. However, it should be noted that a small number of students also matriculate in this category on the three face-to-face campuses.

Interpretation of the Demographic Characteristics

The age range of students is between 20 and 39 years. This is similar to that reported by Holmberg (1995, in Thompson, 1998), who cites studies spanning over three decades which indicate that "the 25-35 age group seems to be the largest in most [distance learning] organizations." The fact that the students are predominantly female is in keeping with the findings in Thompson (1998), who states that "Most studies of distance learners in North American higher education report that more women than men are enrolled in courses delivered at a distance". Indeed, the percentage of females enrolled in the UWI distance education courses is higher than that reported by Thompson (1998) for the enrollment of women in distance education institutions in North America. The closest to the UWI's was the data reported by Robinson 1991, (in Thompson, 1998) for the Open College of Ryerson Polytechnical Institute, where female students made up 77.9% of the Open College's enrollment. Thompson's (1998) research interest is into the higher success rates among female distance education students. However, the following three of the four reasons she proposes for these findings aptly explain the high percentage of females in the UWI's distance education courses:

> - The higher rates at which women access institutional support structures
> - The potentially higher levels of motivation that might operate among women, who more often work in occupational sectors in which career advancement is closely tied to academic upgrading
> - The appeal of the distance format to women who might integrate education into lives characterized by multiple roles (Ross and Powell, 1990; Powell, Conway, and Ross, 1990; Robinson, 1992 in Thompson, 1998).

The demographic characteristics of the students enrolled in the two courses in this study, including the number of years in the workforce which indicates that they have not recently graduated secondary school, is also consistent with those reported by Tucker (2003): "Distance education students are typically older than traditional students with the average age being more than 25 years old, and they are more likely to be females rather than males. They tend to have family and a job responsibility that prohibits them from attending traditional classes – being employed full-time while attending college on a part-time basis."

A comparison of these results with those of the 2000 study by Kuboni, Thurab-Nkhosi and Chen suggests that the demographic profile of UWI's distance students has remained relatively constant between 2000 and 2008 in the following respects: the age range of 25 and 35, predominantly female, employed as clerical workers, and a certificate or diploma (below the bachelor's level) being the highest educational level attained at matriculation. However, the monthly earnings of present UWI distance students has increased slightly as indicated by earnings in excess of US$1000 being 26.2% in the 2000 study compared with 29% and 43% in the present study. In addition, the percentage of students below US$500 was 22.8% in the 2000 study compared with 16% and 10% in the present study.

Taking into account the fact that an increase in salaries would be expected due to inflation etc by the time of the 2008/2009 study, it would appear that although a fairly substantial number of low-income earners are still accessing higher education via distance education, a fairly substantial number of middle-income earners are now also accessing higher education via this route.

Motivational Characteristics

Table: 2
Motivational Characteristics

Characteristic	Reasons	Level 1	Level 2
Personal Gain	Need to continue to work while studying	83%	82%
	Need to change jobs and unable to attend a F2F campus	10%	7%
Acquire Knowledge	Need to update skills for career advancement and unable to attend a F2F campus	49%	50%
Familial Commitments	Family commitments therefore unable to attend a F2F campus	44%	42%

Interpretation of the Motivational Characteristics

Qureshi et al. (2002) consider Houle's three-category system of reasons adults give for participating in distance education of continued relevance to the field. This system classifies distance learners as:

(1) goal-oriented learners "those who use learning to gain specific objectives"
(2) activity-oriented learners "those who participate primarily for the sake of the activity itself" or
(3) learning-oriented learners "those who pursue learning for its own sake, the lifelong learners".

Based on this classification, students enrolled in the two UWI distance education courses appear to be goal-oriented learners. This finding is also consistent with the finding of Kuboni et al. (2002) that "economic and social factors play a greater role than pedagogical issues in influencing persons to study by distance" (p. 12).

The study by Kuboni et al. (2002) identifies employment constraints (58.6%) and family constraints (50.7%) as the main reasons cited by respondents for opting to study at a distance. A comparison with those of this study suggests that students' motivation to study at a distance has remained relatively constant and is also in keeping with a dimension of the shift in the distance education population in Canada noted by Wallace (1996), which suggests that "the most important barrier pushing students toward registration in independent study is work commitments". In addition, the results from both studies are consistent with Thompson's (1998) view that although being place-bound continues to attract students to distance education; being time-bound (which includes work and family commitments) is increasingly becoming a more important motivational factor.

EXPERIENTIAL CHARACTERISTICS

Courses Taken
In order to qualify for the award of the B.Sc. Management Studies, students must complete a minimum of ninety credits (equivalent to thirty three-credit courses).

A minimum of thirty credits must consist of Level 1 courses and a minimum of sixty credits must consist of Levels 2 and 3 courses. In addition, part-time distance students are allowed to register for a maximum of twenty-one credits (seven courses) or a minimum of twelve credits (four courses) over a period of two semesters. It is suggested that new students in their first semester register for two three-credit courses and no more than three courses in any semester. The number of courses students have taken in both groups is shown in Table 3.

