

THE INFORMATION TECHNOLOGY PEACE CORPS VOLUNTEER:
EXPERIENCES, CHALLENGES, AND RECOMMENDATIONS FOR AND BY
THE VOLUNTEERS WHO WORK TO BRING AND TEACH TECHNOLOGY TO
HOST COUNTRY NATIONALS

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Abstract

Peace Corps Volunteers who serve to bring Information Technology (IT) skills to host country nationals face many interesting challenges, yet the impact that organized, well-funded Peace Corps IT initiatives have on the host country nationals is inspiring. Since the IT Volunteer category is so new, there is no collective body of information on this volunteer type. The following pages tell of the experiences of six individuals who have served as Peace Corps IT Volunteers: their unique experiences, their views on bringing technology to host country nationals, and their recommendations for how the Peace Corps and its IT volunteers can serve the host country nationals better. By reading the information within these pages, future Peace Corps IT volunteers will be better able to prepare themselves for the challenges, both technical and non-technical, that lay before them as they anticipate working to bring technology to host country nationals.

The Information Technology Peace Corps Volunteer:
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Work to Bring and Teach Technology to Host Country Nationals

Statement of the Problem

The category of Peace Corps Volunteer, termed Information Technology (IT) Volunteer, is a very new category. The category was introduced in 2000 to answer the needs of the host country nationals who had begun more and more to ask the volunteers serving in their communities for assistance with computers, email, and the Internet (S. Mortimer, Former Peace Corps IT Placement Officer, personal communication, March 3, 2003). The IT Volunteer works to bring and teach technology to host country nationals. Fisher (1998) describes in *Making Them Like Us* that Peace Corps Volunteers abandoned the use of the terms *developing world* and *third world*, as well as terms such as *local* and *native*, and replaced those terms with host country nationals, or HCNs, to describe the people they were living and working amongst.

The technology introduced or taught to the host country nationals ranges from computers to software, to email accounts, or to the Internet or networks. IT Volunteers face certain challenges unfamiliar to other Peace Corps Volunteers, since the equipment that they require, or the technology they teach on, is often costly and high maintenance. Even when host country nationals can afford the equipment, they may not have the resources to, or the knowledge of how to setup, configure, properly store, maintain, or utilize such new technology.

Environmental factors, such as heat, dust, and humidity, also often wreak havoc on equipment in the extreme climates where Peace Corps Volunteers serve.

No compilation has been written and published about the special challenges these volunteers face, or the individual or collective accomplishments they have already achieved. This project was chosen since it is not possible to find a collective body of information that focuses on the Peace Corps Volunteer who works to bring technology to various areas of the world. The need and importance of the project is more personal centered, since I am planning to serve as an IT Peace Corps Volunteer beginning in the Fall of 2003. Even though the initial push for the project is self-centered, the information collected in this project will serve other potential Peace Corps IT Volunteers as a collection of experiences to draw upon.

Goals, Objectives, and Benefits

By undertaking the task of writing about the experiences and challenges faced by Peace Corps Volunteers who introduce technology to host country nationals my hope is to create a collective body of information that will be a useful introductory tool for myself and other potential Peace Corps IT Volunteers. By bringing together the responses of six Peace Corps Volunteers who have worked to bring technology to host country nationals it will offer a small range of the potential hurdles IT Volunteers face and provide a glimpse into their perceptions of how the Peace Corps does it's job in appropriate job placements, how the host country nationals view the IT Volunteer's new ideas and efforts to teach technology, what recommendations these past and present IT Volunteers

have for future IT Volunteers, and what benefits the IT Volunteers felt they were able to bring the host country nationals through technology, if any.

A particular effort was made to include as much supplemental information with likely value to a potential IT Peace Corps Volunteer. A few articles posted to the www.peacecorpsonline.org message board, as well as several phone conversations with Peace Corps employees or former volunteers, supported ideas and points presented by the questioned IT Volunteers, and so they were cited to present the individual point as an idea shared by more than one.

By educating myself on the experiences of former or present IT Volunteers I should better be able to prepare myself for potential service and should be able to consider a proactive approach to addressing potential problems faced by an IT Peace Corps Volunteer before volunteer service even begins. The information collected in this project is of importance to a very select group of individuals, yet its value to those individuals is considerable since this body is a collection of what is to be known about the Peace Corps IT Volunteer, complete with outsider assessment and supplemental information.

The findings of this project offer hopeful IT Volunteer candidates the opportunity to consider obstacles to their success as an IT Volunteer that they may not have considered before. Certain volunteers would not be comfortable and would not want to spend two years with the understanding of potential obstacles or disorganization. By learning about these possibilities ahead of time, certain potential volunteers may be deterred from making a commitment that they might not be able to complete in the long run.

The Peace Corps and the host country nationals stand to benefit by weeding out potential IT Volunteers who do not see, in themselves, the flexibility and patience necessary to endure as a Peace Corps IT Volunteer. The Peace Corps would save on the expenses associated with misplacing a volunteer, like the costs associated with training a person to fill a position, meanwhile the person leaves before she can even put those skills to work. By weeding out inflexible volunteers early on, the host country nationals truly stand to benefit. The nationals benefit most because if they have requested a volunteer to serve in their community, and the volunteer only lasts two months, out of their two year assignment, then that community goes without the volunteer they had hoped would be there. Since the Peace Corps does not replace a volunteer who leaves early, it is the host country nationals who lose out the most when a volunteer early terminates. The completed project will be submitted to the Peace Corps former director of IT Volunteer Placement in Washington, DC.

Literature Review

President George W. Bush announced his commitment to the Peace Corps in his January 29, 2002 State of the Union Address. The President's words were printed on the inside cover of *Peace Corps: The Great Adventure* (2002), a book published by the Peace Corps and sent to potential Peace Corps Volunteers who have applied to and successfully achieved a nomination to join the Peace Corps. President Bush said,

'America needs citizens to extend the compassion of our country to every part of the world. So we will renew the promise of the Peace Corps,

double its volunteers over the next five years and ask it to join a new effort to encourage development and education and opportunity in the world' (inside cover).

The promise to double the number of volunteers over the next five years means that twice as many people in developing nations will be able to benefit from the skills and knowledge brought by Peace Corps Volunteers.

According to data, from the Peace Corps Web site (*Fast Facts*), updated March 15, 2003, there are currently 6,678 current Peace Corps Volunteers and Trainees. 61% are female and 39% are male. The average age of the volunteer is 28. 86% of Peace Corps Volunteers have an undergraduate degree and 12% have graduate studies/degrees. The volunteers work around the world in educational, health, environment, business, and agricultural sectors (*Fast Facts*). Information Technology Volunteers can work within any of the sectors, yet they are primarily part of the Education and Small Business sectors (J. Smith, Peace Corps Management Analyst, personal communication, April 28, 2003). As of February 2003, there have been only 59 returned Peace Corps Volunteers that hold the official title of IT Volunteer (D. Nanninga, Peace Corps Recruiter, personal communication, February 11, 2003).

The IT Volunteer Focus Area was officially established in 2000 and came about after volunteers in the field, from every sector, repeatedly stressed that the communities they were serving in were communicating a need and a desire to learn to use and incorporate computers and technology into their lives (S. Mortimer, Former Peace Corps IT Placement Officer, personal communication,

March 3, 2003). The Peace Corps has since done away with the position of IT Placement Officer and instead has moved to Regional Placement Officers, this way placement officers can become very familiar with the needs of the region and can better address those needs with the appropriate volunteers (S. Mortimer).

Nations that commonly request IT Volunteers and that have strong IT initiatives in place are Belize, Dominican Republic, Guyana, Kenya, and Nicaragua (S. Mortimer, 2003). According to the Peace Corps Web site page on the Dominican Republic,

in November 2000, the Government of the Dominican Republic requested Peace Corps' assistance in implementing information technology programs in the country. In response, Peace Corps Volunteers provides [sic] technical assistance for a national school-based computer laboratory project (*Dominican Republic*, 2003, ¶ 4).

IT Peace Corps Volunteers are placed in a variety of environments, such as schools to teach students or train educators, with entrepreneurs to help them set up small businesses, or with other non-governmental organizations (NGOs) to help them set up databases and information tracking systems (S. Mortimer).

The former IT Placement Officer, Sylvie Mortimer, expressed that the profile of the IT Volunteer has changed since its inception a few years ago (personal communication, March 3, 2003). In the beginning the requirements to become an IT Volunteer were not very strict and not very demanding. As the projects began to grow, nations began to request volunteers with more IT-

specific skills. This is when the Peace Corps began to do a considerable amount of recruiting in the Silicone Valley. The downturn of the economy caused a notable increase in the number of qualified IT Volunteers. In an article published in the *San Francisco Chronicle* in May 2001, titled “Former Dot-Com Workers Joining Peace Corps,” the author, Chuck Squatriglia, writes, “now that unemployment lines are teeming with former dot-comers and the Bay area economy is sputtering, the ‘toughest job you’ll ever love’ is looking more attractive” (¶ 5).

As the Peace Corps becomes more business-oriented and high-tech, computer junkies are finding their place amongst the volunteers (Squatriglia, 2001). Squatriglia’s article mentions some similarities that the high-tech world shares with the Peace Corps—“both encourage individualism while emphasizing teamwork [and] both favor people who can ‘think outside the box’” (¶ 19).

The purpose of IT Volunteers is to bridge the digital divide (*Focus Areas*, 2003). “The Peace Corps places Volunteers to work in Information Technology to assist communities and organizations to capitalize on available and appropriate information technologies” (Peace Corps assignment area 143 A & B, n.d., ¶ 3). According to *Focus Areas*, the Web page on the Peace Corps Web site that describes the IT Focus Area, the

[IT] Volunteers work with local organizations to provide young people and entrepreneurs with basic training in computer use and Internet technology, opening the doors to e-commerce for micro and small business ventures. By helping people learn more about the power of technology, Peace

Corps Volunteers expand the prospects for economic growth in the communities where they serve (2003, ¶ 2).

Even though the IT Volunteer is the main focus of the research for this project, two other volunteer categories are also occasionally involved in bringing and teaching technology to host country nationals. They are the Non-Governmental Organization Development Volunteers and the Community Services Volunteers. The Non-Governmental Organization Development Volunteer is equipped with “the skills, ideas and knowledge to enable a [non-profit organization or a non-governmental organization] to meet the needs of the population served while balancing future consequences . . . [The Volunteer] work[s] as an advisor to non-governmental organizations that deal with issues of environment, youth, social services, or business development” (Peace Corps assignment 145, n.d., ¶ 4). The Community Services Volunteer would be least likely to have the resources available to provide technological training, yet if the volunteer does have the appropriate resources, then she has the opportunity to introduce technology as she “work[s] on projects that address immediate needs which improve the quality of life and, at the same time, identify community assets to build long-term self-sufficiency” (Peace Corps assignment 162, n.d., ¶ 3).

Innovative programs, such as the AOL Time Warner Foundation’s 2001 opportunity, called the AOL Peace Packs program, have been presented by the media as providing additional resources for Peace Corps Volunteers to bring technology to host country nationals.

Initiated in January 2001, the Peace Packs program provides basic information technology resources to support a variety of community-based projects developed by Peace Corps Volunteers worldwide. The Peace Packs are grant awards that include computers, software, printers, Internet connectivity and various peripherals such as digital cameras, scanners and PDAs (“Peace Corps Awards Second Round...,” 2002, ¶ 2). This innovative program glittered on paper, yet proved to be not as user friendly to volunteers in the field as one would hope.

Design and Implementation of the Project

Approximately thirty former Peace Corps Volunteers who worked to bring technology to host country nationals were contacted in order to request that they complete my IT-Volunteer-specific questionnaire. Obtaining the contact information was a challenge from the start. Since returned Peace Corps Volunteer contact information is confidential, all contact information had to be obtained from current employees of the Peace Corps in the States. Since these people have jobs of their own, and project research is not the top of their priority, I spent a considerable amount of time following up or waiting for information that did not come only to have to then pick up and try to find yet another person to pursue for that information. I also discovered that not everyone I contacted was familiar with the category of IT Volunteer. I found this out the hard way after obtaining a list from one source that had about 20 names on it—the list was of Appropriate Technology Volunteers, not IT Volunteers, and I spent a

considerable amount of time distributing my questionnaire to these subjects before realizing I was aiming at the wrong target.