Table: 3
Number of Courses Taken by Level 1 and Level 2 Students

Level 1 Students	Level 2 Students
1 = 1%	6 = 6%
2 = 5%	7 = 4%
3 = 19%	8 = 11%
4 = 7%	9 = 13%
5 = 10%	10 = 7%
6 = 16%	11 = 10%
7 = 10%	12 = 11%
8 = 7%	13 = 3%
9 = 4%	14 = 9%
10 = 2%	15 = 6%
11 = 2%	16 = 5%
12 = 2%	17 = 3%
13 = 2%	18 = 1%
14 = 0%	19 = 2%
15 = 0%	20 = 1%
16 = 0%	21 = 1%

The data suggest that 19% of Level 1 students have just started their programme of study, and between 10% and 16% are in the middle or nearing completion of their Level 1 course requirements.
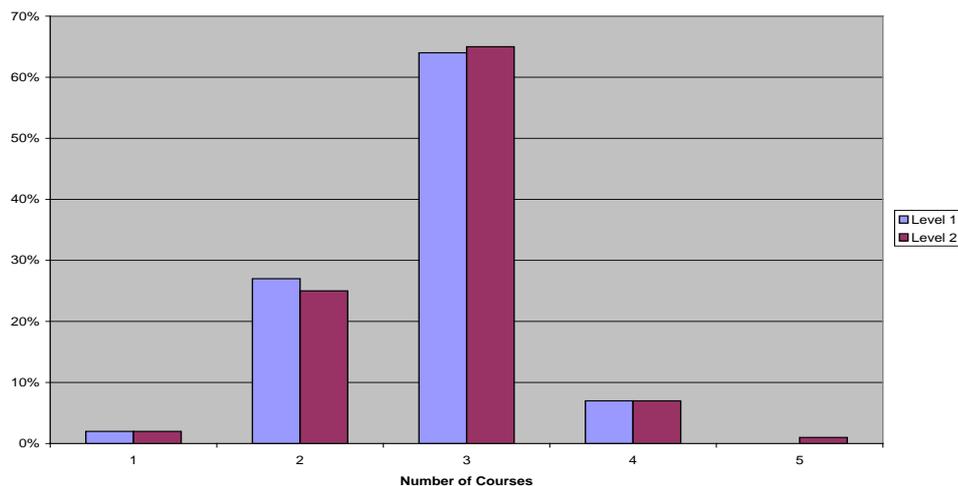

Figure: 5
Average Number of Courses Taken Per Semester by Level 1 and Level 2 Students

The data also suggest that between 9%, 10% and 11% of Level 2 students have completed their Level 1 course requirements and are just starting Level 2. In addition, the data suggest that between 11% and 13% of Level 2 students are trailing Level 1 courses which they are allowed to do provided that the courses they are trailing are not prerequisites for courses in the higher level. The data shown in Figure 5 indicate that students in both levels appear to be following a part-time programme of study.
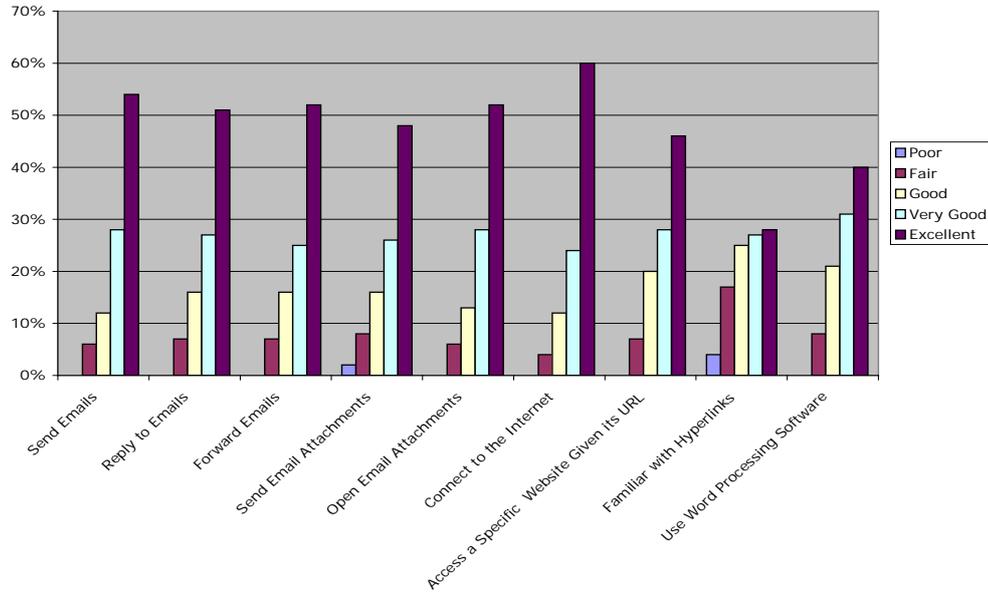
Technological Proficiency

Figure: 6
Level 1 Students' Proficiency in the Use of Specific Technologies and Related Processes
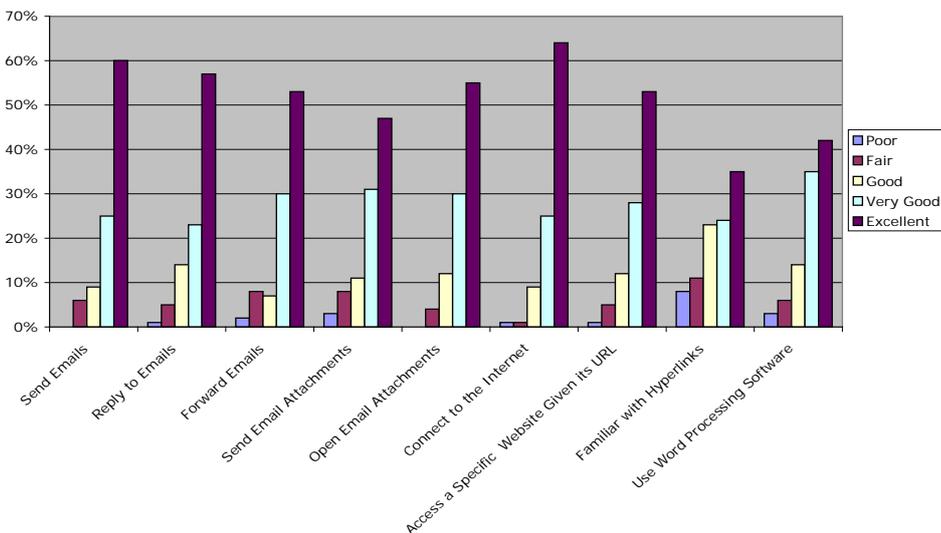

Figure: 7
Level 2 Students' Proficiency in the Use of Specific Technologies and Related Processes

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Interpretation of the Experiential Characteristics

Based on the number of courses part-time students are allowed to take over two semesters, students in these two courses are pursuing their programme of study on a part-time basis. In addition, there is no indication that these students are combining DE and on-campus courses. These findings are contrary to a dimension of the shift in the Canadian distance education population noted by Wallace (1996), "towards full-time course loads that combine independent study with on-campus courses."

In their study, Qureshi et al. (2002) found that previous experience with web-based instruction and the use of e-mails distinguished DE from on-campus students and posited that previous experience with web-based instruction was more important than computer proficiency for DE students. Based on these findings, one would expect Level 2 students in the present study to be more technologically proficient than Level 1 students. However, the findings do not suggest any significant difference in the level of technological proficiency between the two groups and therefore do not support such an assumption. In addition, compared with the Kuboni et al. (2002) study in which 51.4% of the students of the former UWIDEC considered themselves very capable of using and accessing the Internet, the present study indicates a slight improvement in using the Internet only. The present study also reveals that students are still not highly proficient in terms of the following increasingly commonly used technologies and related processes: sending email attachments, accessing a specific website given its URL, hyperlinks and using word processing software.

Inhibitory Characteristics
Situational

69% of both Level 1 and Level 2 students cited the convenience of time and place while 40% of Level 1 students and 32% of Level 2 students cited the high cost of attending a face-to-face campus as reasons for opting to study at a distance.
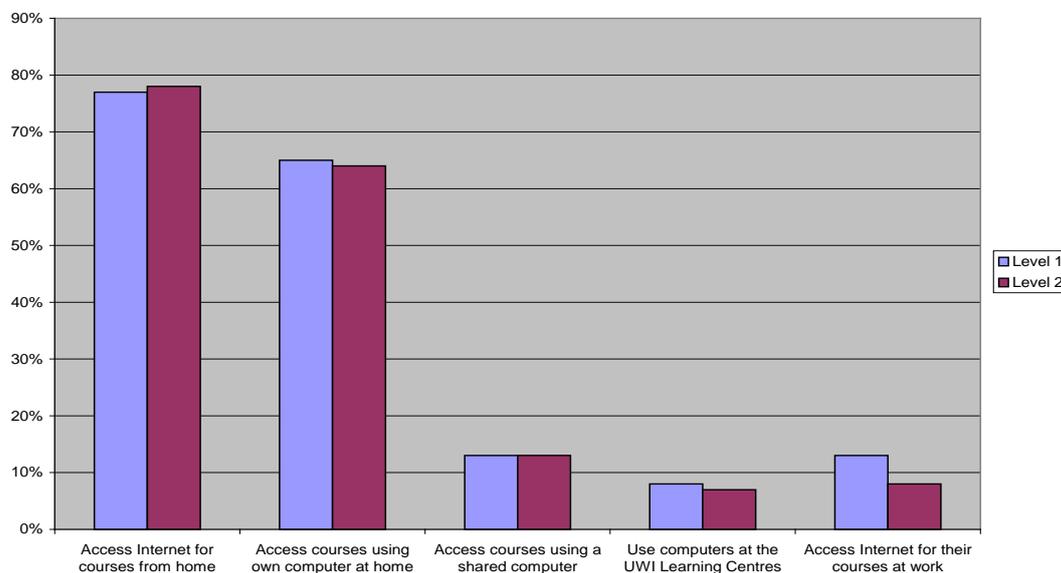