In the end, six appropriate respondents (see Table A) completed the questionnaire. The questionnaire (see Appendix A) was tailored slightly, to represent the present tense, so that the one Peace Corps Volunteer currently serving might properly complete it. In three of the six cases the respondents' answers required further expansion, so half of the surveyed volunteers received a follow up email with a second set of questions specifically tailored to that volunteer's initial responses. (Completed questionnaires are attached as Appendixes B, C, C1, D, E, E1, F, and F1.) As the responses were reviewed, supplemental information was sought, when appropriate, to provide an expanded view or a contrasting idea pertaining to the particular volunteer's statement. Assessment or commentary on the volunteers' responses was not completed until after all the information about a particular subject, or all the answers to a common question, were brought together and looked at collectively.

The greatest change in direction did not come until after all research was complete and brought together. The change in direction occurred because before collecting the questionnaires the thought was that a good deal of general assumptions would be able to be made based on the IT Volunteers responses to my questionnaire. I was wrong. The IT Peace Corps Volunteer's experience is just as unique as every other Peace Corps Volunteer's experience. While the case studies presented in this project do still hold value, in that they present glimpses into six Peace Corps IT Volunteer's experiences, they cannot

simply be generalized or easily compartmentalized, as was the notion before compiling the research.

Surveyed IT Volunteer Profile

Table A

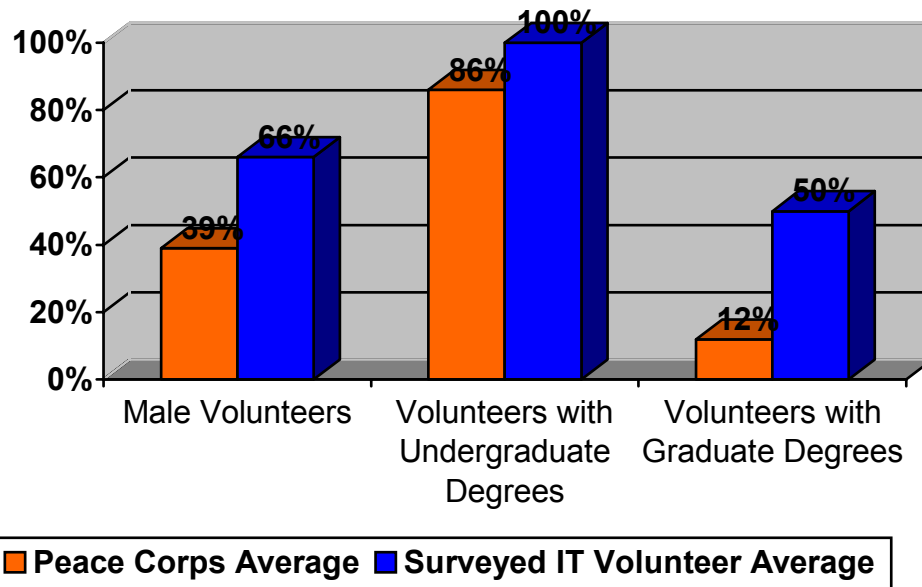
Surveyed IT Volunteers' Assignment Region, Description, and Length of Service

Respondent Number	Region of Service	Years of Service	Volunteer's Title/ Assignment	Appendix
1	Eldoret, Kenya	1992-1994	One in first group sent to teach IT skills in Kenya. Taught at a Polytechnic (junior college).	B
2	Niue, South Pacific	1998 (7 months of service)	Brought to teach IT to high school students. Ended up performing system administrator duties.	C & C1
3	Belmopan, Belize	2000-2002	Belize IT initiative to train primary school teachers in introductory computer skills. Married to Respondent #4.	D
4	Belmopan, Belize	2000-2002	Belize IT initiative to train primary school teachers in introductory computer skills. Married to Respondent #3.	D
5	Punta Gorda, Belize	2000-2002	Oversaw the setup of new computer lab in Punta Gorda and trained teachers to use and teach on these machines.	E & E1
6	Kisii, Kenya	2002-present	Small Enterprise Development and Information Communications Technology (SEDICT) Volunteer. Teaches Management Information Systems at a university.	F & F1

*Appendixes C1, E1, and F1 represent the three follow-up questionnaires.

Four of the six questionnaire respondents were men, an interesting number since the overall Peace Corps gender split weights heavier on the female side, with about a 60/40 split (*Fast Facts*, 2003). Two of the respondents served together as a married couple.

Figure 1. Peace Corps Average Volunteer Figures Compared to Surveyed IT Volunteer Averages.



100% of the respondents have college degrees, compared to the Peace Corps average of 86% (*Fast Facts*). Only one had a college degree specific to IT. Two of the six have completed graduate degrees, and yet another has a Ph.D. in Educational Psychology; only one completed a graduate degree pertinent to IT. Since, according to the Peace Corps Web site, only about 12% of all Peace Corps Volunteers have graduate degrees (*Fast Facts*), the population of this focus group tips the scale considerably, with 50% of the surveyed group

having earned a graduate degree before service. The volunteer with the graduate degree in Computer Science in Education found her degree extremely helpful, stating that the coursework and hands-on practice were exactly what she needed to prepare her for her IT project in Belize.

The other volunteers all stated that it was their work experience that added to the technical skills that enhanced their IT Volunteer service. The IT experience of the group ranged from four years to twenty-five years. The three volunteers with the advanced degrees were also the ones with the most IT experience—respondent #3 and her husband both had about twenty years of IT work experience and respondent #5 had about twenty-five years. Respondent #3 had taught computer science and computer courses, primarily at the high school level, as well as working as a technology coordinator and Webmaster. Respondent #4 had spent seventeen years managing a network of computers for a major telescope in Hawaii. Respondent #5 wrote that her work as an IT manager assisted in the development of the skills used to work with diverse populations with little or no training.

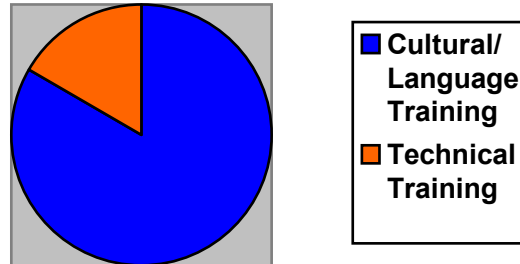
Present Kenyan volunteer, respondent #6, had four years IT work experience under his belt before being sent to teach IT at a Kenyan university. He wrote that even though his work experience is a valuable asset to his IT service, since so much of his work-acquired knowledge pertained to new machines, new software, and new technology; it has proved irrelevant being he teaches on such old computers, using such old software.

Usefulness of Peace Corps Training

The questionnaire respondents were asked about what portion of their Peace Corps training they found most useful during their service as IT Peace Corps Volunteer. Respondent #2 commented that the initial training was useful, but since at the time of his service, the late 1990's, the Peace Corps had no official recognition of an IT Volunteer, he had received no type of training geared toward the challenges he might face as a volunteer bringing technology to host country nationals. Respondent #1 felt that the language training was the most valuable aspect of his training. Respondent #6 agreed with the value of the language training, writing that the cultural/language training was about 100% useful, while the technical training was only about 10-15% useful. Respondents #3 & #4 stated that since they were already pretty experienced, the technical training was not as useful, but that the training on the cultural expectations of the student populations was useful.

Respondent #5 was the one volunteer who responded that the technical in-service training was the most valuable. Respondent #5 claims that the technical in-service training was very hands on and was developed for the first time when her team of IT Volunteers was in Belize. A facilitator from Washington, DC went to Belize to conduct the training, but it was really done by the in country Peace Corps Volunteer who had had previous training and experience. The Belize IT Volunteer team had to develop their own manuals, but learning from each other and sharing their experiences in the field were the most valuable learning tools for the volunteers.

Figure 2. Surveyed IT Volunteer's Perception of Which Type of Training They Found Most Useful



It seems that no matter what knowledge you hope to gain as a Peace Corps volunteer, the language and cultural expectations training are of greatest value to the new volunteer. Being able to communicate with those you are working with is key, but understanding their culture and learning about the expectations and needs of these people is just as important.

Challenges around Obtaining Needed Technology for Host Country Nationals

Since respondent #2 worked at the high school, and also helped out at government offices, the equipment was provided for by those agencies. Respondent #2 mentioned that a former Peace Corps Volunteer had stayed on the island of Niue and had become the main IT resource, as well as the ISP, and one of three non-Niuean's who controlled the .nu (Niue) top level domain. Respondent #2 developed a good relationship with this man, and that meant that having access to spare parts was easy for him.

Respondent #1, the only other IT Volunteer to serve before 2000, said that he didn't work to obtain any equipment at all. He was reluctant to obtain any extra equipment for his school because the students had such little access to the equipment the school already had, so he didn't feel it was right to add to an already awkward situation.

All of the volunteers who served in Belize said that the equipment for their projects was all provided by the Belizean government—respondent #5 said that the government of Belize provided 22 new Compaq computers for each district lab. As well as paying for computers, respondent #3 wrote that the government also paid for the Internet access for her project, while respondent #5 said that obtaining Internet connectivity was a real challenge with her project. Respondent #5 noted that all Internet and communications capabilities had to be bought, at an exorbitant cost, from the sole supplier in the country, called the BLT. The BLT had initially agreed to provide free Internet access to all schools, yet few received this free service. When asked what these schools did without the free Internet access, respondent #5 said that most of the schools simply went without connectivity. A few of the schools were able to pay the huge fees because they would charge local businesses to use the schools computers and Internet during non-school hours. Some of the schools in the southern district, where Shannon was stationed, are still without the necessary infrastructure to receive either voice or data communications, and that is not expected to change for at least another two more years.

Respondents #3 & #4 wrote that the government of Belize was responsible for providing the necessary equipment and computers for the project they were to work on. While the computers were suppose to be installed and ready to use upon the volunteer's arrival in June 2000, it wasn't until six months later that the computers arrived and were operational. Other computers that were suppose to arrive throughout the country's schools finally started to arrive in early 2002—about eighteen months after their expected arrival date. Another frustration experienced by respondents #3 & #4 was that their team did not have the money to purchase educational software that would have been useful to the Belizean educators.

It is interesting to look at the three Belizean volunteers' observations side by side. All three served in the same time period, yet the husband and wife team had a very different experience than respondent #5. One of respondent #5's greatest frustrations was the prohibitive cost of Internet access; while respondents #3 & #4 expressed no frustration in obtaining connectivity, they instead had to deal with waiting about six months for the equipment to arrive so they could begin work on the job they had been sent down to do.

Respondent #6 also wrote that his school provided the needed equipment, but that any non-standard equipment needs to be bought in the larger city, Nairobi, about 150 miles east of Kisii. Parts are of varying availability and often cost a significantly higher amount than they should. Respondent #6 faces many challenges brought on by the schools inability afford the needed books and computer parts. Respondent #6 has been further challenged by the schools

expectations that he provide such needed materials, which he cannot, of course, do. Respondent #6 does not have Internet at his site, yet he has access to the Internet through Internet cafes throughout the city--that is, when the electricity is operating properly.

Host Country National's Reception of IT Peace Corps Volunteers' Ideas

Neither of the pre-2000 respondents, #1 & #2, felt that their ideas and knowledge relating to technology were being well received by the host country nationals. Respondent #2 mentioned that those that grow up with IT are able to accommodate its rough edges, but since the people he was working to teach were not as flexible, respondent #2 felt that some of what he was trying to teach or pass on, such as the concept of passwords, met with resistance. Respondent #1's impression was even grimmer. Respondent #1 saw that the emphasis on teaching in Kenya was to teach to the existing syllabus and to prepare students for national exams. Very little thought, within the education community, was given to practical IT knowledge.

In contrast, the IT Volunteers who served after the millennium had a much greater sense of satisfaction pertaining to how their ideas and knowledge relating to technology were being received by the host country nationals. Respondents #3 & #4 expressed that the teachers they taught in Belize were excited about learning how to use computers and immediately began using them to complete teacher-related tasks, such as developing grade books using Excel, writing letters home to parents, and creating cards and signs. There were a few teachers who had computers at home or at school, so that they could practice

what they had learned in the volunteers' classes. While the teachers received technology and its uses well, they did not demonstrate a willingness or understanding that passing their new computer skills and knowledge to their students was the next logical step. Since many of the teachers did not have computers at the schools for their students, their resistance did make some sense. But respondents #3 & #4 felt it also had quite a lot to do with the primarily rote style of education that focused on memorization and regurgitation more than free-thinking, project-based lessons.

Respondent #5 expressed that she found that the host country nationals were open to most ideas, yet she did experience a bit of resistance from some of the host country nationals who were not as technically trained as the IT Peace Corps Volunteers. Respondent #5 pointed out that a great deal of diplomacy, as well as arbitration and compromise skills, are necessary when introducing change into rigid decision making structures. Respondent #5 also stressed that maybe more important than anything is practicing patience when introducing change.

Respondent #6 wrote that he sees the host country nationals he is working with as excited to learn about computers because they see knowledge about computers and technology as critical to their success. Respondent #6 struggles with the host country national's naive perception that IT knowledge is critical for their success and that with IT skills they will be able to find work and provide for their families.

How Education Can Cause or Exacerbate Difficulties for Host Country Nationals

In Making Them Like Us, Fischer (1998) tells this story:

Volunteers convinced some locals to change their ways, only to find that they had unleashed a new series of problems. [Peace Corps Volunteer,] Morritz Thomsen tells of one local, Ramon, who followed his instructions and examples more closely than anyone else in town. Ramon was rewarded with a modicum of financial success. Yet he was also rewarded with a new way of thinking that was not necessarily 'more developed' than the old. 'Before you came,' Ramon whined, 'well, you know how poor I was; I had nothing. But I was happy; I lived without worries. But now. My God, I am half crazy with worry.' Thompson had made Ramon into a petty capitalist, complete with stress and anxiety (141).

This statement demonstrates a disparaging reality that the Peace Corps Volunteer still faces today—progress often comes at a price to the people. Teaching skills to, or educating a people, may not change their lives in ways that are all positive or desired.

All of the volunteers surveyed were asked how they felt the host country nationals benefited from the technology implemented and taught by them. The responses to this question were revealing of the economic status of the regions in which these volunteers served. The Nuie, South Pacific, volunteer had left his assignment too suddenly to make a proper assessment of the benefits reaped by the host country nationals. Both African ITVs, respondents #1 and #6, noted that

it is extremely difficult for the host country nationals to find jobs, even after acquiring technical knowledge. Respondent #1 said that since the economy in Kenya was so depressed, very few of the Polytechnic graduates, Polytechnic graduates being the equivalent of American junior college graduates, could find work in their field of study. More of a benefit could be seen in the peripheral knowledge passed to other degree students, such as engineering and accounting students.

Respondent #6's assessment of the job opportunities in Kenya today is only slightly brighter than respondent #1's had been almost ten years ago. Respondent #6 writes that more and more Internet cafes and computer training facilities are currently popping up in smaller towns—this means more and more job opportunities for the technically trained, but the job openings are still limited. Respondent #6 described that in the city of Kisii, where he lives and works, the population is about 60,000 and there are only about four or five places that offer Internet access, and an additional four to five places offer computer training; about 30-40 computers, total, available to the public in a city of 60,000. The only other computer facilities in the city, to the best of respondent #6's knowledge, are located at a couple of the secondary schools in the city and at the technical college where respondent #6 teaches.

Respondent #6 is under the impression that most computer industry related positions are in Nairobi, a larger city located over 150 miles east of Kisii. He adds that many people do make the exodus to Nairobi because there is no room for them in the rural areas around the city where he lives. Respondent #6

describes that the family plots have been so subdivided that they are no longer big enough to provide food and an income for everyone in the family to live on. This perceived need to move to the big city may contribute to the host country national's eagerness to pursue degrees that deal with computers, which the majority of students have never even touched before their first professional degree course.

Respondent #6 wrote that the host country nationals see a professional degree dealing with computers as modern, new, and popular. Respondent #6 also sees that these students think that a technical degree will ensure them a job when they complete their program, but Respondent #6 sees that this perception by the host country nationals is probably incorrect, seeing as there are so many Kenyans with the same idea—that if they are educated in technology they will get jobs. An already tight job market is flooded with qualified individuals willing to work in a field with a limited number of positions needing to be filled.

Shanice Anderson, Peace Corps Volunteer in the Dominican Republic from 2001-2002, but not one of the surveyed group, told me in a telephone conversation (March 22, 2003) that even though she did not serve as a IT Peace Corps Volunteer she would be able to offer some insights, since she had been sent to serve as an IT Volunteer and spent a weekend with an IT Volunteer during her initial training before being reassigned to an eco-tourism position. Anderson was a volunteer in a town where the IT training of the host country nationals took place in a trailer with a satellite dish and six computers, yet one computer remained broken. The courses, mostly in how to use a Hotmail

account and Microsoft Word, cost money to participate in, since the community itself did not have enough money to provide free classes. The cost for the courses prohibited opportunity for all and limited the number of participants. The greatest challenge the IT Volunteer in that community faced was in keeping the IT initiative going after the Peace Corps Volunteer left. Shanice had spoke of what other volunteers have—once you educate, the educated move on, either to attend university in the city, if they could afford to, or to leave in hopes of making more money somewhere else. It becomes so there is no one trained and remaining in the small communities or villages to teach the computer courses or keep the programs initiated by the Peace Corps going.

This section reveals the flip side to the education coin—when you educate in small towns, cities, and villages, the educated begin to desire more and have to move to where the opportunity is--the big city. When these people leave to either continue their education or seek a higher paying job, they often become one of many and find themselves unable to afford the higher education or unable to obtain the desired job due to factors outside of their control, such as a flooded job market, an oppressive government, or economic hard times. The educated then struggle with not fitting in back in their home village, yet not being able to find opportunity elsewhere. It is a bleak picture for some.

Ways Belizean Host Country Nationals Benefited from IT Peace Corps Volunteers

All three Belizean volunteers surveyed, respondents #3, #4, and #5, were part of the Peace Corps IT initiative launched in July 2000. All three volunteers

were featured in the article, “Belize Gets Wired: A New Peace Corps Initiative Aims to Raise Computer Literacy in the Developing World” (n.d.). The article explains that

the Belize government has set a goal of placing computers in every primary school by the year 2005. ‘The Prime Minister told me that he doesn’t want his country to fall victim to the so-called digital divide,’ said Christ [the Peace Corps country director for Belize]. ‘[The Prime Minister] feels this program will be important for business development and investment, by training a skilled labor force (IEEE, n.d., ¶ 5).

The article goes on to say that even though many of the schools in the rural areas have neither phones nor electricity, they know about computers and are eager to begin learning how to use them.

The Belizean volunteers expressed more positive benefits derived from their teachings. Respondent #3 explained that she and her husband, respondent #4, taught the elementary school teachers practical skills to perform school-related tasks. Respondents #3 & #4 exposed the Internet to the host country nationals as an invaluable resource for small, rural schools with limited funds to provide libraries or textbooks. Respondent #3 also noted that they opened the educators’ eyes to the possibilities computers in schools present to them and their students. Respondent #3 wrote that they were told that what they taught changed the host country nationals’ lives forever and for the better. Respondent #4 was quoted in an article from *Computerworld* online magazine, called “IT Volunteers Recharged by Peace Corps,” as saying, “some of these people have

never seen a computer before . . . In a small country like this, you can have a big impact. So it feels good” (Solomon, 2001, ¶ 10).

Respondent #5 and her team built a state of the art computer lab and trained over 150 teachers in their district. The district was left with a facility as well as the technical skills to train their students. In fact, respondent #5’s Belizean counterpart is currently in charge of all technical training for the district. He had had no previous computer experience, but is now viewed as the office technical expert.

The Peace Corps IT initiative in Belize clearly reads like a success story, yet this success did not come without difficulties and challenges, as respondents #3 & #4 and respondent #5 have expressed. It cannot go without mentioning that the governments support of the IT initiative, both in policy and with the appropriate monetary backing, demonstrates its dedication to keep the countries youth ahead of the digital divide. The government’s view on technology, and the education of technology to its people, can be seen as an indicator of the success or failure of potential future IT initiatives in other nations.

Host Country National Government’s Perception of IT

Potential IT Peace Corps Volunteers need to consider the governments stance on the education of its people when considering if they will accept an invitation to teach IT in various regions of the world. As we have seen, in the contrast of the IT Volunteers’ experiences in Belize versus the volunteers who have served to teach technology in Africa, the governments stance on technology can make a real difference in how a volunteer feels about working

teaching it there. The Belizean volunteers felt that they were able to make a contribution to the growth of a nation, while the African IT Volunteers encountered much greater obstacles and questioned more why they were teaching to a group of individuals who were going to struggle to find a job that utilizes their new skills.

In “Africa Goes Online” (2001) Daniel Akst and Mike Jensen write that there is a general agreement among those with long experience trying to bring information technology to Africa that the difficulty is highly regulated telecommunications services, usually appearing in the form of a moribund state-owned monopoly that is expensive and wary of change—especially of change embodied by a medium as potentially subversive as the Internet (§ 21).

UN aid worker, Nancy Hafkin, takes the direct approach by stating in Akst and Jensen’s article, “African governments are the big barrier to progress in this area as in most areas” (§ 20).

I think that a potential IT Volunteer would be doing herself a great favor by communicating with a few current IT Volunteers, if there are any at the time, in the region they are invited to serve in before accepting an invitation in order to be sure that the volunteer will be able to handle the possible lack of support by the country’s government.

Most Challenging Aspects of IT Peace Corps Volunteer Service

Volunteers surveyed described the unique challenges that most affected them during their service. While these challenges may be particular to each

individual, they do present a glimpse of the possible struggles other IT Peace Corps Volunteers might face.

Early IT volunteer respondent #2, who was brought to the South Pacific Island of Niue for the purpose of teaching high school, found himself being the campus systems administrator. When asked if respondent #2 felt it was hard to set boundaries with the host country nationals who expected more from him than was actually his job duties, he responded with a negative. Respondent #2 simply had to accept that if he wanted a classroom of computers that worked, or a network to work on, then he was his only resource. Respondent #2 mentioned that his extra requests as the systems administrator did not take away from his main objective of teaching at the high school. Teaching had become his oasis, but the teaching, combined with the system administrator demands, did eat far too much into the volunteer's personal time.

Another difficulty respondent #2 mentioned was the use of Windows 95, which he did not find suitable for the high school environment. Respondent #2 also mentioned that on several occasions he had re-imaged a machine only to have it picked apart to a state of uselessness in under a week. By picked apart, respondent #2 is referring to the fact that essential files, such as Dynamic Link Libraries (DLLs), would be removed from the machine. When asked who was responsible for rendering these machines useless, he responded that it had been not only students, but also children of the staff. Respondent #2 added that there was evidence that one incident in particular was malicious.

A challenge mentioned by half of the volunteers surveyed was the difficulty in teaching in a rote learning system. Respondent #1 wrote that the hardest aspect to overcome was getting past the rote system of learning practiced in Kenya. Respondent #1 stated that the Kenyan students were spectacularly good at memorizing text and completely unprepared to perform any creative problem resolution. Respondents #3 & #4 encountered the same, primarily rote, system of education in Belize. Respondent #3 expressed that it was like pulling teeth to engage a class in group discussion because the population was not used to group discussions, thinking about ideas, or answering questions that have multiple right answers.

Respondents #3 & #4 also expressed other difficulties they and their teammates found teaching IT to Belizeans. First, the classes would have a few students who were familiar with computers, but many of the students had never even touched a computer before. This meant that the instructors had to teach their students all the basics, and this started with using a mouse. Respondent #3 expressed the patience necessary to instruct an adult Belizean to manipulate a mouse since it is a practice that, as an American, we expect a three-year-old to be able to do with ease. Forty-year-old teachers were very awkward trying to make the mouse do what we consider commonplace in the States, so much patience was required by the volunteers to get their students comfortable using the mouse.

Respondent #5 also worked teaching IT to Belizeans. Respondent #5 wrote that her team had very little difficulty filling classes since everyone wanted

to improve their computer skills. Respondent #5 recognized that since so few students had access to any type of computer outside the classroom, it limited the speed at which they could learn and made it difficult for them to retain what they were being taught. Since the teaching of these students required much more in class repetition of lessons to retain what they learned on the computers, it did limit the speed with which the classes could be taught.

Respondent #6 also struggled with the difficulties of teaching to students with limited access to computers. Respondent #6 has found himself teaching a course on Management Information Systems; a rather advanced topic for a class of students in which he says about 50% had never even seen a computer before his class and about 80% had never used one. Respondent #6 wrote that trying to teach people who have never seen a computer before what networking is and why it is important is quite a challenge.