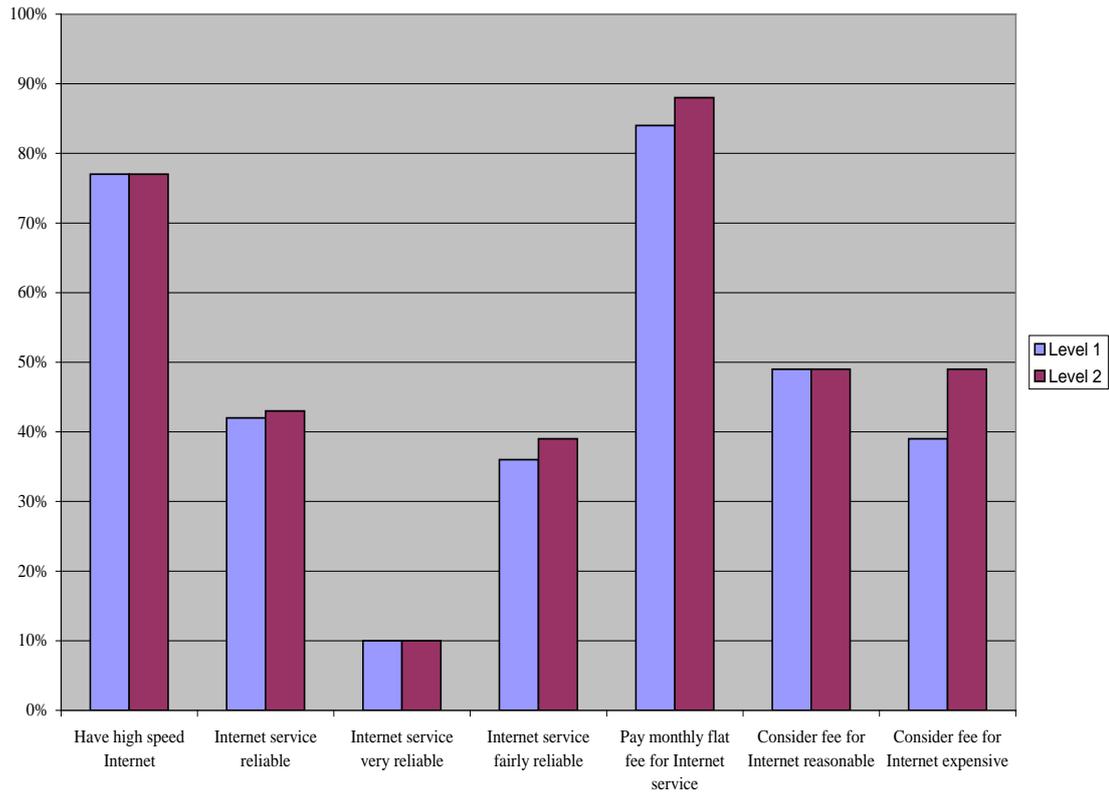**Figure: 8**
Level 1 and Level 2 Students' Technological Particulars

Figure: 9
Level 1 and Level 2 Students' Internet Particulars

Table: 4
Level 1 and Level 2 Students' Institutional and Dispositional Characteristics

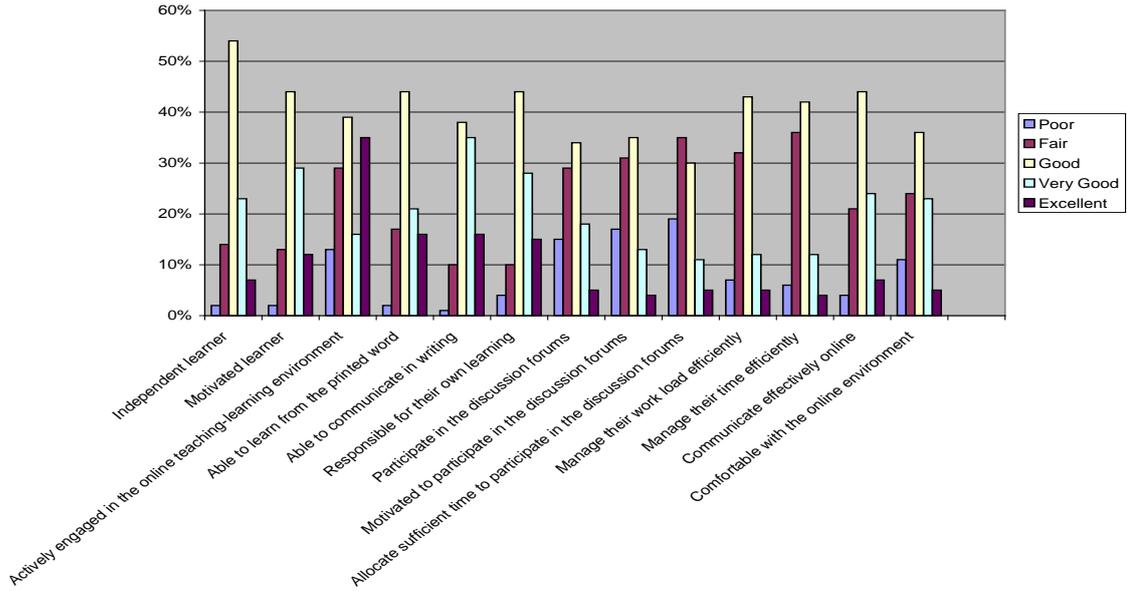| Characteristics		Level 1	Level 2
Institutional	**Distance from F2F campus**	**24%**	**23%**
	No F2F campus in country	**13%**	**15%**
	Not accepted to a F2F campus	**3%**	**0%**
Dispositional	**Confident in managing own learning**	**19%**	**18%**
	Prefer small group interaction	**12%**	**16%**
	Prefer to study on their own	**6%**	**11%**
	Too old to attend a F2F campus	**1%**	**2%**
Learning Style Preference	**Visual**	**48%**	**38%**
	Read/write	**49%**	**32%**
	Kinesthetic	**10%**	**10%**
	Aural	**10%**	**3%**

Figure: 10
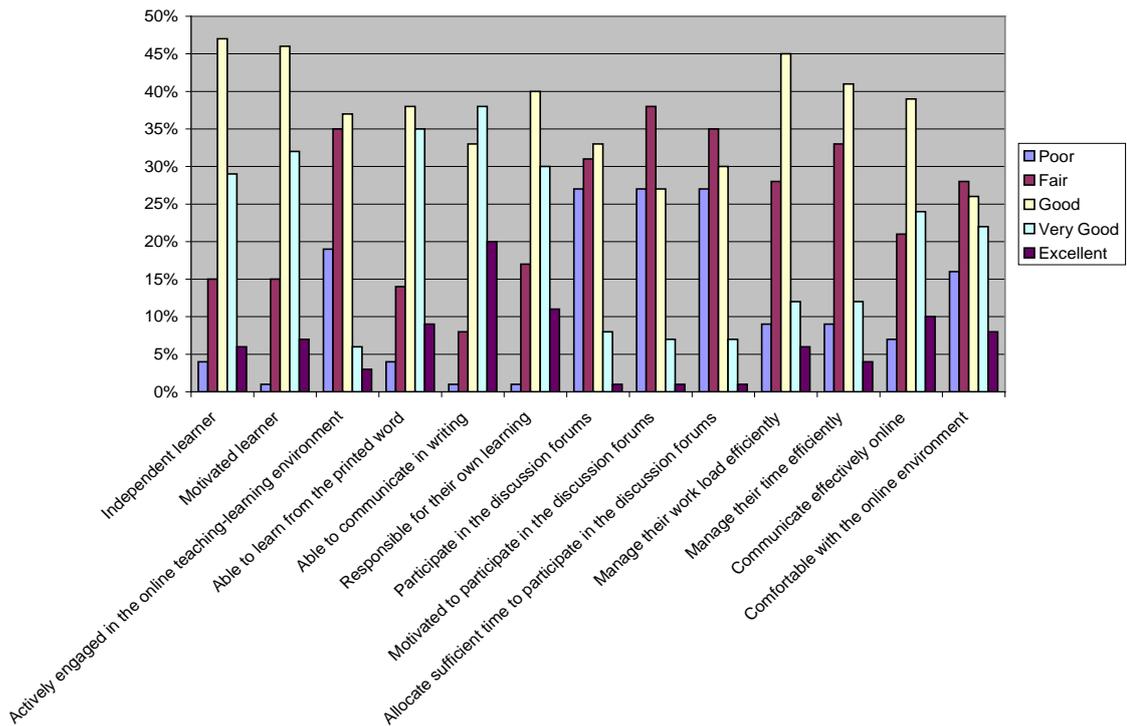**Level 1 Students' Rating on Areas Critical to Distance Education**

Figure: 11
Level 2 Students' Rating on Areas Critical to Distance Education

Interpretation of the Inhibitory Characteristics

Students in these two courses find the convenience of time and place offered by studying at a distance suiting their needs. This finding corroborates the motivational characteristics of students in this study and is consistent with a dimension of the shift in the distance education population in Canada noted by Wallace (1996), which suggests that "the most important attractions [to distance education] relate to control of time, place and pace of learning" (p. 1). In addition, the increase in the monthly income distribution identified in the demographic characteristics of this study might explain the following situational factors related to students' technological particulars:

- The higher percentage of students in this study (65% Level 1 and 64% Level 2) compared to the 2000 study (52%) that had the highest level of access for their courses at home.
- The lower percentage of students in this study (13% Level 1 and 8% Level 2) compared with the 2000 study (33.9%) that identified their places of employment as the place where they access their courses.
- The lower percentage of students in this study (8% Level 1 and 7% Level 2) compared with the 2000 study (9.6%) that had the highest level of access to their courses from the UWI Learning Centres across the region.

With regards situational factors related to the Internet particulars of students in this study, of note is the high percentage who have high speed Internet, find the service reliable, and pay a flat monthly fee which they find reasonable.