The absence of any computer or business experience within his students, and the university's demand that these advanced computer topics be taught without enforcing any prerequisites, like basic computer skills training, is a challenging aspect of respondent #6's service. During his first teaching term respondent #6 approximated that he spent 40-50% of his class time simply getting students caught up on basic computer skills. At the current time, as long as the student can pay the school fees they can enroll in advanced classes without having any basic computer training. Respondent #6 is working to encourage the university where he teaches in Kenya to implement prerequisites,

such as the minimal basic computer skills course, before students are able to participate in advanced courses.

Environmental Factors Create Further Challenges

A couple of the IT Peace Corps Volunteers commented on how environmental factors create further challenges for the volunteers who spread knowledge of technology. Respondent #2 commented that the climate in Niue was hard on the equipment, even the floppy disks. Respondent #2 explained that the floppy disks for sale in tropical climates are formulated with anti-fungal agents in the oxide binders, which helped. Respondent #2 also mentioned that connectors needed reseating much more often than is done in a typical, controlled office environment, as would be common in the States. When asked whether he was able to take preventative measures to protect the equipment, he explained that the classroom that housed the computers did have air conditioning units, which would help create a more controlled, ideal environment.

Belizean volunteer respondent #5 expressed that even tougher than obtaining equipment was maintaining the equipment she had in her lab. Due to the absence of air conditioning in the lab, the dust, heat, and humidity wreaked havoc on the equipment and meant that something always needed repair. Since getting replacement parts or finding anyone to service the equipment was so difficult, equipment was often out for repair for months at a time. Respondent #5 said that some of the equipment never got the needed repairs.

When respondent #5 was asked how the dust, heat, and humidity specifically affected the equipment she wrote that the dust and humidity would

cause circuit boards and disk drives to fail. Respondent #5 disclosed that about 35% of their initial shipment of 1000 brand new computers failed within the first three months of being in Belize. Another factor contributing to the IT Volunteers frustrations was the unreliability of the electrical current supply, which would burn out power supplies constantly.

Respondent #5 did try to take as many preventative measures as possible to protect the equipment. She and her team used UPS and power strips to regulate the electricity surges to the equipment. Combating the heat and humidity was impossible though since air conditioning would be the ideal solution, but most of the labs and none of the schools could afford the climate control. To protect the equipment from dust, respondent #5 and her team would cover all the equipment every night. They would perform preventative maintenance on a routine basis, like cleaning all the parts of the equipment and keeping the rooms as clean as possible.

AOL Peace Packs Program

Of all those surveyed, half of the respondents served in the timeframe when they would have been eligible to receive an AOL Peace Packs grant to bring needed equipment to their host country nationals. The three volunteers were respondents #3, #4, and #5, and all served in Belize from 2000-2002. Respondent #5 wrote that she was part of one of the first groups eligible for the Peace Packs, but the program she was working within was so new that they did not have the correct procedures in place to apply and they missed the first deadline. Respondent #5 stated that she didn't feel the application process or

Peace Packs requirements were overly restricting, but that it was the newness of her IT program in Belize that hampered them from applying for the Peace Packs grant before the initial deadline. Respondent #5 also mentioned that the IT group that followed hers was very successful at obtaining the Peace Packs grant.

Respondents #3 and #4's experience with and knowledge of the Peace Packs Grant Program was not necessarily a positive one. Respondent #3 said that her team had been given instructions from the Washington, DC Peace Corps office. When respondents #3 and #4's group submitted their application to the local Peace Corps office in Belize they were told that the Peace Pack's program guidelines had changed and that their application and proposed project would have to be rewritten. The team was given only one day to make the significant changes to meet the next deadline. In addition, respondents #3 and #4 were already halfway through their two years of service, which would have been counted against the applicants in the selection process, since the team would not have been around long enough to implement and evaluate the project according to the grant guidelines. After all that work putting together the application and the project details according to the incorrect set of instructions, respondents #3 and #4's team decided not to rewrite the project in the one day they had to do so before the deadline.

Respondent #3 also expressed that she knew of other volunteers who had trouble submitting their proposals through the Peace Packs Program due to changing regulations and guidelines. Respondent #3 knew only one successful volunteer applicant. She attributes most of the applicant's success to the fact

that he applied immediately after the program was announced and before the guidelines were tightened up. To respondents #3 and #4, the program initially sounded like a great deal and a sure thing, yet the volunteers became very frustrated with the constantly changing expectations of the application and its process.

This section on the AOL Peace Packs program demonstrates other potential obstacles IT Peace Corps Volunteers might face. When initially reading about the AOL Peace Packs Program it sounded like such a great initiative and an incredible opportunity for IT Peace Corps Volunteers to bring extra equipment and technology based services to the communities where they were serving. Looking at and reading the fifteen page *AOL Peace Pack Volunteer Guidance, June 2001*, distributed by the Peace Corps in Washington, DC, the application looks promising and full of opportunity, but it sounds as if some volunteers encountered obstacles with an application process and application guidelines that were not as simple and straight forward as they initially seemed.

What can be gained by this evaluation is that if volunteers are presented with the opportunity to apply for other such grants, that they spend some time in the onset asking others in their field if they have applied for this particular grant in order to gain a general sense of the ease or difficulties that the applicant faces. It sounds as if in the case of respondents #3 and #4 the Peace Corps office in DC was distributing outdated application guidelines. Whenever possible, volunteers should attempt to contact the awardee of the grant to ensure that they are utilizing the correct application and guidelines. It also seems that applying

early contributed to the success of at least one volunteer who respondents #3 & #4 mentioned as obtaining the grant, so handing in applications as much in advance of deadlines as possible would also be recommended.

The Value of the Internet to Host Country Nationals

Even though a few of the volunteers mentioned difficulties surrounding Internet service—like respondent #5, who expressed that the ISP in Belize charged exorbitant fees, preventing many schools from being able to afford the service; and respondent #6, who must travel outside of his classroom to Internet cafes to use the Internet, and then the frequent power outages mean his time on the Web can be limited—the Internet, when working properly, is an invaluable resource for host country nationals. In some instances it can simply mean enjoyment for the host country nationals. Respondent #2 wrote that the kids he worked with were able to send email to each other on a solitary machine, and that was a big excitement for them. Non-surveyed Peace Corps Volunteer, Tim Mallon, who served in Cochabamba, Bolivia as a non-IT Volunteer in the late 1990s, had spoke of the numerous times he had been approached by host country nationals wanting assistance with or to be taught how to setup and use email and the Internet (personal communication, January 27, 2003).

Respondent #5 expressed that some of the schools that could not afford to pay for the ISP on their own became resourceful and would sell the use of their computers and the Internet to local business people at night to pay for the high costs of the ISP, thus benefiting not only the school system, but the local

business owners as well. Respondent #5 currently keeps in touch with the host country nationals in Belize who are utilizing the Internet skills she taught them.

As respondents #3 and #4 mentioned, the Internet is an expansive resource for small, rural schools that cannot afford to provide the students with textbooks, let alone an extensive library. Patrick and Jacqueline Duffy-Saenz agree with respondents #3 and #4's idea of the Internet as an invaluable resource. In the article, "U.S. Peace Corps Veterans Tell Why the Third World Needs the Net," the Duffy-Saenz's write that "the Internet is just a vehicle, and a vehicle is useless if it lacks direction" (n.d., ¶ 6). The couple had worked as volunteers in Uruguay from 1995-1997 and it did not take them long to see that they needed a way to connect the host country nationals with the information available to the rest of the connected world. In Uruguay, one textbook costs about as much as a teacher's monthly salary. Having heavy books shipped from the States is also extremely costly, and one cannot be certain that the packaged books would arrive at all. Since the costs of books is so prohibitive, the Duffy-Saenz's spent two months searching for an ISP, and once they found one they were amazed at how quickly the Internet boomed in Uruguay.

The Duffy-Saenz's wrote that "[the Internet] will not only link people and places, but also ideas and solutions to common problems" (¶ 11). The Duffy-Saenz article explains that, with the Internet, the host country nationals were able to put together an environmental resource library for students and educators to be used to spread knowledge on recycling, waste management, endangered plant and animals; the non-governmental organizations became linked up with

potential sources of financial aid for organizations that would help to build up non-governmental organizations; educators had access to curriculum and lesson plans that helped enrich their classrooms; and one environmental non-governmental organization contacted an organization through the Web that sent them hundreds of packets of flower, vegetable and legume seeds. The Internet has brought an abundant wealth of information to the host country nationals of Uruguay thanks to two volunteers with the will, and the resources, to make it happen.

The Exit Interview

The surveyed were questioned about whether or not they felt the Peace Corps asked questions, during the volunteer's exit interview, which would aid future IT volunteers. Respondent #2 answered that since the IT Volunteer had not been formally recognized at the time of his service, he was not asked questions particular to his plight to teach technology to host country nationals. Respondent #1, who was also an early IT Volunteer, answered that he had not been asked questions particular to teaching technology to host country nationals either.

What became apparent through the responses to this question was that the Peace Corps was not asking questions geared to assist future technology volunteers during the exit interview, yet IT Volunteers who served after the year 2000 did write that the Peace Corps was receiving input from this particular category of volunteers about their IT specific service. Still, I did not get the impression from those polled that, to the best of their knowledge, the Peace

Corps was asking questions with the intention of making things easier for future Peace Corps IT Volunteers.

Respondent #3 wrote that her and her husband's exit interview was more of just a well-wishing, but that the quarterly reports the group submitted, and the periodic personal chats and workshops the IT Volunteers had, were opportunities for the IT Volunteer to inform the American country director and Belizean assistant director about the group's progress.

Respondent #5 responded that during her exit interview she was asked about her experiences, good and bad, but that the questions were very specific to her particular project and not the IT program in general. Respondent #5 felt that the technical in-service training sessions offered the volunteers opportunities to offer input to future IT Volunteers. This practice of in country, experienced IT Volunteers passing knowledge to brand new IT Volunteers merely exemplifies that the Peace Corps IT Volunteer is unable to find out about the particular challenges posed to an IT Volunteer until they already make the commitment to service and actually begin in country training.

Recommendations for Future IT Peace Corps Volunteers from the Surveyed Group

While respondent #2 had no recommendations or suggestions for future IT Peace Corps Volunteers, possibly because he had left his service suddenly after only seven months, the others surveyed had plenty to say. The respondents were asked, do you have any recommendations for future technology related Peace Corps Volunteers and what suggestions do you have for other volunteers

who will work to bring or teach technology to host country nationals?

Respondents were purposely asked the above questions separately, as questions 16 and 19 on the questionnaire. Each question asks basically the same thing, yet the intention was to draw out as many recommendations for future IT Peace Corps Volunteers as possible. Here are their exact responses to the questions:

Respondent #1:

Each situation is different, but I would've been better served if I had understood the situation of my placement.

I did try to initiate some other work within my city in helping some startup IT businesses but by the time that was underway my two years were up.

Volunteers need to be aware that this is a slow moving process and that Peace Corps is not affected by an individual volunteer making little or no progress in advancing technology in their host country.

Respondents #3 &4:

1. Patience, patience, patience! 2. Make your examples pertinent to their culture or working situation. 3. Have fun and get to know your students – most likely they will be wonderful people.

The primary purpose of our project was to teach educators how to use computers in their schools. Thus, people needed to know how to teach adults and how to use computers. In my group of IT PCVs, very few volunteers had much teaching experience, and only two had computer teaching experience. In addition, most had little IT knowledge; they knew how to word process and that was about it. So these volunteers had to

learn how to be effective teachers as well as their teaching topics while on the job. For some this was difficult and led to some stress. In the second year of the Belize IT project, the focus was more on teaching educators how to repair computers. So in that group of IT PCVs, the group that followed us, there were a few highly qualified computer engineer types. They were what you might call “geeks.” Despite the Belizean government’s request for techies, they had difficulty placing such highly qualified persons in jobs that enabled them to use their skills in a worthwhile manner. As a result, some left and some got reassigned to other types of jobs, including teaching computer applications to educators. So, in sum, my recommendations are: (1) Peace Corps needs to do a better job of matching potential PCV with in-country job assignment. First, Peace Corps in country needs to get a specific job description for every placement and then communicate these clearly to Peace Corps Washington. Then Peace Corps Washington needs to do a good job matching potential PCVs with the intended jobs and the skills required before sending people off to foreign countries. The potential PCVs need to be told what the expectations of their assignments will be and then Peace Corps needs to follow through with that. (2) In addition, volunteers need to have good people skills to be successful at most any job assignment in Peace Corps.