Although the findings suggest that situational factors are the most significant inhibitory characteristics, they also suggest that institutional factors still affect students. This is in keeping with Thompson's (1998) finding that, "traditionally, distance education has attracted students whose geographic distance from a higher education institution discouraged or prevented enrollment in on-campus classes." In addition, the low percentage of students in this study that opted to study at a distance because they did not get accepted at a face-to-face campus suggests that there is a distinct group of individuals whose specific tertiary educational needs are being met by the UWI through distance education.

Although still comparatively low, a higher percentage of students in the present study (12% Level 1 and 16% Level 2) compared with the 2000 study (6.4%) identified the pedagogical issue of preferring small group interaction as a reason for studying at a distance. In addition, between 12% and 18% of Level 1 students and 18% and 27% of Level 2 students rated themselves poor in the following areas critical to distance education:

- ➢ Actively engaged in the online teaching-learning environment
- ➢ Participate in the online discussion forums
- ➢ Motivated to participate in the online discussion forums
- ➢ Allocate sufficient time to participate in the online discussion forums

Although the 2000 study examined the issue of the online discussion forums from the perspective of the course coordinators and not the students, there were expressions of concern for the latter's active participation. Further, in this study, 11% of Level 1 students and 16% of Level 2 students rated their comfort level with the online environment as poor.

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This area was seen as a "critical contributing factor to [students'] readiness to engage in on-line teaching and learning" (p. 10) in the 2000 study. These findings are also contrary to those of Gilliard (1997, in Tucker, 2003) who notes that, "distance education students are mature, have a high level of motivation, and do not require instructors to constantly remind them to meet deadlines. They are disciplined, they establish regular study schedules, and they set aside time on a regular basis in order to successfully accomplish their tasks."

DISCUSSION

Implications for Online Curriculum Development
The findings of this study imply that the motivational factors for studying at a distance suit the specific needs of the demographic population, which is primarily female. Although this is heartening, the extremely low percentage of males participating in this format of education is cause for concern even though indications are that this trend also exists in the UWI's face-to-face programmes. Specific to participating in the UWI's distance programmes, Osoba (2000) traces the trend in enrollment by gender at the UWI Antigua Learning Centre from 1977-2000. According to the author, in the academic year 1977/78, male enrollment was 52% and female enrollment was 48%. However, the author notes that: "Three years later, the percentage enrolment by gender began to show a marked disparity in favour of females, 55 percent to 45 percent – a disparity that has increased greatly over the years" (p.50).

In the academic year 1999/2000 male enrollment was 11% and female enrollment was 89% at the UWI Antigua Learning Centre. Osoba (2000) attempts to account for the disparity in gender and the higher attrition rates among males by positing that males might have opted to pursue their studies abroad in face-to-face programmes or might not have needed a tertiary degree as much as females in order to advance their careers. While these are valid explanations, the implications are that the UWI's distance education programmes are not perceived to be meeting the needs of these learners. Bearing in mind that most of the UWI's current distance programmes are at the undergraduate level, the implications are that certificate, diploma and just-in-time training programmes are more likely to meet the specific needs of this group. It is therefore timely that, with the establishment of the UWI Open Campus, a Pre-University Department responsible for these types of programmes has been created within the Academic Programming and Delivery Division (APAD).

The findings with regards existing students' matriculation levels, their fairly extended period of time in the workforce and the fact that their interest in pursuing tertiary education is goal oriented, imply the need for graduate programmes that provide them with opportunities to gain further qualification in specific fields. Osoba (2000) posits that "UWI must also design more innovative and attractive [programmes] if it is to retain, at least, its regional pre-eminence in distance education" (p. 56).

In addition, the author proposes making programmes available "at the Master's degree level, as it is at this level that we receive most of our queries about the possibility of studying in particular fields at a distance" (p. 56).

It is therefore also timely that, with the establishment of the UWI Open Campus, a Graduate Programmes Department responsible for these types of programmes has been created within the Academic Programming and Delivery Division (APAD).

According to the findings of this study, the UWI distance students appear to be the traditional part-time, time-bound and place-bound ones and there is no indication that a shift or convergence between distance and on-campus study is taking place or likely to happen in the near or distant future. This trend is even more troubling in the context of the Caribbean's status as small island developing states (SIDS) where, as described by Roberts (2002), "Small population size and the related difficulty of the achievement of economies of scale is self-evident. The pool of lecturers is small and the pool of students is very limited" (p. 10). In addition, the fact that there is no clear stated provision for the seamless movement of students between the four campuses of the UWI has implications for the UWI's ability to offer a wide range of programmes in a wide range of formats across the Caribbean. Further, the fact that the pool of lecturers is small and campus-bound means that the UWI is not maximizing an already deficient human resource capacity and, in so doing, denying Caribbean students ready access to the region's expert academics. Roberts (2002) proposes the creation of a valid framework within which UWI can address these issues, "Perhaps the most difficult challenge however is that of creating in the tertiary education environment a new tradition of accommodating and respecting the value of diversity in the various forms of tertiary education delivery" (p. 26).