Respondent #5:

I think that will depend on the particular situation in each country. I do think that volunteers have to be extremely knowledgeable of both the software and hardware associated with whatever technology they wish to use. They will be viewed as the experts in all aspects whether or not they have the training.

I found the experience extremely challenging, but at the same time rewarding. Technology has played an important part in my professional life and the Peace Corps gave me the opportunity to use my experience to

help others. The most surprising thing to me was how eager HCNs were to participate in our programs. We had no problem getting them involved or excited about what we were doing, while PCVs in other areas such as rural development, etc, sometimes had to struggle to get local participation.

My recommendation would be to come prepared and be open-minded. You never know what to expect, but you'll always feel needed.

Respondent #6

Manage your expectations, don't expect to be working with the latest computers, programs, etc. Practice troubleshooting now. Come with an open-mind, patience, and persistence. The task is difficult, but incredibly rewarding.

The volunteers put it best by expressing, in their own words, what they believe might help the Peace Corps in its handling of the IT Volunteer and the IT Volunteer in its handling of the Peace Corps and the host country nationals they serve.

Issues Around Placement of Peace Corps Volunteers

A few of the volunteers expressed their concern over issues about placements. Respondent #1 mentions in his closing recommendation that he would have been better served by the Peace Corps if he had understood the situation of his placement better. Almost a decade later the Peace Corps is still struggling with communication and organization around placement concerns. Respondents #3 & #4 also mentioned in their closing recommendation how the government of Belize had specifically requested technically skilled volunteers,

but once the volunteers were there, the volunteers did not have specific or appropriate assignments that utilized their skills to their fullest potential, so some of the volunteers left or were reassigned. It is interesting to note that the volunteers were asked to give recommendations for future technology related Peace Corps Volunteers, *not* to give recommendations to the Peace Corps, yet half of the respondents did address their recommendation to the Peace Corps and the way the agency handles the placement of volunteers.

Shanice Anderson's name was on the contact list I received from Peace Corps Recruiter, Kathleen Stolle, (March 3, 2003). On the sheet Anderson was classified in category 143, which meant she served as an IT Volunteer. Yet when contacted on March 22, the Dominican Republic volunteer explained that even though she had been sent by the Peace Corps to be an IT Volunteer, after being in country, Anderson was switched to work instead as an eco-tourism volunteer. When asked why the switch in her assignment occurred, Shanice (personal communication, April 28, 2003) explained that the non-governmental organization she was sent to bring technology skills to was not as organized or as enthusiastic as the Peace Corps wanted, so the Peace Corps sought out another assignment in that region for the volunteer, and they discovered the group that worked with eco-tourism.

Since Anderson remains in the Peace Corps database as being classified as an IT Volunteer, even though she did not serve as one, this creates questions as to how accurate the agencies numbers are. How many other volunteers are sent to bring IT to host country nationals, only to have their assignment switched

upon arrival? How often do they remain classified as an IT Volunteer even though they do not serve as one?

Part of the difficulties the Peace Corps has with its placement of highly skilled individuals may, in part, have to do with the agency's history. In *Making Them Like Us*, Fischer (1998) writes that from the onset the Peace Corps specifically recruited BA generalists, since the personality type would be more flexible and the volunteer would have general knowledge, but not a specific skill. Fischer expanded by writing that "the Peace Corps leadership worried about making the Peace Corps a professional organization. They believed the Peace Corps essence demanded the volunteers be qualified to do many things but not eminently qualified to do anything" (154).

Imbedded in the agency's history is the idea that the Peace Corps Volunteer is above all else flexible and patient, yet that the volunteer is not specifically skilled in any one area. As demonstrated by the surveyed group in this paper, 100% with college degrees and 50% with advanced degrees, the IT Focus Area draws a more educated, technically experienced volunteer. By creating the Information Technology Focus Area of volunteers, the Peace Corps has grown away from its initial intention for a volunteer and has made that intention more skill related, yet the agency's skills in handling this technically adept volunteer may not be growing at a complimentary pace.

Triumphant, a Strong Word

All of the surveyed volunteers were asked if they felt triumphant about the technology they taught as IT Peace Corps Volunteers. The phrasing of the

question may have led a bit to the general response, but regardless, a couple of the volunteers expressed that they thought that triumphant was too strong of a word. Respondent #2 expressed that he felt he made a positive difference, but that triumphant was a 'suspect word.' Respondent #5 expressed that even though she is thoroughly proud and satisfied that she was able to improve the computer literacy of educators in Belize, she felt that since there is still so much to be done in Belize, and since she feels she maybe could have done more, that triumphant is not the word she would use. Respondent #1 did not necessarily disagree with the use of the word triumphant; he simply stated that he did not feel triumphant about the technology he worked to bring to the host country nationals in the early nineties. Respondent #1 felt that he was a political appointee and that his hours of teaching merely enabled the host country nationals' educators to focus on their second jobs. Since respondent #6's service is still continuing, he could not respond to this question the same way, yet he did say that he felt that he was successfully teaching the host country nationals his acquired IT skills. Respondents #3 and #4 were the two volunteers who expressed a feeling of triumph concerning the IT knowledge they passed to host country nationals.

Even though triumphant may be a strong word, the majority of volunteers surveyed felt that the host country nationals would continue to utilize the technology and processes the volunteers worked to implement. Since respondent #6's service is still in progress, he is unable to assess the longevity of his work at this time. Respondent #1, the earliest of the volunteers surveyed, was the only one that responded with a negative. The trend in a positive sense

of the transfer of information, from a negative sense a decade earlier, shows that as the Peace Corps IT initiative has grown, so has the initiative's ability to make a lasting difference.

Results of the Project

After completing months of research and interviews I have discovered that the most important characteristics or skills for a Peace Corps IT Volunteer to have are the same for an Educational Volunteer or an Agricultural Volunteer—patience, flexibility, and good people skills. Since a person working in IT is typically accustomed to troubleshooting and jumping to plan B, C, or D, if plan A didn't initially work, the IT Volunteer's troubleshooting skills work well in the uncertain and often challenging environment the Peace Corps places her in. While the IT Volunteer's troubleshooting skills serve her well in the host country, a technically skilled and trained person may be more uncomfortable during periods of waiting for equipment to arrive or if their placement does not properly utilize their specific technical skills. This said, the below sections offer recommendations to accommodate some of the multiple areas of concern raised in this paper.

Tap Into Peace Corps Resources

One of the most valuable resources uncovered during my research for this project was not stumbled upon until after over two months of research. No where on the peacecorps.gov Web site, nor through the numerous personal inquiries I made to former Peace Corps Volunteers and current Peace Corps employees, was the Web site, peacecorpsonline.org mentioned. That Web site contains

articles, stories, and Message Board postings rich with information pertaining to bringing technology to host country nationals. The Peace Corps would serve its potential IT Volunteers well by informing them of this great resource to learn of what former volunteers have to say about bringing technology to host country nationals around the world.

Become Familiar with a Rote System of Education

Before flying off to teach IT skills to host country nationals, take the time to learn about what a rote system of education is like. Never having heard of a rote system of education, I was interested to hear of the challenges it presented the surveyed IT volunteers. Since many around the world are educated in the rote manner, memorize and regurgitate, it would be helpful to seek some information, before setting off, on how to encourage creative thinking amongst people who are not used to brainstorming and freethinking in the classroom.

Back to Basics

Future IT Volunteers will be doing themselves a great service by keeping in the back of their mind that they may be teaching technology to people who have never even seen, let alone touched, a computer before. Be prepared, with patience, to be teaching the absolute basics, like maneuvering a mouse.

Also consider that you may be working on outdated machines, using outdated software. By contacting the regional director where you intend to serve, the potential volunteer might be able to get a better idea of what condition the equipment is in and what types of software that equipment is running. The potential volunteer's recruiter should be able to furnish the future volunteer with

the email address for the regional director to find out about what type of equipment the future volunteer will most likely be working on.

Change Management Skills

The Peace Corps should encourage future IT Volunteers to learn as much as possible about introducing and managing change. Since introducing change more often than not causes anxieties and anticipation, no matter what the culture or environment, learning about how to possibly handle the awkwardness of change may help the IT Volunteer anticipate the possible frustrations of those she is trying to teach IT skills to. By learning about how others have overcome resistance to change, the volunteer will be better prepared to apply what she has learned when working with host country nationals. *The Change Monster: The Human Forces that Fuel or Foil Corporate Transformation and Change* (2001), by Jeannie Duck, does mention a corporate environment in the title, but the examples and suggestions given in that book can be applied to just about any situation in which change is being introduced. A book such as *The Change Monster* is an excellent tool for future IT Peace Corps Volunteers, as well as all other categories of Peace Corps Volunteers.

Manage Expectations

Also reinforced through this project is the idea that one should not join the Peace Corps to feel triumphant. The Peace Corps is a wonderful avenue for an individual to share her skills with a different culture of people, but the small wins need to be celebrated since the small wins may be all one is able to accomplish within her two years of service.

Along with managing one's expectation is the reality that the IT Volunteer must accept—that the technological education she brings may not change for the better the lives of the host country nationals. By accepting, in advance, the chance that one's two years of service may be essentially fruitless, an IT volunteer, more than likely, will end up pleasantly surprised rather than frustratingly disappointed.

Learn About Region of Service

Not to be ignored is the difference between a region whose government supports the spread of education and technology and a region whose government does not implement policies that demonstrate support for such a spread of knowledge. Potential IT Volunteers should begin looking into the job climate in the region they are to serve in so that they can prepare themselves for the educational tone they are more than likely to encounter. It can make a considerable difference in the volunteer's perception of the difference she is able to make to a community and could be a deciding factor in a volunteer's longevity to serve in a disparate region.

Learn About Environment of Region of Service

By learning of the environmental conditions that may be harmful to computer equipment, a potential volunteer will be able to study up on the possible preventative measures to take to combat those conditions. By learning of the potential harmful effects of sunlight, dust, heat, or humidity, a volunteer can become better aware of what measures must be taken to ensure the longevity of the equipment.

Network

As suggested above, contacting the regional director where one is to serve is a great start to establishing contacts. Requesting contact information for, and communicating with, current IT volunteers in that region will not only answer some of your pre-service questions, but these pre-established contacts may serve the volunteer well once in country. As respondent #2 pointed out, after he became friends with a former Peace Corps volunteer in Nuie, he had a much easier time accessing spare computer parts.

Past and present IT volunteers are great contacts to have and can provide valuable advice and recommendations; like the example of how respondent #5 and the host country nationals devised a means of paying for Internet service in the schools—by allowing local businesses to use the computers and Internet at night for a fee. Learning how IT Volunteers and host country nationals have resolved problems is proactive and adds to the resources a potential IT volunteer carries with her during her service.

Discussion/Implications

In pursuit of information pertaining to the triumphs and challenges faced by IT Volunteers who work to bring and teach technology to host country nationals, the material that fills these pages was collected and materialized into a much different project than initially envisioned. The initial questionnaire did point the respondent in a particular direction, yet the volunteers' responses ended up taking control of the project by adding to it important subject areas not initially considered. It is the respondents, and the abundant feedback they have

provided, that have made this project a success. This project is considered a success because it serves as an information source and makes the reader familiar with some of the particular challenges, accomplishments, perceptions, and frustrations faced by the Peace Corps IT Volunteer. The surveyed group offers valuable suggestions, not only to future IT Peace Corps Volunteers, but also to the Peace Corps representatives who are responsible for appropriately placing these experienced individuals. The flexibility demonstrated in the approach and completion of this project has served the composer and the reader well.

Even though this project is considered a success, if certain factors were not present, the project may have been even more thorough. The first limiting factor is that I am only a nominated candidate for Peace Corps service, so I have limited access to information and limited knowledge of how best to maneuver the Peace Corps and its affiliated resources to obtain the information I need. Had I been a current Peace Corps Volunteer or a returned Peace Corps Volunteer, while working on this project, I would have undoubtedly had more access to pertinent information and contacts.

The second limiting factor is my inexperience creating interview questions like the ones used in the distributed questionnaires. Possibly having had more time to focus solely on the questions asked, and learning how to put those questions in a way that would draw the most information, would have been extremely helpful and may have opened up the project's results even more.