Implications for Online Teaching and Learning

The technological findings of this study indicate that UWI distance students do not possess the computer skills necessary to function effectively in the online teaching/learning environment. In fact, indications are that their computer skills have not improved significantly over the past eight to ten years. Added to this are the findings on students' dispositional characteristics which indicate 1) a moderate to low rating of participation in, motivation for and allocation of sufficient time for the discussion forums, which, based on the current design of UWI's distance courses, are the sole medium for ongoing student/student and/or student/course facilitator communication and interaction and 2) the fact that UWI distance students do not possess the ability to function autonomously and take responsibility for their own learning, key competencies in the online teaching and learning environment.

The technological findings underscore the need for a concerted effort and a higher level of systematic orientation and training in the use of computer applications and the Internet for these students. Kuboni et al. (2002) support this view and recommend that "some level of orientation and greater encouragement to use computer applications and the Internet may be necessary to enhance current usage." Findings on the dispositional characteristics, on the other hand, are not only troubling but not easily remedied. Explanations specific to the context of education in the Caribbean have been posited over the years. Osoba (2000) speaks of a "culture of learning" that she believes "Caribbean students, at all levels of the educational system, are being nurtured in, what is still, to a large extent, very traditional" (p.55). According to the author, in this traditional educational system, "students tend to be passive recipients of knowledge and skills imparted to them by someone considered more expert than they. Thus, there is generally an overwhelming need for a teacher; there is little emphasis on self-learning" (p. 55). In discussing barriers to access in tertiary education in the Commonwealth Caribbean, Roberts (2002) perceives the "culture of learning" observed by Osoba (2000) as attitudinal, that is, related to the attitudes of both teachers and learners to education. With regards learners' attitudes, the author notes that, "Many learners still lack the discipline, confidence and motivation to take responsibility for their own learning and function in a less controlled and more self directed learning environment" (p. 10). These explanations are valid and because they are specific to the Caribbean context should form the basis on which solutions to address these problems are sought.

To this end, the community of inquiry framework developed by Garrison, Anderson & Archer (2000) comprising the following three elements of an educational experience: cognitive presence, social presence and teaching presence offers a basis for interpreting the findings of this study. Stodel, Thompson & MacDonald (2006) also used this framework to interpret learners' perceptions on what was missing in the online environment. The five themes that emerged from their study are: robustness of online dialogue, spontaneity and improvisation, perceiving and being perceived by the other, getting to know others, and learning to be an online learner (p. 5). According to the authors:

> *"Using the community of inquiry framework to interpret our findings provided us with new understandings regarding online learning. We were able to view this course from an alternative perspective and see online experience in a new light. As the import of presence in an online environment was revealed, it became apparent that aspects of what online learners miss about F2F learning relate to deficiencies in presence"* (p. 17)

Based on the findings of the Stodel et al. (2006) study, the likelihood that deficiencies in presence, in any or a combination of these educational experiences are contributing factors to the UWI's distance learners' dispositional characteristics are worth considering. Emerging from the Stodel et al. (2006) study are the following recommendations for improving practice:

1) create opportunities to enhance spontaneity and emergent design,
2) coach learners how to learn online,
3) explore the use of diverse technologies for enhancing communication and social presence,
4) articulate and manage the expectations of the online community, and
5) understand all learners in online learning environments (p. 18-19).

The likelihood therefore that the asynchronous discussion forums, as the sole medium of building a community of inquiry, are not, in and of themselves, capable of improving practice for the UWI's distance learners is also worth considering.

It may therefore be worthwhile to consider what Fahy (2008) describes as "technologies used to overcome distance in online learning" (p. 167). One option is to examine individual technologies used to overcome distance in online learning with a view to including one or any combination into the design of the UWI's distance programmes. Fahy (2008) refers to these as online learning media tools and posits that they "are tools for cooperation, collaboration and communication" (p. 167). The author views these tools in the context of their "perceived relation to learning, the impact of media on learners' perceptions of isolation (transactional distance vs. community), and the role of teaching presence in meeting individual learning needs" (p. 169).

According to the author, "In addition to helping communities to develop and evolve, media allow individualized learning, reducing *transactional distance*" Moore 1991 (in Fahy, 2008). Specifically, the author discusses the technical and pedagogical characteristics of each of the following online tools: print and text, video and graphics, audio, mobile devices and the Internet, "in the context of their potential usefulness as tools for online teaching and learning" (p. 173).

Another option is to examine online environments that allow for synchronous and/or asynchronous instruction as a standalone or in tandem with one or a combination of individual technologies as part of the UWI's design of its distance programmes. These virtual classrooms are defined by Parker & Martin (2010) as "online environments that enable students and instructors to communicate synchronously using audio, video, text chat, interactive whiteboard, application sharing, instant polling etc. These features enable faculty and students to interact as if they were face to face in a classroom" (p. 135). The authors note that:

> ➢ "The interactive nature of the virtual classroom addresses the main challenges found in distance education, namely student involvement and participation" Arbaugh 2000a (in Parker & Martin 2010, p. 136),
> ➢ "The features of the virtual classroom promote interactivity, synchrony, usefulness and ease of use, and sense of community" Arbaugh 2000a (in Parker & Martin 2010, p. 137), and
> ➢ "The interactive nature of the virtual classroom, synchronous capability, usefulness and ease of use may promote a sense of community if the features are used effectively (p. 144).