Another limiting factor was that all questionnaires were distributed through email and returned to me by email. This required an initial email to request their willingness to complete my questionnaire, and then I would wait for a response. Once the questionnaire was returned to me, I would read through it and come up with additional questions, when necessary, and email those back out and wait for a response yet again. Even after I had completed those steps I would naturally come up with other questions based on the volunteers' responses, which would require more emailing and waiting. The respondents to my questionnaire were by no means the limiting factor here—without their willingness to take the time to pour their experiences out on paper I would not have a project. The limiting factor was the nature of the email interview. Personal interviews may have allowed me to ask the respondent to expand on areas brought up in conversation that did not get brought up in the frame of my questionnaire.

In addition, I would have liked to have asked the current Peace Corps IT Volunteer in Kenya, respondent #6, more questions pertaining to the manual he mentioned he and other Small Enterprise Development Information Communications Technology Peace Corps Volunteers were working on, as well as to ask him how the conference he had mentioned he was going to be at with other IT Volunteers a few weeks ago. The fact that the electricity in his region has been so unreliable lately has meant that he has not been able to get to his email as often as he would like. Respondent #6 even mentioned that he had initially answered my second round of questions, only to have the power go down before the email was sent, making him have to return yet another time to

complete that task. Respondent #6 also paid for the Internet time required to respond to my emails and complete the questionnaires at a local Internet café.

The outcome of this project may have also been very different had I not found three of the volunteer's names through articles featured on the Internet. The articles featured the three volunteers involved in the Belizean IT initiative and discussed how successful their projects were. Surveying volunteers whose experiences I knew, beforehand, were positive may have altered the average IT Volunteer profile I initially set out to present in this paper. Even still, if the Belizean volunteers had not been so helpful in providing me information about their experiences, I would have only had three Peace Corps Volunteers experiences, which would have made for an incomplete number of respondents.

Interestingly, I had set out to have six IT Volunteers complete my questionnaire, and I aimed at approaching ten to complete the questionnaires to get that six. I ended up approaching about three times as many volunteers as I initially intended and still ended up with the initially intended six volunteers to complete my questionnaire.

This project could have been expanded if the country directors responsible for the project section and placement of the IT Volunteers were surveyed. The responses to the inquiry of what information the Peace Corps directors are collecting during IT project quarterly reports may have added some valuable information to the topic of what the Peace Corps is doing to improve its comfort and placement of the skilled IT Volunteers. It would also be interesting to know

what criteria a host country national's project needs to demonstrate before IT Volunteers are committed to the project.

Interviews with the Peace Corps personnel responsible for making the decision to include the IT Volunteer into its volunteer offering, even though it is such a variant from the initial intention of the Peace Corps not to employ specifically skilled volunteers, may have also expanded the project. It would be interesting to learn how the decision was made to include the IT Volunteer Focus Area and to learn of what considerations were made, if any, to prepare for properly placing the specifically skilled volunteer.

The Peace Corps is doing the world a service by offering volunteers skilled in IT to teach technology to host country nationals. The IT initiative is still in its infancy, and still has imperfections to iron out, yet the agency seems to be making a great contribution to bridging the digital divide seen in lesser-developed areas of the world. For better, or for worse, the Peace Corps has made the commitment to educate host country nationals. It will be interesting to see in ten or twenty years how this technical education has impacted the host country nationals.

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Appendix A

Returned Peace Corps Volunteer Technology Questionnaire

1. Urban or rural service location? Explain.
2. College degree? If yes, in what?
3. Graduate degree? If yes, in what?
4. How tech savvy was your host country upon your arrival?
5. What technology was being used when you arrived? If equipment was being used, explain condition of equipment?
6. How did you obtain needed equipment and/or services (ex. ISP)?
7. Have you heard about or participated in the *AOL Peace Packs Program* (Program begun 2001)? If yes, please explain your knowledge of or experience with the program in as much detail as possible.
8. What, if any, difficulties did you face or have to overcome to obtain needed equipment?
9. What portion of your Peace Corps training did you find most useful during your service as an IT volunteer?
10. What part of your degree(s), if any, did you find most useful during your service as an IT Volunteer (ex. a course on Managing Change, a Networking course, etc.)?
11. How many years of IT experience did you have prior to Peace Corps service?
12. How did the host country nationals receiving your ideas?
13. How did the host country community benefit from the technology you implemented and the technical skills you taught?

14. What was the most challenging aspect of training the host country nationals?

Please explain.

15. Did you get the feeling that when you left the host country nationals that they would continue utilizing the technology and processes you worked to implement?

16. What suggestions do you have for other volunteers who will work to bring or teach technology to host country nationals?

17. Do you feel triumphant about the technology you taught as a Peace Corps Volunteer? Explain.

18. During your exit interview from the Peace Corps, do you feel that they asked questions that, if addressed, might help future technology volunteers? Explain.

19. Do you have any recommendations for future technology related Peace Corps Volunteers?

Appendix B

Respondent #1's Responses to Questionnaire

Received March 23, 2003

1. Urban or rural service location? Explain.

Urban. Taught at a Polytechnic in Eldoret, Kenya's fourth largest city – population of about 200,000. Polytechnics are the equivalent of American junior colleges.

2. College degree? If yes, in what? Yes, Math and Physics.

3. Graduate degree? If yes, in what? No.

4. How tech savvy was your host country upon your arrival?

Not very. At my school there were several teachers that had trained in the USA but the course syllabi were clearly written by someone with very little technical background.

5. What technology was being used when you arrived? If equipment was being used, explain condition of equipment?

My school had ten PCs (286's) donated by an English agency. These PCs ran a proprietary operating system that somewhat resembled DOS.

6. How did you obtain needed equipment and/or services (ex. ISP)?

I did not obtain any equipment.

7. Have you heard about or participated in the *AOL Peace Packs Program* (Program begun 2001)? If yes, please explain your knowledge of or experience with the program in as much detail as possible.

Not applicable.

8. What, if any, difficulties did you face or have to overcome to obtain needed equipment?

I was reluctant to obtain extra equipment for my school since the students had very little access to the existing equipment – so I felt I would just exacerbate an already awkward situation.

9. What portion of your Peace Corps training did you find most useful during your service as an IT volunteer? *Language.*

10. What part of your degree(s), if any, did you find most useful during your service as an IT Volunteer (ex. a course on Managing Change, a Networking course, etc.)? *None.*

11. How many years of IT experience did you have prior to Peace Corps service? *14.*

12. How did the host country nationals receive your ideas?

Not well. The emphasis was on teaching the existing syllabus and preparing students for national exams, with very little thought given to practical IT knowledge.

13. How did the host country community benefit from the technology you implemented and the technical skills you taught?

Very little. The economy in Kenya is so depressed that very few Polytechnic graduates could find work in their given field of study. The only benefit was in peripheral knowledge passed to the accounting and engineering students.

14. What was the most challenging aspect of training the host country nationals? Please explain.

The hardest aspect to overcome was getting past the rote learning system in use within Kenya. Kenyan students were spectacularly good at memorizing text and spectacularly ill-trained to do any creative problem resolution.

15. Did you get the feeling that when you left the host country nationals that they would continue utilizing the technology and processes you worked to implement? No.

16. What suggestions do you have for other volunteers who will work to bring or teach technology to host country nationals?

Volunteers need to be aware that this is a slow moving process and that Peace Corps is not affected by an individual volunteer making little or no progress in advancing technology in their host country.

17. Do you feel triumphant about the technology you taught as a Peace Corps Volunteer? Explain.

No. I felt I was a political appointee because I was placed in the district of the Kenya President – and that my sole purpose there was to take in hours of teaching to allow the HCN staff to concentrate on their second jobs.

This shouldn't be confused with whether I thought my time as a PCV was worthwhile.

18. During your exit interview from the Peace Corps, do you feel that they asked questions that, if addressed, might help future technology volunteers? Explain. No.

19. Do you have any recommendations for future technology related Peace Corps Volunteers?

Each situation is different, but I would've been better served if I had understood the situation of my placement. I did try to initiate some other work within my city in helping some startup IT businesses but by the time that was underway my two years were up.

Appendix C

Respondent #2's Responses to Initial Questionnaire

Received March 27, 2003

Niue

7 months in 1998

1 non-urban

2 BS, double major in physics and philosophy

3 about a dozen grad courses in philosophy

4 Because of the small population, less than 1500 in all of Niue, per capita statistics look pretty good. All students at the high school (starting about our 8th grade) who wanted a little experience with Peace Corps could have that experience.

5 At the high school there were about 14 Pentiums, with about 10 in my classroom. There were also a handful of earlier machines. The library had two, one for staff (with a modem drop) and one for students, and the main office had two. I also helped with PCs at the newspaper, one at the home of a pastor and a Macintosh (or two?) at forestry. All government offices were well equipped. At the time I left we were getting 10 or 20 new machines – with network cards. The

climate is hard on the equipment, even on floppy disks, but it was in pretty good shape. All the machines were running Windows 95, which was not at all suitable to a high school environment. I could/did re-image a machine and it would be picked apart to a state of uselessness in less than a week

6 A former PCV stayed and was the main IT resource, was the ISP (and one of three, all non-Niuean, controlling the .nu TLD).

7 no then (of course) and not until now

8 I was pretty lucky - no major problems obtaining equipment. Although, I pieced together a 486 with two 50-megabyte drives (helped by the guy mentioned in 6) and took this home. It was ground for accusations later.

9 At the time, Peace Corps had no formal recognition of IT, so nothing apart from their usual training.

10 none

11 I had about 4 years of dedicated IT experience but many more from working in science, using email since 1985 and being an early adopter of the Web.

12 IT is still - worldwide - a rough, early technology. Moore's Law is one of the most pervasive underlying facts of recent decades. People who've grown up with IT can/do accommodate its rough edges. Blah, blah, blah... But not much differently than a person from your town. Some ideas, like passwords, met with resistance.

13 Hard to say. I left suddenly and have had little feedback on these matters.

14 The gulf presented in 12. For example, my counterpart was teaching a straight course in all the features of Word.

Further, I was brought to teach high school, particularly IT. What was challenging was that I ended up being, in large addition, the campus sys admin.

15 Yes, despite my answer to 13, I think I made a positive difference.

16 I think "triumphant" is a suspect word; I bring a critical point of view to IT - I'm not an evangelist.

17 No distinct recollection, and again, IT wasn't being formally recognized yet.

18 I don't but only because I know nothing, except that it now exists, about the PC formalizing IT development work. I'm curious about that and I think I could react to more specific questions.

Appendix C1

Respondent #2's Responses to Second Set of Questions

Received March 31, 2003

1. You said that as you were leaving Niue the host country nationals were getting 10 to 20 new machines with network cards. When you wrote new, did you mean brand new, or just new to Niue? **Brand new**

1a. Who was paying for those new machines, or were they being donated?

I think the NZ high commissioner found the money for them.

2. Can you explain further that after re-imaging a machine it would be picked apart to a state of uselessness in less than a week? What do you mean by 'picked apart'?

Essential files, such as DLLs, would be removed.

2a. Who/what was picking apart the PC?

Kids, not only students but young kids of staff. There was some evidence that one incident was malicious.

3. Can you explain how the environment was hard on the equipment? How was it hard on floppy disks?

Floppies for sale in tropical climates are actually formulated with antifungal agents in the oxide binders. The package mentions this. It helps. Connectors needed reseating much more than you see here.

4. Were you able to/ did you have the resources to take preventative measures to protect the equipment from harsh environmental conditions? If yes, what were those measures?

The classroom had two window a/c units.

5. When asked how you obtained needed equipment and services you mentioned the former Peace Corps Volunteer in Niue. I am unclear as to his role. Did this former Peace Corps Volunteer start his own business or partner with others there in Niue to provide IT and ISP services for a fee? Was this a monopoly?

I'm not sure of his relationship then (and certainly less so now) as a provider of PC services – fixing hardware and software. I know that at the time the mail server for the island was in his house. All the government's mail and everyone else's in 1998 was POPed from NZ first. I think there is a server hut nearer telecom facilities now. I know the son of the premier at the time was doing IT work and partnered with the former PCV. I'd just begin to interact with him before I left. He switched to philately soon after that point. 'Monopoly' is probably more than fair. I do know that the ccTLD control – only this former PCV, a longtime resident/resort owner/part-time barrister, and a guy in Boston –was/is matter of

contention. Yet another study was done just recently, apparently into its legitimacy.

6. You said that you were lucky and had no problem obtaining needed equipment in Niue? Please explain why this was easy for you. Was there an ample supply of money available for computer equipment? Were there technology initiatives in place at the time? If yes, whose initiatives were they?