Of interest to the design of online instruction at the UWI is the authors' report that "studies on the virtual classroom in fully online environments can incorporate learning styles or personality" (p. 145). The fact that the majority of students in this study perceive their learning preference as visual and/or read/write, suggests that the existing course design and delivery format reflect this preference. However, the current format excludes those students whose preference is aural and kinesthetic. The implications are therefore, that teaching strategies should include these preferences and the research in this area substantiates the ability of online technologies to do so. In addition, doing so becomes especially important if the UWI is serious about attracting a broader student base to its distance programmes.

The findings of this study indicate that from a logistical and technological perspective, the UWI's distance learners are in a position to avail themselves of technologies used to overcome distance in online learning. Their situational characteristics show a high percentage of the UWI's distance learners having their own computer at home with high speed Internet connection, paying reasonable flat rates for the service and accessing their courses from home rather than the UWI Learning Centres. This means that, technologically speaking, students are equipped to take full advantage of the convenience of place afforded by ICT, and if sessions are recorded, of time at some level. In addition, new programmes are and will continue to be offered by the new academic departments established within the UWI Open Campus. Currently, the Learning Centres have a maximum of two studios and teleconferencing sessions are scheduled from 5.30 pm till 9.30 pm on weekdays to accommodate students' work schedule. It is therefore evident that, in the not too distant future, it will be physically and logistically impossible for these Centres to accommodate the demand for its facilities. These trends highlight the need for the UWI to re-think the feasibility of further investment in its audio and video conferencing systems and give serious consideration to re-purposing the Learning Centres. On this note, Brown (2000) posits that the UWI's choosing to invest heavily in audio conferencing facilities at its Learning Centres rather than new media such as the Internet and World Wide Web "unnecessarily limits its delivery capacity, as well as the range of its potential clients.

Its choice also undermines the cost-effectiveness of its present programme" (p. 157). The author also posits that this 'choice' has not resulted in any fundamental shift in the way the UWI conducts its business since "In order to gain access to its services, clients of the university still have to go somewhere, to a specific place to do so, largely because, conceptually, the university remains a location-specific physical place" (p. 158). Referring to the use of the radio by the UWI in the 20th century, Brown (2000) makes the following observation and related recommendation that may still be pertinent in the 21st century in the context of the institution's provision of distance education: "The shift of orientation that the regional cultural context calls for is yet to be made by the university. That shift requires that the university delivers its services to its constituents where they are rather than have its constituents come to it for those services. In shortly, it necessitates taking the mountain to Mohammed" (p. 158).

Despite the strong case made for incorporating technologies to overcome distance in online learning and the indications that the UWI's distance students possess the technological capability, care needs to be taken to ensure that the use of ICT is purpose-driven and not technology-led. In this regard, Brown (2000) posits that, "While cutting edge media technologies open up enormous global possibilities for the University of the West Indies as a service provider in the area of distance education, the development of appropriate distance education strategies should be informed in the first instance by the socioeconomic and cultural reality of the Caribbean and only secondarily by such cutting edge technologies" (p. 155). The author notes, "Most importantly, sound policy requires being clear about the purposes to be served by the technologies of choice" (p. 158). He further notes, "what the appropriate mix should be will be influenced by factors such as the nature of the subject matter, who the clients are and the defined goals and objectives of any programme. Ultimately, the most successful distance education programmes are purpose-driven, not technology-led" (p. 160). Fahy (2008) supports this view in stating that his assessment of distance teaching and learning media is based:

> *"on the assumption that no medium, however technologically elegant, is de facto appropriate for all student audiences or learning contexts. The task of practitioners is to understand and better appreciate the implications of the various affordances and limitations of technologies and to monitor their readiness for use in online teaching and learning, as they change and develop" (p. 169)*

SUMMARY

The findings presented in this study indicate that the demographic, motivational and experiential characteristics of the UWI distance learner have remained relatively unchanged over the last eight to ten years: still predominantly female, employed full-time, needing to complete degree programmes for employment reasons, unable to attend a face-to-face campus due to family commitments, needing employment income while studying and technological proficiencies still relatively weak.

In addition, the inhibitory characteristics in this study suggest that the UWI distance learners' proficiencies in areas critical to distance education are relatively weak even though indications are that they have access to and are availing themselves of reliable, cost effective ICT from the convenience of their homes.

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The implications for online curriculum development include the need for pre-university and graduate programmes as well as the creation of an environment within the UWI that allows for the free movement of faculty and students across the four campuses. The implications for online teaching and learning include the need to develop students' computer skills and re-purposing the Learning Centres across the region.

Most importantly, the implications for online teaching and learning point to the need to design mechanisms that address deficiencies in presence experienced by the UWI's distance learners. In this regard, a strong case is made for appropriately incorporating technologies used to overcome distance in online learning.

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