The former PCV and I got along well until near the end. It was easy to get the few spares I needed.

7. You mentioned accusations after bringing home a machine you worked to put together. Can you explain that situation? Why did the host country nationals or the Peace Corps look negatively on you using that machine at home?

If I remember right it was a 486 in a 386 chassis. The case came out of the junk heap at school, the motherboard (as well as these two drives that wouldn't even take a Windows install they were so small) out of the former PCV's junk heap. So the principal made the initial accusation, asking where the machine came from. I don't know why it was a negative to them.

8. You mentioned that some ideas, like passwords, met with resistance. Can you explain why people were resistant about passwords?

It's very open there. Something we take for granted can be very strange.

8a. What other ideas were people resistant of? Please explain.

IT as something more than every detail of how Word works (I think I mentioned this).

9. You wrote that even though you were sent to teach mostly IT in high school you ended up acting as a system administrator. Did you feel it was hard to set boundaries with the host country nationals that would ask more from you than you felt was really your job? Please explain.

If I wanted a classroom of computers that worked, if I wanted a network, I was the only resource.

9a. Did you feel that the extra requests made for your system administrator services took away from your main objective of teaching in high school?

Not really. Teaching actually became an oasis. But the sum ate too far into my time

10. You conclude that you think you made a positive difference. Can you explain the difference you feel you made?

Two or three girls ended up going to Jr. Summit. The hard-to-describe example of just being there. The kids got to send email to each other on a solitary machine – that was real hit...

Appendix D

Respondent #3 and Respondent #4's Responses to Initial Questionnaire

Received March 28, 2003

First, here is a little background on the country of Belize. It is located in Central America, south of Mexico and east of Guatemala. Its official language is English, but the first language of over half the population is Spanish and another 25% speak creole, a localized version of English. The country is a big cultural stewpot of Spanish, Carib, Garifuna, East Indian, English, and other ethnic minorities. A former British colony, the government is parliamentary with a Prime Minister and a representative legislature. All instruction in the schools is done in English; for students between the ages of 6 and 14, school attendance is mandatory. Only the highly qualified go on to high school and an even smaller percentage go on to college. Over 80% of the population has TV and pirated cable from the US, so they are very influenced by what they see on American TV. A majority of families have a family member or friend living or working in the US; this person sends money home to the Belizeans. So this is another way Belizeans are influenced by Americans. There are many, many volunteers in Belize, not just Peace Corps, and of course there is a growing tourist business, so Belizeans are very used to having foreigners in their midst.

1. Urban or rural service location? Explain. We lived in the capital city of Belmopan, Belize, which has a population of approximately 9,000. Belize City is the largest city in the country with a population of approximately 80,000; the Peace Corps office is located there. The rest of the country is rural. The total population of Belize is only 250,000.
2. College degree? If yes, in what? Mary Jo, Math; Bob, Math
3. Graduate degree? If yes, in what? Computer Science in Education; Bob, Educational Psychology
4. How tech savvy was your host country upon your arrival? Somewhat. The telephone company provided Internet access (for an exorbitant fee!). A few schools (the wealthier ones, of course) had computers for their staff and students. The government of Belize's Ministry of Education wanted all schools to have computers and Internet access, and the Peace Corps was invited to help implement this dream. The first phase involved educating the elementary school teachers in typical computer applications such as Word, Excel, etc., plus showing them how to integrate computers into their curricula. The 2000 IT group, of which we were a part, was the first ever IT group deployed to any country by the Peace Corps.

5. What technology was being used when you arrived? If equipment was being used, explain condition of equipment? When we arrived, the Ministry of Education had no computers available for this project. After about six months, enough brand new HP computers arrived in country to create a computer lab of approximately 25 computers in each of six regional education centers. In the interim, the IT PCVs spent the time creating a beginning computer application curriculum that was culturally appropriate for the host country. Once the computers were up and online, the teacher education portion of the project began. (At this point, although we were IT PCVs, Bob and I were not involved in this part of the project and had other jobs. We switched to this project after about a year in country.)

6. How did you obtain needed equipment and/or services (ex. ISP)? N/A since the government of Belize paid for all the computers and Internet access involved in this project.

7. Have you heard about or participated in the *AOL Peace Packs Program* (Program begun 2001)? If yes, please explain your knowledge of or experience with the program in as much detail as possible. Yes, we know about it and even applied for one to be used in our secondary project. We were given one set of instructions (from the Washington DC Peace Corps office in charge) to follow in completing our project, we submitted our project to our local Peace Corps office, and then we were told that the program guidelines had been changed and we would have to rewrite the project. At this point, we were more than halfway into our two years of service, and this would have been against us in the grant selection process because we would not have been around long enough to implement the project and evaluate it according to the grant guidelines. In addition, we were given only one day to make the (significant) changes required before the next deadline. So we decided not to rewrite the project. Fellow volunteers also had trouble submitting projects through this program because of changing guidelines and regulations. The only successful volunteer applicant that we know submitted his proposal immediately after the program was first announced and before the guidelines were tightened up. The program sounded like a great deal, and a slam dunk at first, but people became very frustrated with the constantly changing expectations.

8. What, if any, difficulties did you face or have to overcome to obtain needed equipment? As mentioned above, the government of Belize was responsible for bringing in the necessary computers for our project. The computers for the regional training centers were supposed to be installed

- and ready to go when we arrived in June 2000. It took about six months before they actually arrived and were up and operational. The government of Belize was also supposed to bring in computers for all the country's schools while we were there. Those computers finally started arriving in early 2002, about 18 months after the expected due date. We wanted to share examples of appropriate educational software with our educators but had no budget to purchase them with. Nor was it possible to order American software because it cannot be sold out of the US. ???
9. What portion of your Peace Corps training did you find most useful during your service as an IT volunteer? Not much as I was already pretty experienced. The part that was helpful was cultural expectations of student populations.
 10. What part of your degree(s), if any, did you find most useful during your service as an IT Volunteer (ex. a course on Managing Change, a Networking course, etc.)? My masters degree in Computer Science in Education was very helpful to me as the coursework and hands-on practica I had done for it were exactly what was needed for this IT project.
 11. How many years of IT experience did you have prior to Peace Corps service? Mary Jo, For 20 years, I had taught computer science and computer applications courses primarily at the high school level, in addition to working as a technology coordinator and webmaster. Robert, He has about 20 or so years of IT experience, the last seventeen, just prior to the Peace Corps, were related to managing a network of computers for astronomers at a major telescope in Hawaii.
 12. How did the host country nationals receiving your ideas? The teachers we taught were wonderful people, very enthusiastic and very hard-working. They enjoyed learning how to use the computers and immediately put them to use in completing teacher-related tasks such as writing letters home to parents, making signs and cards, creating grade books in Excel, etc. A few teachers had their own computers at home or at school where they could practice and use the skills we taught them in our classes. The concept of integrating computers into their curricula was a harder one for them to grasp, especially because at that point most did not have computers in the schools and had not worked with students in any capacity on computers. In addition, the Belizean style of education is primarily rote (memorize and regurgitate) rather than project-based. It will take some dedicated teachers a few years to really implement this more advanced aspect of computers in schools.

13. How did the host country community benefit from the technology you implemented and the technical skills you taught? We taught the elementary school teachers practical skills that they can use in their work as educators to perform everyday school-related tasks. We opened the educators' eyes to the possibilities that using computers in schools will provide for them and their students. We exposed them to the Internet, a tremendous resource for small rural schools that cannot afford extensive libraries or even textbooks for all their students. As they told us, we changed their lives forever and for the better.
14. What was the most challenging aspect of training the host country nationals? Please explain. While we had some students who were familiar with computers, we had many who had never even touched one before. We had to teach our students all the basics, from using a mouse on up. In the US a three-year-old is able to manipulate a mouse, but in Belize forty-year old teachers did not know how to do that and were very awkward trying to make the mouse do what we consider so commonplace here. It took much patience on our part to get the students comfortable with using the mouse. Also, as I mentioned before, their system of education is primarily rote and they are not used to group discussion, thinking about ideas, or answering questions that have multiple right answers. So it was like pulling teeth to engage them in group discussions, etc.
15. Did you get the feeling that when you left the host country nationals that they would continue utilizing the technology and processes you worked to implement? Oh, yes!
16. What suggestions do you have for other volunteers who will work to bring or teach technology to host country nationals? 1. Patience, patience, patience! 2. Make your examples pertinent to their culture or working situation. 3. Have fun and get to know your students – most likely they will be wonderful people.
17. Do you feel triumphant about the technology you taught as a Peace Corps Volunteer? Explain. Yes. Our group was the first-ever PC group to work with HCNs in IT, and I hope it will make a tremendous impact on their educational system for the children's sake.
18. During your exit interview from the Peace Corps, do you feel that they asked questions that, if addressed, might help future technology

volunteers? Explain. My exit interview was very brief and really just a “good luck in the future” type chat with the country director. Our group was so small that I’m sure the American country director and the Belizean assistant director knew what was up with our program from the quarterly reports that we had to submit and from the periodic personal chats and workshops we had.

19. Do you have any recommendations for future technology related Peace Corps Volunteers? The primary purpose of our project was to teach educators how to use computers in their schools. Thus, people needed to know how to teach adults and how to use computers. In my group of IT PCVs, very few volunteers had much teaching experience, and only two had computer teaching experience. In addition, most had little IT knowledge; they knew how to word process and that was about it. So these volunteers had to learn how to be effective teachers as well as their teaching topics while on the job. For some this was difficult and led to some stress. In the second year of the Belize IT project, the focus was more on teaching educators how to repair computers. So in that group of IT PCVs, the group that followed us, there were a few highly qualified computer engineer types. They were what you might call “geeks.” Despite the Belizean government’s request for techies, they had difficulty placing such highly qualified persons in jobs that enabled them to use their skills in a worthwhile manner. As a result, some left and some got reassigned to other types of jobs, including teaching computer applications to educators. So, in sum, my recommendations are: (1) Peace Corps needs to do a better job of matching potential PCV with in-country job assignment. First, Peace Corps in country needs to get a specific job description for every placement and then communicate these clearly to Peace Corps Washington. Then Peace Corps Washington needs to do a good job matching potential PCVs with the intended jobs and the skills required before sending people off to foreign countries. The potential PCVs need to be told what the expectations of their assignments will be and then Peace Corps needs to follow through with that. (2) In addition, volunteers need to have good people skills to be successful at most any job assignment in Peace Corps.

Appendix E

Respondent #5's Responses to Initial Questionnaire

Received March 26, 2003

1. Urban or rural service location? Explain.

I was stationed in Punta Gorda, Belize. It is urban location by Belizean standards. It is a small coastal village of approximately 2000 people.

2. College degree? If yes, in what?

I have a BA from DePaul University in Information Systems

3. Graduate degree? If yes, in what?

I have a MA from New York University in Liberal Studies

4. How tech savvy was your host country upon your arrival?

The country was already into its second year of its Computer Literacy Mission. Therefore, most of the people I worked with in the government capital city of Belmopan were quite knowledgeable; however, the staff at the local level did not have the same level of training or expertise.

5. What technology was being used when you arrived? If equipment was being used, explain condition of equipment?

The country had adopted Microsoft products as its standard. The condition of the equipment at the local level was quite poor. Most of the PC's were donated and either totally unusable or so outdated that they could not be brought up to an acceptable standard.

6. How did you obtain needed equipment and/or services (ex. ISP)?

The government of Belize provided 22 new Compaq computers for each district lab. All Internet or communications capabilities had to be bought from the only supplier in the country – BLT. The costs of Internet access and general phone communications were exorbitant. Even though BLT had agreed to provide free Internet access to all schools, free received them.

7. Have you heard about or participated in the *AOL Peace Packs Program* (Program begun 2001)? If yes, please explain your knowledge of or experience with the program in as much detail as possible.

Yes, we were one of the first groups to be eligible for the Peace Packs since they were established during my service. The program was new so we didn't have the correct procedures in place to apply and we missed the first deadline. As a result, we weren't able to receive any in the IT group.

8. What, if any, difficulties did you face or have to overcome to obtain needed equipment?

My biggest challenge was maintaining the equipment that I had in our lab. Because of environmental issues (no air conditioning, dust, heat and humidity) our equipment needed constant repair. Getting the right parts or finding anyone to service our equipment was extremely difficult. We often had equipment out for repair for months at a time. Some never got serviced.

9. What portion of your Peace Corps training did you find most useful during your service as an IT volunteer?

The technical in-service training proved to be the most valuable.

10. What part of your degree(s), if any, did you find most useful during your service as an IT Volunteer (ex. a course on Managing Change, a Networking course, etc.)?

I found my work experience to be the most valuable. As an IT manager, I had developed the skills to work with diverse groups with little or no technical training.

11. How many years of IT experience did you have prior to Peace Corps service?

Over 25 years

12. How did the host country nationals receiving your ideas?

I found that they were open to most ideas; however, I did experience some resistance from host country nationals who perhaps weren't as technically trained as some of the PCVs. A great deal of diplomacy is needed to effectively introduce change into the existing decision making structures.

13. How did the host country community benefit from the technology you implemented and the technical skills you taught?

We built a state of the art computer lab and provided training to over 150 teachers in the district. They improved their technical skills and now have a facility to train their students.

14. What was the most challenging aspect of training the host country nationals? Please explain.

Everyone wanted to improve their computer skills so we had very little difficulty filling classes. However, it was extremely difficult for our students to retain what they learned in the classroom, since so few had access to any type of computer outside. The students have very little time on the computers and that limited the speed that they could learn, or that we could run the classes.

15. Did you get the feeling that when you left the host country nationals that they would continue utilizing the technology and processes you worked to implement?

Yes, I did. The program is still going on today, and I've kept in touch with HCNs using the Internet skills that we taught them.

16. What suggestions do you have for other volunteers who will work to bring or teach technology to host country nationals?

I think that will depend on the particular situation in each country. I do think that volunteers have to be extremely knowledgeable of both the software and hardware associated with whatever technology they wish to use. They will be viewed as the experts in all aspects whether or not they have the training.

17. Do you feel triumphant about the technology you taught as a Peace Corps Volunteer? Explain.

I am extremely proud and satisfied with the contribution I made to the computer literacy training of the teachers in Belize. I probably could have done more and there is still quite a lot of work remaining, so triumphant would not be an adjective I would use.

18. During your exit interview from the Peace Corps, do you feel that they asked questions that, if addressed, might help future technology volunteers? Explain.

I was asked about my experiences, both good and bad. The exit interview was very specific to my assignment and was not conducted to provide feedback for the program in general. There were other opportunities where our input was requested for future IT volunteers, namely the in-service technical training sessions.

19. Do you have any recommendations for future technology related Peace Corps Volunteers?

I found the experience extremely challenging, but at the same time rewarding. Technology has played an important part in my professional life and the Peace Corps gave me the opportunity to use my experience to help others. The most surprising thing to me was how eager HCNs were to participate in our programs. We had no problem getting them involved or excited about what we were doing, while PCVs in other areas such as rural development, etc, sometimes had to struggle to get local participation.

My recommendation would be to come prepared and be open minded. You never know what to expect, but you'll always feel needed.

Appendix E1

Respondent #5's Responses to Second Set of Questions

Received April 1, 2003

1. You wrote that the staff at the local level did not have the same level of training or expertise as those in the capital city. Were you successful at providing them the training they needed to continue to teach others after you left?

I believe we did provide adequate training for the staff at the local level. My Belizean counterpart is now in charge of all technical training for the district. He had no previous computer experience and is not viewed as the expert in the office.

2. If few of the schools received the free internet the BLT promised, then what did the schools that did not receive the free connectivity do? Did they just go without internet access; did they pay the exorbitant fees; or something else?

Most schools went without Internet access. A few were able to afford it by charging local businesses for usage of their computer and the internet during non school hours.

Some schools in the southern district where I was stationed are still without the infrastructure necessary to receive any type of communications, voice as well as data. This is not expected to change for at least two more years.

3. You wrote that you didn't have the correct procedures in place to apply for the *AOL Peace Packs Program*. Did you think the application process or requirements were overly restricting?

No, the application process once it was documented was fine. We just didn't have any procedures to follow when we first heard about it and missed the deadline date.

It was just too knew for us to take advantage of. The group that followed us however, was very successful getting Peace Packs.

4. How specifically did the dust, heat, and humidity affect the equipment?

The unreliability of the electrical current supply would burn out power supplies constantly. The dust and humidity would cause circuit boards and disk drives to fail. Approximately 35% of our initial shipment of 1000 brand new computers failed within the first three months of being in country.

5. Were there any preventative measures you were able to take, or had the resources to use, to protect the equipment from the heat, dust and humidity?

We used UPS and power strips to regulate the electricity, but there was little we could do about the heat and humidity. The only effective method is to use A/C but that is too expense for most of our lab locations and non-existent in the schools.

The most effective method of keeping down the dust was to cover all the equipment every night and hope for the best.

We also tried to do preventive maintenance on a routine basis, such as cleaning all the parts of the equipment and keeping the rooms as clean as possible.

6. Was the technical in-service training that you found so valuable hands on?

Did you follow along with a current IT volunteer in Belize? Were you given a manual or handbook on the technical issues faced by IT volunteers?

Describe this technical in-service training.

The technical in service training was developed for the first time when we were in Belize. We had a facilitator come from DC to conduct it. It was hands on and was really done by the PCV who had had previous training and experience.

We had to develop our own manuals, but the most valuable part was learning from each other and sharing our experiences in the field.

7. What diplomatic skills did you feel were most successfully used by you to introduce change to the more resistant HCNs?

Arbitration and compromise with a big dose of patience.

8. In "Belize Gets Wired," (an article I found your name in) the article mentions that HP donated a great deal of equipment to the Peace Corps IT initiative in Belize. Did the communities you served in benefit from these contributions? Please explain.

HP did not really "donate" any equipment to Belize. All of it was purchased by the government specifically for the Computer Literacy project in the district schools. That was a mistake in the article as far as I know.

9. What were your years of Peace Corps Service?

I served in Belize from 2000-2002

Appendix F

Respondent #6's Responses to Initial Questionnaire
Received April 1, 2003

Today's Date: 2 April 2003

Country of Service: Kenya

Years of Service: 1st year (4 months at site, 6 mo. in country)

1. Urban or rural service location? Explain.

By Peace Corps standards, Kisii is an urban location. It is a town of about 60,000 people or so and there are about 500,000 people in the greater Kisii (Kisii District area).

2. College degree? If yes, in what?

Yes, B.A. Political Science

3. Graduate degree? If yes, in what?

No

4. How tech savvy was your host country upon arrival?

I would say that Kenya is about average for a developing country. There are Internet cafes available in most medium size and larger towns. Rates vary from 1-20 shillings/minute -- expensive when you consider most Kenyans live on less than 80 shillings(\$1) a day. Also available in most towns are training in the MS Office components (Word, Excel, Access, etc.). That said, at the college where I

teach, most of the students have never used a computer before and many have never seen one before. This is true even of the Diploma in IT students of whom, at the beginning of term 50% had never seen a computer and only about 20% had used one before. Software piracy is rampant in Kenya.

5. What technology was being used when you arrived? If equipment was being used, explain condition of equipment? We have four old, Compaq Desktop computers (80486/33Mghz, 8 MB RAM) running Win 95 and Office 97. All were donated by GTZ (German Gov't), all have minor problems (e.g., with power supply, RAM, etc.).

6. How do you obtain needed equipment and/or services (ex. ISP)?

No Internet at my site, can use via Internet cafes. Any non-standard computer equipment must come from Nairobi. Some parts are available in large towns, but often at significantly higher cost and varied availability.

7. Have you heard about or participated in the AOL Peace Packs Program (Program begun 2001)? If yes, please explain your knowledge of or experience with the program in as much detail as possible. Have heard about the Peace Packs Program. Know that it involves grants for computers and Internet access (1 year).

8. What, if any, difficulties did/do you face or have to overcome to obtain needed equipment?

Many difficulties, mostly that the school cannot afford needed books, computer parts, etc. Also, face challenges with school expecting me to provide these things which, of course, I cannot.

9. What portion of your Peace Corps training are you find most useful during your service as an SEDICT volunteer?

Technical Training -- about 10-15% useful Cultural/Language Training -- very useful (100%)

10. What part of your degree(s), if any, do you find most useful during your service as an IT Volunteer (ex. a course on ManagingChange, a Networking course, etc.)?

Degree not relevant to my project. That said, I have experience running the computer systems for a small lcompany and that is moderately useful -- most of the equipment here is so old, that any new knowledge is not that relevant.

11. How many years of IT experience did you have prior to Peace Corps service?

2 years out of school, plus two years of internships while in university. Extensive computer experience prior to this though.

12. How are the host country nationals receiving your ideas?

Most people are very anxious, excited to learn more about computers because they see the knowledge as critical for success. How true this is in practice, I am not sure.

13. How will the host country community benefit from the technology you are implementing and the technical skills you are teaching?

That is difficult to say, there is an ever increasing presence of Internet cafes and computer training facilities in town where people can find work once they have been trained in computers. In medium-sized towns, the opportunities are limited. Have the impression that most computer-industry related positions are in Nairobi.

14. What is the most challenging aspect of training the host country nationals?

Please explain.

Absence of any computer/business experience and the need to teach advanced computer topics. For example, I teach Management Information Systems and trying to teach people who have never seen a computer before what networking is and why it is important is something of a challenge.

15. Do you get the feeling that when you leave the host country nationals that they will continue utilizing the technology and processes you worked to implement?

I hope this is true, at this stage in my project it is difficult to know for sure.

16. Do you feel that you are successfully teaching the nationals to do what you are doing, or do you feel more like you are doing the work for them? Explain.

Feel that I am successfully teaching them.

17. What suggestions do you have for other volunteers who will work to bring or teach technology to host country nationals?

Manage your expectations, don't expect to be working with the latest computers, programs, etc. Practice troubleshooting now. Come with an open-mind, patience, and persistence. The task is difficult, but incredibly rewarding.

Appendix F1

Respondent #6's Responses to Second Set of Questions

Received April 17, 2003

1a. You wrote that software piracy is rampant in Kenya. What is the punishment for piracy like like in Kenya? Is it rarely punished, rarely caught, or just not of a big concern to anyone?

All of the above, but not a big concern would probably fit best.

1b. What software would you say you see as the most commonly pirated?

Microsoft Office 97 and 2000; Windows 95, 98, 2000

1c. Have you been put in the position to pirate software and how did you handle that?

I have not, but many other Volunteers in country have been. Pirated software is used at my school. I have not brought the issue up with them. Given that most people survive on a \$1 a day here, paying the equivalent of \$200+ for a software package is pretty much out of the question.

2a. You wrote that of the Diploma of IT students about 50% had never even seen a computer before. Do you know what it is that makes these students pursue a degree that pertains to a machine they know practically nothing about?

I think that they see it as modern and new/popular. Also, I think that they believe that it will help them get a job when they finish. I am not sure that this is the correct impression.

2b. Do you have any idea what these students think an IT Diploma will get them? Do you think their perception of what an IT degree will gain for them is correct or incorrect?

See above. I think it is incorrect.

3a. You are teaching Management Information Systems, a more advanced topic compared to your students' knowledge and skills. Do you teach this particular course because the Peace Corps has chosen it for you or because the university has chosen you to teach it?

All classes I teach, and all classes taught by all PCVs in country, are selected by the schools at which they work and NOT the PC.

3b. Are their prerequisites for this course? If so, what are they?

None that are enforced except having school fees. I am trying to encourage them to implement prerequisites in the future -- basic computer skills.

3c. How much of the course time (in percentage) do you feel you spend getting your students caught up on basic skills before you can actually move on to the meat of the course material?

During the first-term this was about 40-50%, but think this should go down later in the year.

4a. You wrote that you were under the impression that most computer industry related positions are in Nairobi. Do you see that many of the trained or educated leave their villages for cities like Nairobi in hopes of finding work?

Many people do leave for Nairobi for work simply because there is not room for them in the rural areas around where I live -- the family plots have been so subdivided that they are no longer large enough to provide food and income for everyone living on them.

In rural areas, computer jobs are mainly limited to the Internet Cafes and computer training facilities. In Kisii (about 60,000 people, with about 500,000 living in the District, about like a US county), there are four or five places with Internet access (5-20 computers) and an additional 4-5 places offering computer training (2-20 computers). Beyond these, two of the supermarkets in town (the smaller of the two is presently trying to sell their one computer), and a couple of the secondary schools plus my technical college I am not aware of any other facilities that use computers.